



The impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing, Vietnam

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Abstract

This study investigated the impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing (UFM), Vietnam. A total of 440 participants, including 420 students, 12 physical education lecturers, and 8 administrators, were involved in the study. Data were collected through questionnaire surveys, expert interviews, document analysis, and statistical methods. The findings revealed that improving health and reducing academic stress were the primary motivations for participating in pickleball. Students reported positive effects on mental health, particularly in stress reduction, mood improvement, self-confidence enhancement, and anxiety reduction. In addition, pickleball participation contributed to academic well-being through improved study–life balance, increased learning motivation, better concentration, and higher academic satisfaction. However, barriers such as limited time, inadequate facilities, and insufficient organized activities were identified. Based on the findings, several solutions were proposed, including establishing pickleball clubs, expanding facilities, organizing tournaments, and promoting student participation. It was concluded that pickleball is an effective recreational sport that can enhance both mental health and academic well-being among university students.

Keywords: Pickleball participation, mental health, academic well-being, university students, physical activity

Introduction

In recent years, mental health and academic well-being have become important concerns in higher education worldwide. University students are increasingly exposed to various academic, social, financial, and personal pressures that may negatively affect their psychological well-being and learning experiences. Academic workload, examinations, career uncertainty, financial responsibilities, and the transition to independent living often contribute to stress, anxiety, emotional exhaustion, and reduced academic motivation among students. Consequently, promoting mental health and academic well-being has become a major priority for universities seeking to improve student success and overall quality of life.

Research has consistently demonstrated that physical activity plays a significant role in enhancing psychological health and reducing stress among young adults. Regular participation in sports and recreational activities has been associated with lower levels of anxiety and depression, improved mood, greater self-esteem, better social relationships, and higher life satisfaction. In addition to physical health benefits, sports participation can contribute to students' academic well-being by improving concentration, learning motivation, emotional regulation, and study–life balance. Therefore, universities are increasingly encouraged to promote sports participation as part of comprehensive student wellness strategies.

Among emerging recreational sports, pickleball has experienced remarkable growth during the past decade. Originally developed in the United States, pickleball combines elements of tennis, badminton, and table tennis into a game that is easy to learn, enjoyable to play, and suitable for individuals of different ages and skill levels. The sport is played on a relatively small court using lightweight paddles and a perforated plastic ball. Because of

its accessibility and social nature, pickleball has become one of the fastest-growing sports globally.

One of the key characteristics that distinguish pickleball from many traditional sports is its inclusiveness. The sport requires less physical strength and technical complexity than some competitive sports while still providing moderate-to-vigorous physical activity. This makes pickleball particularly attractive to beginners and recreational participants. Furthermore, the doubles format commonly used in pickleball encourages communication, teamwork, and social interaction among players. These features may contribute positively to psychological well-being and social connectedness, both of which are important dimensions of student mental health.

Recent studies have suggested that participation in recreational sports can positively influence mental health outcomes through multiple mechanisms. Physical activity stimulates the release of endorphins and other neurotransmitters associated with positive mood and stress reduction. Participation in sports also provides opportunities for social support, friendship development, and community engagement. Moreover, regular exercise can help students manage academic pressure, improve sleep quality, and maintain healthier lifestyles. As a result, sports participation has increasingly been recognized as an effective strategy for promoting mental health among university students.

In Vietnam, concerns regarding student mental health have become more prominent in recent years. The rapid expansion of higher education, increasing academic competition, and changing social conditions have created new challenges for university students. Several studies have reported that many students experience moderate to high levels of stress, anxiety, and academic pressure during their university years. Consequently, universities have begun

paying greater attention to activities that support student well-being and mental health promotion.

At the same time, pickleball has recently emerged as a popular recreational sport in Vietnam. The number of pickleball courts, clubs, tournaments, and recreational groups has increased rapidly in many cities, including Ho Chi Minh City. University students have shown growing interest in the sport because of its affordability, accessibility, and enjoyable nature. Despite this rapid growth, scientific research examining the educational and psychological impacts of pickleball participation in Vietnam remains limited.

At the University of Finance – Marketing (UFM), pickleball has gradually attracted attention among students as a recreational and health-promoting activity. Informal student groups and community-based pickleball activities have become increasingly common. However, there is currently limited empirical evidence regarding how participation in pickleball may influence students' mental health and academic well-being. Understanding these effects is important because positive mental health contributes not only to personal well-being but also to academic achievement, learning engagement, and student retention.

Academic well-being is a multidimensional concept that refers to students' positive experiences and functioning within educational settings. It includes satisfaction with learning, motivation to study, academic confidence, concentration, emotional balance, and the ability to manage academic demands effectively. Students who experience higher levels of academic well-being are more likely to demonstrate stronger academic performance, greater persistence, and better overall educational outcomes. Therefore, identifying activities that support academic well-being is an important objective for higher education institutions.

Although previous studies have examined the relationship between physical activity and mental health, relatively few studies have specifically focused on pickleball participation among university students. Furthermore, little research has been conducted within the Vietnamese higher education context, particularly at the University of Finance – Marketing. This lack of empirical evidence represents an important research gap that warrants further investigation.

Therefore, this study was conducted to examine the impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing, Vietnam. Specifically, the study aims to investigate participation characteristics, identify perceived mental health benefits, evaluate the relationship between pickleball participation and academic well-being, explore barriers to participation, and propose practical solutions to promote pickleball activities among university students.

The findings of this study are expected to contribute to the growing body of knowledge regarding sports participation and student well-being. In addition, the results may provide useful information for university administrators, physical education lecturers, student affairs departments, and policymakers in developing effective programs that promote physical activity, mental health, and academic success among university students.

Research Design

The study was designed as a descriptive cross-sectional investigation combined with solution-oriented analysis. The

purpose of the study was to examine the opportunities and challenges of digital transformation in physical education within higher education institutions and to identify practical recommendations for improving implementation effectiveness.

Participants

The study was designed as a descriptive cross-sectional investigation combined with solution-oriented analysis. The purpose of the study was to examine the impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing (UFM), Vietnam, and to identify practical solutions to promote participation among university students.

Participants

A total of 440 participants were involved in the study, including:

- 420 students from the University of Finance – Marketing;
- 12 physical education lecturers;
- 8 administrators and student affairs staff.

The student sample was selected using convenience sampling with consideration for gender and year-of-study representation. All participating students had experience playing pickleball for at least three months prior to the survey.

Variables

The study focused on the following variables:

1. Characteristics of pickleball participation;
2. Reasons for participating in pickleball;
3. Perceived effects on mental health;
4. Perceived effects on academic well-being;
5. Barriers to participation;
6. Expert evaluation of development solutions.

Methods

The following methods were employed:

Document Analysis

Relevant scientific publications, policy documents, and previous studies related to physical activity, mental health, academic well-being, and pickleball were reviewed.

Questionnaire Survey

A structured questionnaire was developed to collect data from students regarding participation patterns, psychological outcomes, academic well-being, and barriers to participation.

Expert Interview

Physical education lecturers and university administrators were interviewed to obtain professional opinions regarding the development of pickleball activities at UFM.

Mathematical Statistics

Collected data were processed using SPSS 22.0. Descriptive statistics including frequency, percentage, mean score (Mean), and standard deviation (SD) were used for analysis.

Procedure

The study was conducted through the following stages:

1. Reviewing theoretical and practical literature related to pickleball and student well-being;
2. Developing and validating survey instruments through expert consultation;
3. Administering questionnaires to students;
4. Conducting interviews with lecturers and administrators;
5. Processing and analyzing the collected data;
6. Identifying key findings and proposing solution directions.

Results

Scores collected were statistically analysed using descriptive statistics. The findings are presented below.

Table 1: Characteristics of Pickleball Participation among UFM Students (n = 420)

Participation Frequency	n	%
1–2 sessions/week	128	30.5
3–4 sessions/week	176	41.9
≥ 5 sessions/week	116	27.6

The results in Table 1 indicate that pickleball participation among UFM students was relatively active. The majority of students (41.9%) participated in pickleball three to four times per week, while 27.6% participated five or more times weekly. These findings suggest that pickleball has become a regular recreational and physical activity among a considerable proportion of students.

Table 2: Reasons for Participating in Pickleball

Reason	Mean	SD	Rank
Improve health	4.45	0.66	1
Reduce academic stress	4.31	0.71	2
Enjoyment and recreation	4.18	0.74	3
Social interaction	4.09	0.78	4
Improve physical appearance	3.92	0.81	5

In Table 2, the highest-rated reason for participating in pickleball was improving health (Mean = 4.45), followed by reducing academic stress (Mean = 4.31). Recreation and social interaction were also important motivating factors. These findings indicate that students primarily view pickleball as a health-promoting and stress-relieving activity rather than a competitive sport.

Table 3: Effects of Pickleball Participation on Mental Health

Indicator	Mean	SD	Rank
Reduced stress	4.38	0.68	1
Improved mood	4.29	0.72	2
Increased self-confidence	4.16	0.77	3
Reduced anxiety	4.08	0.79	4

The findings presented in Table 3 demonstrate that pickleball participation had positive effects on students' mental health. Reduced stress received the highest evaluation (Mean = 4.38), followed by improved mood (Mean = 4.29). Students also reported increased self-confidence and lower anxiety levels. These results suggest that regular participation in pickleball contributes positively to psychological well-being.

Table 4: Effects of Pickleball Participation on Academic Well-being

Indicator	Mean	SD	Rank
Better study–life balance	4.34	0.69	1
Increased learning motivation	4.22	0.74	2
Improved concentration	4.15	0.77	3
Higher academic satisfaction	4.07	0.81	4
Greater confidence in learning	3.98	0.84	5

Table 4 shows that students perceived pickleball participation as beneficial to their academic well-being. Better study–life balance received the highest mean score (Mean = 4.34), followed by increased learning motivation (Mean = 4.22) and improved concentration (Mean = 4.15). These findings indicate that participation in pickleball may support students in managing academic demands more effectively.

Table 5: Barriers to Pickleball Participation among UFM Students

Barrier	Mean	SD	Rank
Lack of time due to academic workload	4.27	0.73	1
Limited court facilities	4.12	0.77	2
Lack of organized activities	3.96	0.81	3
Equipment costs	3.71	0.87	4
Lack of playing partners	3.54	0.92	5

The results in Table 5 indicate that the greatest barrier to pickleball participation was lack of time caused by academic workload (Mean = 4.27). Limited court facilities and insufficient organized activities were also identified as significant obstacles. These findings suggest that institutional support and facility development are necessary to encourage greater participation.

Table 6: Expert Evaluation of Solution Directions for Promoting Pickleball Participation

Solution Direction	Mean	SD	Rank
Establish pickleball clubs	4.56	0.58	1
Increase court facilities and equipment	4.48	0.62	2
Organize regular tournaments and events	4.35	0.66	3
Strengthen communication and promotion	4.21	0.71	4
Integrate pickleball into student wellness programs	4.13	0.75	5

According to Table 6, experts identified the establishment of pickleball clubs as the most important solution direction (Mean = 4.56), followed by increasing court facilities and equipment (Mean = 4.48). Regular tournaments and communication campaigns were also considered effective approaches to promote student participation.

Overall, the results demonstrate that pickleball participation contributes positively to both mental health and academic well-being among students at the University of Finance – Marketing. Nevertheless, several barriers related to time constraints, facilities, and program organization continue to affect participation levels. The findings suggest that appropriate institutional support and development strategies can further enhance the benefits of pickleball participation for university students.

Discussion

This study investigated the impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing (UFM), Vietnam. The

findings indicate that pickleball has become an increasingly popular recreational sport among university students and provides substantial benefits for both psychological well-being and academic life. At the same time, the study identified several barriers that may limit participation and highlighted important directions for future development.

One of the most notable findings of this study is the relatively high level of pickleball participation among UFM students. More than two-thirds of the respondents reported participating in pickleball at least three times per week, indicating that the sport has become a regular physical activity for many students. This finding reflects the rapid growth of pickleball worldwide and its increasing popularity in Vietnam. Unlike many traditional sports that require extensive facilities, advanced skills, or high physical demands, pickleball is relatively easy to learn and accessible to individuals with different levels of athletic experience. These characteristics may explain why university students are increasingly attracted to the sport.

The findings also revealed that improving health and reducing academic stress were the primary reasons for participating in pickleball. This result is consistent with previous research indicating that health promotion is one of the strongest motivations for sports participation among university students. Students today face numerous academic pressures, including examinations, assignments, project deadlines, and career-related concerns. Consequently, recreational sports such as pickleball provide an effective outlet for stress management and emotional recovery. The social and enjoyable nature of pickleball may further enhance its attractiveness as a recreational activity.

A particularly important finding of this study is the positive impact of pickleball participation on mental health. Students reported significant improvements in stress reduction, mood enhancement, self-confidence, and anxiety management. Among these indicators, stress reduction received the highest evaluation. This finding supports the growing body of evidence demonstrating that regular physical activity contributes positively to psychological well-being. Participation in sports stimulates physiological processes associated with improved emotional states, including the release of endorphins and other neurotransmitters that help regulate mood and reduce stress.

Furthermore, pickleball may provide psychological benefits beyond those associated with physical activity alone. The sport is commonly played in doubles format, requiring communication, cooperation, and social interaction among participants. Such social engagement can strengthen interpersonal relationships and create a sense of belonging within a community. Social connectedness has been widely recognized as an important protective factor against psychological distress among university students. Therefore, the mental health benefits identified in this study may result from both the physical and social dimensions of pickleball participation.

Another significant contribution of this study is the identification of positive effects on academic well-being. Students reported improvements in study-life balance, learning motivation, concentration, academic satisfaction, and confidence in learning. The highest-rated outcome was better study-life balance, suggesting that participation in pickleball helps students manage academic demands while maintaining personal well-being. These findings are particularly important because academic well-being has

become a major concern in higher education institutions worldwide.

The positive relationship between sports participation and academic well-being may be explained through several mechanisms. First, regular physical activity contributes to better physical fitness and energy levels, which can improve students' ability to focus on academic tasks. Second, participation in recreational activities provides opportunities for psychological recovery from academic stress, thereby reducing emotional exhaustion. Third, involvement in sports can enhance self-discipline, time-management skills, and self-confidence, all of which are beneficial for academic success. Consequently, pickleball should not be viewed solely as a recreational activity but also as a potential contributor to student academic development.

Despite these positive findings, several barriers to participation were identified. The most significant obstacle was lack of time due to academic workload. This result is not surprising because university students often face competing demands from coursework, examinations, internships, part-time employment, and personal responsibilities. Similar findings have been reported in studies examining participation in other forms of physical activity among university students. Therefore, universities should consider providing more flexible opportunities for sports participation that can accommodate students' academic schedules.

Limited court facilities and insufficient organized activities were also identified as important barriers. Although interest in pickleball has increased rapidly, infrastructure development has not always kept pace with growing demand. Many students reported difficulties accessing appropriate facilities or finding organized opportunities to participate. These findings suggest that institutional investment in sports infrastructure and activity organization is essential for supporting long-term participation.

The expert evaluation provided additional insights into future development strategies. The establishment of pickleball clubs received the highest evaluation among proposed solutions. Student sports clubs can provide structured opportunities for participation, social interaction, skill development, and event organization. Experts also emphasized the importance of expanding facilities and organizing regular tournaments. These activities may help maintain student interest, increase participation rates, and strengthen the campus sports culture.

Overall, the findings of this study suggest that pickleball has considerable potential as a health-promoting and student-centered activity within higher education institutions. The sport appears to contribute positively to mental health, academic well-being, and social engagement while remaining accessible to a broad range of students. However, maximizing these benefits requires appropriate institutional support, including facility development, club establishment, activity organization, and awareness promotion.

Therefore, universities should consider incorporating pickleball into broader student wellness and recreational sports programs. Such initiatives may not only improve physical activity participation but also contribute to healthier, happier, and more academically successful student communities. In the context of increasing concerns regarding student mental health, pickleball may serve as a practical and sustainable approach to enhancing student well-being in higher education settings.

Conclusion

This study examined the impact of pickleball participation on students' mental health and academic well-being at the University of Finance – Marketing, Vietnam. The findings revealed that pickleball has become an increasingly popular recreational sport among university students and provides substantial benefits beyond physical fitness.

The results indicated that students primarily participated in pickleball to improve their health, reduce academic stress, and enjoy recreational experiences. Regular participation was associated with positive mental health outcomes, particularly in terms of stress reduction, mood improvement, increased self-confidence, and lower levels of anxiety. These findings suggest that pickleball can serve as an effective activity for supporting students' psychological well-being in the university environment.

The study also demonstrated that pickleball participation contributes positively to academic well-being. Students reported better study–life balance, higher learning motivation, improved concentration, greater academic satisfaction, and enhanced confidence in learning. These outcomes indicate that participation in recreational sports may help students manage academic demands more effectively while maintaining overall well-being.

Despite these benefits, several barriers continue to affect participation. The major challenges identified in this study included limited time due to academic workload, inadequate court facilities, insufficient organized activities, and limited opportunities for regular participation. These constraints may reduce the potential benefits that students can obtain from engaging in pickleball activities.

Based on the empirical findings, five major solution directions were proposed: establishing pickleball clubs, expanding court facilities and equipment, organizing regular tournaments and recreational events, strengthening communication and promotional activities, and integrating pickleball into student wellness and health promotion programs. These solutions may contribute to increasing participation rates and maximizing the positive impacts of pickleball on student well-being.

Overall, this study concludes that pickleball participation has a significant positive influence on both mental health and academic well-being among students at the University of Finance – Marketing. The sport provides an accessible, enjoyable, and socially engaging form of physical activity that supports students' psychological health, academic performance, and quality of life. Therefore, universities should consider promoting pickleball as part of a comprehensive strategy for enhancing student wellness, fostering healthy lifestyles, and creating a more supportive educational environment.

Future studies may expand the research scope by involving students from multiple universities, examining gender differences, and investigating the long-term effects of pickleball participation on academic achievement, social connectedness, and overall quality of life.

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