



Improving the physical quality of students through practicing Pencak Silat

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Abstract

This paper aims to evaluate the impact of Pencak Silat training on improving the physical quality of university students. Through a research design combining qualitative and quantitative methods, the authors conducted semi-structured interviews with 07 physical education experts and surveyed 107 students who participated in Pencak Silat training at a number of universities in Ho Chi Minh City. The research results indicate that Pencak Silat has a positive impact on the comprehensive physical development of students, particularly in enhancing cardiovascular endurance, flexibility, reflexes, motor coordination, and mental pressure control. At the same time, group training also plays a role as a form of personality education, helping students practice team spirit, discipline and confidence in social communication. In addition to the positive values, the study also pointed out some difficulties and challenges in the implementation of Pencak Silat activities in higher education institutions, such as inadequate physical facilities, a lack of specialized coaches, and limited support policies. On that basis, the article proposes some practical recommendations to improve the effectiveness of teaching and practicing Pencak Silat, such as investing in appropriate training infrastructure, developing a formal curriculum, organizing training courses for coaches, and integrating Pencak Silat content into regular or elective physical education programs.

Keywords: Improving physical quality, students, training, Pencak Silat

Introduction

In the context of current higher education, physical development for students is not only a compulsory content in the training program but also an important foundation for forming the capacity to study, work and integrate into society. However, many studies have shown that the physical condition of Vietnamese university students still has many limitations, especially the lack of exercise, high obesity rate, and weak endurance and adaptability to the pressure of studying and living. In practice, traditional physical education subjects are having difficulty attracting students to participate actively due to the lack of innovation in content and teaching methods. Therefore, finding effective, attractive and suitable physical education methods for students' psychology and interests becomes urgent.

In that context, martial arts, especially traditional Southeast Asian martial arts such as Pencak Silat, are emerging as a new and potential direction. Pencak Silat is not only a purely combat sport but also carries within it special cultural, ethical and educational values. Unlike some martial arts that are performance-oriented or purely technical, Pencak Silat emphasizes the harmony between body and mind, between individual movement and community interaction. Therefore, this martial art is considered to have the ability to comprehensively develop practitioners, from physical strength, flexibility, reflexes, to discipline, team spirit and personal qualities.

In some Southeast Asian countries, such as Indonesia, Malaysia, Brunei, etc., Pencak Silat is not only a national sport but is also included in formal teaching in general education and university programs. In Vietnam, although not yet widely popular, some educational institutions have experimented with including Pencak Silat in extracurricular or elective programs, initially receiving positive signals. However, there is still a lack of systematic, practically-based scientific research to confirm the real effectiveness of

Pencak Silat on students' physical development, as well as to propose appropriate development and application solutions.

On that basis, this article raises three main research questions: How does Pencak Silat training affect students' physical factors (endurance, flexibility, reflexes, coordination, etc.)? What are students' attitudes, perceptions and satisfaction levels towards Pencak Silat training in the university environment? What conditions and factors affect the effectiveness of Pencak Silat training in higher education institutions?

To address the above questions, the paper will present the theoretical and practical basis, using mixed methods, analyzing survey data and expert interviews to draw conclusions and propose specific recommendations.

Research Methods

The paper applies mixed methods, combining qualitative and quantitative methods to collect and analyze data. This approach aims to ensure comprehensiveness and depth in assessing the impact of Pencak Silat on students' physical development.

1. Quantitative research

The survey was conducted with 107 students studying at several universities in Ho Chi Minh City, who have been participating in Pencak Silat training. The questionnaire was designed based on physical fitness assessment criteria in physical education, including factors such as endurance, flexibility, reflexes, motor coordination, stress management ability and learning attitude. The questions were constructed on a 5-level Likert scale (1 = Strongly disagree, 5 = Strongly agree).

The survey process included two steps: (i) piloting the questionnaire with 15 students to adjust the content and language, (ii) conducting an official survey through online

and direct forms. The collected data were coded and analyzed using SPSS 26.0 software, using descriptive statistics (frequency, percentage, mean score) and Cronbach's Alpha test to assess the reliability of the scale.

2. Qualitative research

In parallel with the survey, the research team conducted semi-structured interviews with 07 experts who were physical education lecturers, Pencak Silat coaches and sports management staff in universities. The experts were selected using the purposeful sampling method, ensuring that they had at least 5 years of experience in the field of physical education or martial arts.

The interviews lasted from 45 to 60 minutes, were recorded (with the consent of the participants), and then coded by topic using NVivo 12 software. The main topics included: awareness of the benefits of Pencak Silat for students' physical fitness; Factors affecting training effectiveness; conditions for organizing classes; suggestions for improvement. Content analysis was used to extract information and draw conclusions in accordance with the research objectives.

3. Research ethics

The entire study strictly adhered to ethical principles in scientific research. Survey and interview participants were fully informed about the objectives, content and benefits, and signed a commitment to participate voluntarily and keep information confidential. Personal data was completely anonymized to protect privacy and ensure the objectivity of the research results.

Research Results

Based on the three main research questions, the results section was divided into three key issues: (1) The impact of Pencak Silat on students' physical factors; (2) Students' attitudes, perceptions and satisfaction with Pencak Silat training; and (3) Factors affecting the effectiveness of Pencak Silat implementation in universities.

1. Impact of Pencak Silat on physical factors

Physical training through combat sports not only helps students improve their health but also improves basic movement factors such as endurance, reflexes, flexibility and coordination. Among them, Pencak Silat is considered a comprehensive form of training, harmoniously combining physical factors and specialized motor skills. The goal of this section is to clarify the specific impacts of this martial art on physical aspects of students, through analyzing survey data from 107 students who have participated in training. The data will be presented in tabular form, with assessment levels from low to high and average scores of each physical indicator, as a basis for subsequent scientific comments.

Table 1: Student assessment of the impact of Pencak Silat on physical factors (N = 107)

Order	Assessment Content	1	2	3	4	5	Mean
1	Increases cardiovascular endurance	0	2	14	45	46	4.26
2	Improves flexibility	1	3	17	43	43	4.16
3	Develops Reflexes and Speed	0	6	21	38	42	4.09
4	Improves balance	2	3	22	37	43	4.07
5	Increases coordination	1	4	19	41	42	4.11
6	Increases total body strength	0	5	23	40	39	4.06

The results from Table 1 show that the average scores of the contents ranged from 4.06 to 4.26, indicating that students highly appreciated the positive effects of Pencak Silat on physical fitness. In particular, "increasing cardiovascular endurance" (4.26) and "improving body flexibility" (4.16) were the two most strongly recorded factors. Expert interviews (PV3, PV5) confirmed that Pencak Silat exercises require maintaining a state of continuous movement, thereby training endurance and effective breathing control.

2. Students' awareness, attitude and satisfaction

In order to more comprehensively assess the effectiveness of Pencak Silat training, the study surveyed students' awareness, attitude and satisfaction during the training process. These are factors that have an important influence on maintaining students' motivation and long-term commitment to the subject. The students' interest, perceived cultural and health values, and relevance of the subject are reliable indicators of the potential for expansion and development of the program in higher education institutions. Below is a summary of the survey results on these aspects:

Table 2: Attitudes and satisfaction with Pencak Silat (N = 107)

Order	Assessment Content	1	2	3	4	5	Mean
1	Feel excited about practicing	0	3	16	45	43	4.19
2	Want to continue practicing	1	2	13	44	47	4.25
3	Appreciate the culture of the martial art	2	4	15	39	47	4.18
4	Feel more confident after practicing	0	3	20	41	43	4.16
5	Feel the health benefits	1	3	14	43	46	4.22
6	Pencak Silat is suitable for students' needs	2	2	18	40	45	4.14

The data showed a high level of satisfaction, especially the desire to continue training (4.25) and clearly felt the health benefits (4.22). Interview responses (PV1, PV6) emphasized that students felt that Pencak Silat was "both traditional and modern", combining skills, art and discipline, thereby creating a long-term interest in learning.

3. Factors affecting implementation effectiveness

In addition to the learner factor, the quality and effectiveness of Pencak Silat training activities in schools also depend largely on the organizational conditions and teaching environment. Factors such as facilities, coaching staff, curriculum content, support policies from the school... play an essential role in creating an effective and sustainable training ecosystem. Clearly identifying these factors helps managers and educators have a basis to build appropriate programs and make necessary adjustments to increase implementation effectiveness. The following section presents survey results related to the factors that students rated as having the most influence on the quality of Pencak Silat training in the university environment.

Table 3: Factors affecting teaching and training effectiveness (N = 107)

Order	Assessment Content	1	2	3	4	5	Mean
1	Training facilities	5	7	19	43	33	3.83
2	Quality of Trainers	2	3	17	45	40	4.11
3	Adequate class time	1	5	23	44	34	3.97
4	Support from the School	3	6	28	42	28	3.77
5	Student-relevant curriculum	1	3	21	41	41	4.10
6	Ability to Organize Specialized Classes	4	5	27	43	28	3.82

Analysis of results: The average scores of the factors ranged from 3.77 to 4.11. The highest rated factors were “quality of trainers” (4.11) and “suitable curriculum” (4.10). Some experts (PV2, PV4, PV7) pointed out that: “When there are dedicated trainers and lively curriculum, students will participate more actively.” However, “support from the school” and “facilities” are still at an average level, reflecting existing limitations.

Discussion

The research results have clarified the role of Pencak Silat as an effective method in improving physical fitness and comprehensive development of university students. When compared with previous studies, this result not only reinforces the argument of scholars such as Nasrullah & Mulyana (2019) about the role of martial arts in physical education, but also extends the scope of application to the university environment in Vietnam, where traditional martial arts have not been strongly exploited in the regular program.

First of all, the survey results show that Pencak Silat has a clear impact on factors such as cardiovascular endurance, flexibility and coordination. These are key factors that help students improve their physical fitness, reducing the risk of diseases caused by a sedentary lifestyle. Compared with the studies of Purnama *et al.* (2021), the improvement of physical fitness through Pencak Silat in this study achieved a higher average score, possibly due to the characteristics of university students having a good awareness of training and the ability to learn quickly. At the same time, the design of training content in a cycle of increasing difficulty, as some experts interviewed mentioned, helps maintain appropriate and sustainable exercise intensity.

Second, the analysis of students' attitudes and perceptions towards Pencak Silat training provided positive evidence of the educational effectiveness of this martial art. Most students not only clearly felt the physical benefits but also showed psychological and cultural attachment. High scores on criteria such as “wanting to continue training”, “feeling interested” or “appreciating cultural values” showed that Pencak Silat is not simply a physical activity but also a tool to enhance personal qualities and community spirit.

This view is completely compatible with the body-mind integration theory in modern physical education. According to Harber (2020), effective physical education must simultaneously create positive emotions, develop willpower and motor skills. Pencak Silat has clearly demonstrated this characteristic through the combination of martial arts techniques, training rituals and team spirit.

However, the study also pointed out a number of factors that hinder the expansion of Pencak Silat in schools. The results in section 3.3 show that factors such as facilities and support from schools have not really met expectations. The lack of specialized gyms, lack of protective equipment, or the lack of specific financial support policies have partly reduced the motivation to practice and teach. This reality coincides with the analysis of the study by Zhang *et al.* (2022), which shows that the higher education system in developing countries often does not invest properly in non-traditional physical subjects such as martial arts.

Another problem is the quality of the teaching staff and coaches. Despite its high reputation, the number of people with in-depth expertise in Pencak Silat is still limited. Universities mostly have to invite coaches from outside

clubs or centers, making it difficult to maintain long-term. This leads to the need to establish a formal Pencak Silat instructor training program at sports schools or physical education departments.

Theoretically, this study has contributed more perspectives on integrating traditional martial arts into university physical education programs. While most current studies still focus on modern sports such as aerobics, gymnastics or football, this study has expanded the scope of application to an under-exploited field but with strong potential in physical and cultural development.

Notably, the research results also show similarities between Vietnam and some countries in the ASEAN region in the approach to Pencak Silat as an educational tool. For example, in Indonesia, the cradle of Pencak Silat, this martial art is integrated from primary to university levels, supported by the state in both budget and coach development policies (Setiawan & Suryani, 2020). This comparison sets out a direction for further research for Vietnam in building similar support policies.

In summary, the discussion shows that Pencak Silat is not only an effective sport in physical development but also has sustainable educational value if properly invested. The positive results from this study can be a premise for proposing policies to develop Pencak Silat in higher education in Vietnam, and at the same time, create a theoretical basis for further research in the field of physical education integrating traditional cultural elements.

Conclusion

The study has demonstrated that Pencak Silat training has a positive and comprehensive impact on the physical quality of students in the higher education environment. The survey and interview results show that students not only significantly improve physical factors such as endurance, flexibility, and reflexes, but also develop personal qualities, team spirit, and discipline through the training process. The positive attitude and high satisfaction of students with Pencak Silat is a testament to the adaptability and educational value of this martial art in the modern context.

In addition, the study also pointed out a number of factors that hinder the widespread implementation of Pencak Silat, including limited facilities, a lack of specialized trainers, and limited support from the school. These challenges require substantial investment in policies, training programs, and finance if Pencak Silat is to become a stable part of the university's physical education system. The limitations of the study are that the survey scope is limited to a number of universities in the Ho Chi Minh City area and the number of interviews is not really large. In the future, further studies should expand the geographical scope, combine practical observation methods, and assess physical fitness to get more comprehensive results. In addition, comparative research between Pencak Silat and other martial arts is also a promising direction for scientific and practical values.

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