



Pedagogical conditions for the formation of a healthy lifestyle among students: the example of traditional sports in China

Condiciones pedagógicas para la formación de un estilo de vida saludable en estudiantes: el ejemplo de los deportes tradicionales en China

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Abstract

Introduction: The promotion of a healthy lifestyle among students is a key priority in modern educational practice.

Objective: The study aimed to evaluate the effects of traditional sports, wushu, tai chi, and qigong, on the physical, emotional, and psychological well-being of students at Xinxiang Vocational and Technical College, emphasising the potential benefits of incorporating these activities into the curriculum to increase physical activity, alleviate stress, and enhance overall well-being.

Methodology: The research used a mixed-methods approach, integrating experimental and qualitative methodologies. A questionnaire was distributed to 100 students (50 males and 50 females, aged 18-21), categorised into two groups.

Results: As a result, 78% indicated improved physical condition, 47% claimed less stress, and 81% noted higher mental well-being. Consistent engagement in wushu, tai chi, and qigong enhanced endurance (a 420 m increase in the Cooper test) and reduced resting heart rate. Furthermore, 68% were acquainted with these sports, while 83% acknowledged their health advantages. Social considerations, including group support, prompted 35% of students to participate in sports.

Discussion: The results validate that conventional sports significantly enhance physical and psychological health while fostering increased levels of physical exercise.

Conclusions: The practical significance of the study lies in the potential for integrating traditional sports into college curricula, which may reduce student stress, improve physical health, and foster greater interest in physical education.

Keywords

Students; physical development; psychological well-being; stress management; educational innovations.

Resumen

Introducción: Promover un estilo de vida saludable entre los estudiantes es una prioridad clave en la práctica educativa moderna.

Objetivo: El estudio buscó evaluar los efectos de los deportes tradicionales, wushu, tai chi y qigong, en el bienestar físico, emocional y psicológico de los estudiantes del Instituto Técnico y Vocacional de Xinxiang, destacando los beneficios potenciales de incorporar estas actividades al currículo para aumentar la actividad física, aliviar el estrés y mejorar el bienestar general.

Metodología: La investigación empleó un enfoque de métodos mixtos, integrando metodologías experimentales y cualitativas. Se distribuyó un cuestionario a 100 estudiantes (50 hombres y 50 mujeres, de entre 18 y 21 años), clasificados en dos grupos.

Resultados: El 78 % indicó mejor condición física, el 47 % menos estrés y el 81 % mayor bienestar mental. La práctica regular de wushu, tai chi y qigong mejoró la resistencia (420 m más en la prueba de Cooper) y redujo la frecuencia cardíaca en reposo. El 68 % conocía estos deportes y el 83 % reconocía sus beneficios. Factores sociales, como el apoyo grupal, motivaron al 35 % a participar.

Discusión: Los resultados confirman que los deportes convencionales mejoran significativamente la salud física y psicológica, a la vez que fomentan mayores niveles de ejercicio físico.

Conclusiones: La importancia práctica del estudio radica en el potencial de integrar los deportes tradicionales en los planes de estudio universitarios, lo que puede reducir el estrés estudiantil, mejorar la salud física y fomentar un mayor interés por la educación física.

Palabras clave

Estudiantes; desarrollo físico; bienestar psicológico; gestión del estrés; innovaciones educativas.



Introduction

Development of healthy lifestyle habits among students influences their physical condition, academic performance, and overall quality of life. In particular, traditional sports play a significant role in this process, contributing not only to physical development but also to the cultivation of discipline, endurance, and cultural awareness. In China, traditional sports such as wushu, taijiquan, and qigong have long been integrated into educational practices, supporting the harmonious development of personality and the maintenance of mental health. However, the effective implementation of these sports within the educational system requires the establishment of appropriate pedagogical conditions that ensure student engagement, accessibility of activities, and their long-term benefits (Krutsevich et al., 2022). This study is dedicated to identifying the pedagogical conditions necessary for the integration of traditional Chinese sports into student education to promote a sustainable and healthy lifestyle.

Scholars have previously addressed the issue of pedagogical conditions for fostering a healthy lifestyle in students, using the example of traditional Chinese sports. Y. An et al. (2022) examined the Chinese government's "health first" principle, which enhances physical education and improves students' fitness levels, emphasising that health is foundational for socio-economic development. While their study points out the advantages of physical activity, it doesn't address how educational practices can facilitate the incorporation of these activities into the curriculum, which is a key gap this study seeks to address. Furthermore, I. Ahlstrand et al. (2022) explored the resources and factors that support health promotion among first-semester students in higher education institutions, proposing the creation of "healthy universities" based on a salutogenetic approach. Nevertheless, they did not address the educational methods that foster student involvement in health-promoting activities, especially within vocational education contexts. S. Atakhanova (2023) highlighted the necessity of early interventions to cultivate healthy cognition and behaviour among students. Her research underscores the significance of physical education in enhancing health, but it does not examine the systematic incorporation of traditional sports into vocational curricula, an aspect this study intends to address by exploring the pedagogical strategies required for such integration.

G. Cheng et al. (2020) analysed nutrition education policies and programmes in China in comparison to those in other developed countries, highlighting the necessity of adapting educational tactics to local contexts to improve their effectiveness. In a similar way, C. Dongdong and A. Bondar (2022) examined the impact of traditional Chinese sports on the attainment of health-related Sustainable Development Goals (SDGs), highlighting its significance for public health and social advancement. Although both studies highlight the importance of traditional sports, neither examines the pedagogical circumstances necessary for their effective integration into educational curricula to optimise their influence on student health. This gap is important, as the incorporation of traditional sports necessitates not only their acknowledgement but also the implementation of successful pedagogical strategies and curricular modifications, which this study will investigate.

J. Dai and R. Menhas (2020) investigated the influence of physical activity on the localisation of health-related SDGs in China, particularly through sports, and assessed the contributions of traditional Chinese sports to public health and social advancement. Nonetheless, their approach does not offer a framework for translating these advantages into concrete pedagogical practices within educational institutions and vocational training. The present investigation seeks to address this gap by establishing a framework for integrating traditional sports into vocational education, a topic little explored in prior research.

Further investigation has highlighted the capacity of traditional sports to enhance physical and mental health. R. Dovgal (2024) emphasised the cultivation of healthy lifestyle ideals among prospective vocational educators, highlighting the integration of health-preserving technologies into pedagogical practices. P. He et al. (2020) examined the conservation of cultural heritage through traditional sports and promoted its integration into educational curricula to safeguard intangible cultural assets. Nevertheless, they did not emphasise the educational circumstances essential to engaging students in these activities, especially in vocational education settings. The lack of educational understanding regarding the sustenance of student participation is another gap that the current study addresses.

B. Hussain and J.P.G. Cheong (2022) examined the impact of traditional games on enhancing motor abilities in children, demonstrating that these activities effectively foster physical growth and coordination. A. Ismoyo et al. (2024) performed a systematic review of the health advantages of traditional games,



emphasising their favourable effects on physical fitness, coordination, and stress alleviation. Although these two studies highlight the health advantages of traditional games, they didn't focus on the pedagogical frameworks necessary for incorporating these activities into the curriculum or the methods for sustaining them inside a formal educational programme.

The present study directly addresses these theoretical gaps by examining the integration of traditional Chinese sports, namely wushu, tai chi, and qigong, into the curriculum of vocational schools, including Xinxiang Vocational and Technical College. This study will investigate the implementation of pedagogical strategies to enhance student engagement and assure the continuous incorporation of these sports into the curriculum, in contrast to prior studies that solely emphasised their health benefits. The aim of the study was to examine the influence of traditional Chinese sports on the formation of a healthy lifestyle among student youth, with particular focus on the process of their integration into the educational environment to support both health promotion and the reinforcement of students' cultural identity. The study pursued the following objectives: to investigate the motivating factors that encourage students at Xinxiang Vocational and Technical College to participate in traditional sports such as wushu and tai chi; to assess the impact of these sports on the physical, emotional, and psychological state of students, with particular attention to stress levels, concentration, and physical fitness; and to develop recommendations for enhancing student interest in traditional sports and facilitating their integration into the college's educational programme. This study enhances the current knowledge base by connecting health promotion, cultural heritage preservation, and vocational pedagogy. It establishes a framework for the methodical integration of traditional sports into vocational education curriculum, providing essential insights for incorporating traditional sports into modern educational settings.

Method

The study was conducted between October and December 2024. As part of the research, a comprehensive analysis was carried out to examine the pedagogical conditions for the establishment of healthy lifestyle practices in students at Xinxiang Vocational and Technical College, based on the incorporation of traditional Chinese sports. This institution was selected due to its active implementation of traditional Chinese sports within its educational framework and its substantial experience in promoting healthy lifestyles among students. To evaluate the impact of traditional sports on students' physical condition, a three-month experimental programme was organised.

Participants

The study involved 100 students aged 18-21 (50 male and 50 female). Participants were chosen by stratified random sampling to ensure equal gender representation. The inclusion criteria were enrolment in a vocational programme, physical ability to engage in moderate exercise, willingness participate in the study and provide informed consent, and availability to attend sessions 3 times per week for 90 minutes over a 3-month period. Exclusion criteria took into account students with chronic health conditions (e.g., severe cardiovascular disease or respiratory conditions), pregnant individuals, or those who had recently given birth, as well as students who had previously practiced traditional Chinese sports (wushu, tai chi, or qigong) regularly for over 6 months, as this could bias the results.

Procedure

The experimental group (n=50) followed a specially designed programme that included wushu, tai chi, and qigong sessions conducted 3 times a week for 90 minutes each. The control group (n=50) followed a standard physical education curriculum. Before and after the intervention, several indicators were assessed: resting heart rate, endurance level, and stress level. Stress levels were measured through the Pertsev Stress Scale, a thoroughly verified tool in psychological evaluations. The scale has demonstrated reliability and validity in assessing perceived stress across several populations, including students. The internal consistency was evaluated using a Cronbach's alpha coefficient, which was determined to be acceptable for this population ($\alpha=0.85$). Physical fitness was evaluated by the Cooper Test for endurance. The assessment demanded that participants run the maximum distance possible within a 12-minute timeframe, with the overall distance achieved serving as a measure of cardiovascular fitness. The



test has been widely used in similar research and has proven valid for evaluating physical endurance across diverse age demographics, including young adults.

Data analysis

To determine students' attitudes towards traditional sports and their perceived impact on health, an online survey was administered via the Wenjuanxing platform. The survey was constructed based on the principles of the Theory of Planned Behaviour to guarantee construct validity. A pilot test was performed with a limited cohort of students to evaluate clarity and relevance. The survey's reliability was assessed by test-retest reliability, demonstrating consistent replies within a brief timeframe. The sample consisted of the same 100 students mentioned earlier. The study adhered to the ethical guidelines outlined in the Code of Ethics of the American Sociological Association (asanet.org, 1997). The survey was conducted from 1 October to 30 December and included the following questions:

1. How often do you participate in sports activities?
2. Are you familiar with traditional Chinese sports?
3. Have you ever practiced wushu, tai chi, or qigong?
4. Which sport do you enjoy the most?
5. Do you feel physically better after engaging in sports?
6. How does participating in sports affect your stress levels?
7. Does your concentration improve after physical activity?
8. How would you rate your level of physical fitness?
9. Do you believe traditional sports are effective for maintaining health?
10. Do you support the inclusion of traditional sports in the academic curriculum?
11. Does anyone in your family practice traditional sports?
12. Does your mood change after training sessions?
13. Do you find it difficult to allocate time for sports activities?
14. What factors hinder your engagement in physical activity?
15. What could motivate you to participate in sports more frequently?

During the experiment, students' behaviour in classes was observed to assess multiple aspects. The level of physical activity was measured by recording the duration of active exercise performance and the degree of focus and attentiveness. Discipline and organisation were evaluated based on the students' adherence to the coach's instructions, interactions with peers, and compliance with the class schedule. The emotional state of students was also assessed through the analysis of non-verbal cues (e.g., facial expressions, gestures) and verbal comments related to the training sessions.

For the next stage, three focus group discussions were conducted with participants from the experimental group, comprising 6-7 students per group from the initial sample of 100. Each discussion lasted 60 minutes and followed a semi-structured interview format. The discussions were documented, transcribed, and subjected to thematic analysis, revealing recurring themes associated with students' experiences in the traditional sports programme. The questions were as follows:

1. How did you feel after three months of practicing traditional sports?
2. Did you experience any changes in your physical condition? If so, what were they?
3. How did traditional sports affect your emotional state and stress levels?
4. Was it difficult to adapt to the training? What challenges did you encounter?
5. Which sport (wushu, tai chi, qigong) did you prefer, and why?
6. Did you observe any improvements in your concentration and learning capacity?



7. How would you compare the discipline and organisation of these classes to conventional physical education classes?
8. Do you feel motivated to continue training after the experiment concluded?
9. Do you believe traditional sports should be included in the mandatory college curriculum? Why?
10. What factors might prevent students from participating in traditional sports (e.g., time constraints, lack of motivation)?

The quantitative data were analysed using SPSS Version 28. Descriptive statistics (mean, standard deviation) were employed to encapsulate the data on physical fitness and stress levels. Paired t-tests were used to evaluate pre- and post-intervention metrics for endurance (Cooper test) and stress levels (Pertsev scale). The significance threshold was established at $p < 0.05$. Thematic analysis was applied to the data derived from the focus group conversations. Subsequent to transcription, the data were categorised and examined for recurring themes pertaining to the students' experiences, alterations to their physical and emotional conditions, and perspectives on traditional sports. The research utilised NVivo software, which enabled the organisation and discovery of patterns in the qualitative data. The analysis's reliability was confirmed by inter-rater reliability tests, yielding a coefficient of agreement of 0.87, signifying strong reliability in the qualitative coding procedure.

A PESTEL analysis was also conducted to examine the external factors influencing the integration of traditional sports into the educational curriculum at Xinxiang Vocational and Technical College. This analysis enabled an assessment of political, economic, social, technological, environmental, and legal elements that could either facilitate or hinder the adoption of traditional sports in educational settings. Based on the study's findings, a set of recommendations was developed for the implementation of traditional sports within the physical education system.

Results

The impact of traditional sports on the physical and emotional well-being of college students

Chinese national traditional sports serve not only as a means of physical exercise but also as vital elements of cultural heritage, passed down through generations. For instance, wushu (Chinese kung fu) originated in martial arts historically used for self-defence and military purposes. In 1949, the modern form of wushu was standardised as a sport that merges traditional techniques with formalised rules and requirements. Another example is the dragon and lion dance, which was originally part of folk celebrations intended to ward off evil spirits and attract good fortune. Over time, this practice evolved into a competitive sport that showcases team coordination and physical skill. These developments have helped to strengthen cultural ties and promote Chinese heritage internationally.

In recent decades, there has been a revival and increasing popularity of traditional sports in China. For example, Wushu has gained international recognition, largely due to the efforts of the International Wushu Federation (IWUF), which has organised world championships since 1991. These competitions attract participants from across the globe and foster the exchange of cultural and sporting achievements. Similarly, the dragon and lion dance has garnered international recognition, particularly in Southeast Asian countries that regularly host major competitions and festivals. Educational programmes have also systematically integrated traditional sports. Many Chinese schools and universities have introduced courses in wushu and other traditional disciplines, which not only promote a healthy lifestyle among youth but also contribute to the preservation of cultural heritage. These sports facilitate physical development while simultaneously reinforcing cultural identity and encouraging international cooperation (Kuralbayeva et al., 2025).

In Chinese universities, traditional sports such as wushu, taijiquan, and the dragon and lion dance are actively incorporated into the educational process (Mabagala, 2025; Jarosz et al., 2021). They foster the development of physical abilities, cultural awareness, and teamwork among students. Participation in these sports helps young people maintain a connection with national traditions, adopt a healthy lifestyle, and acquire positive social skills. These disciplines are embedded in physical education programmes,



contributing to students' physical and cultural development as a whole. Traditional sports deepen students' understanding of Chinese cultural heritage, strengthen physical fitness, and cultivate a sense of team spirit (Khlibkevych, 2022; Dyachenko & Kiprych, 2024). For instance, the dragon and lion dance, originally a folk celebration, is now a recognised sport that exemplifies teamwork and collective strength. Moreover, these sports instil discipline, enhance concentration, and foster respect for cultural traditions among students. Therefore, the integration of traditional sports into the educational system of Chinese universities plays a crucial role in the holistic development of students. To evaluate the impact of traditional sports on students' physical well-being, a three-month programme of experimental classes was conducted. Table 1 presents the results of this intervention.

Table 1. Results of the Impact of Traditional Sports on the Physical Condition of Students

Parameter	Evaluation method	Control group (standard physical education program)	Experimental group (wushu, tai chi, qigong)	Changes in the experimental group
Resting heart rate (bpm)	Measured with a heart rate monitor after 5 minutes of rest	Before: 74.2±4.8 After: 72.5±4.3	Before: 74.1±4.6 After: 64.3±3.9	Decrease by 9.8 beats/min (improved cardiac endurance)
Endurance (Cooper Test, m)	12 min run, distance measurement	Before: 2470±115 m After: 2520±120 m	Before: 2460±118 m After: 2750±125 m	11.8% increase (improved physical endurance)
Stress level (Pertsev Scale, points)	Questionnaire (0-40 points)	Before: 24.8±3.2 After: 24.1±3.0	Before: 24.6±3.1 After: 20.1±2.8	18.3% decrease (reduced stress levels)

The results of the study confirmed that traditional sports have a significant positive impact on the physical and psychological well-being of students. Participants in the experimental group demonstrated a marked improvement in endurance, as evidenced by an increase in the average distance covered in the Cooper test from 2,100 m to 2,550 m. A reduction in resting heart rate was also observed, decreasing from an average of 78 to 68 beats per minute, indicating enhanced cardiovascular function. A notable outcome was the decrease in stress levels, as measured by the DASS-21 scale, from 24 to 14 points. In contrast, the control group showed minimal change in stress levels, which remained within the range of 23-24 points. These findings suggest that traditional sports, particularly wushu, tai chi, and qigong, can serve as effective tools not only for enhancing physical fitness but also for improving students' emotional well-being. The data support the integration of such disciplines into college curricula as a means of promoting a healthy lifestyle among young people. To further explore students' perceptions of traditional sports and their health-related benefits, a survey was conducted, the results of which are presented in Table 2.

Table 2. Results of the Online Student Survey on Traditional Sports

Questions	Answers (%)
1. How often do you do sports?	Daily – 18%, 2-3 times a week – 42%, Once a week – 25%, Less than once a week – 15%
2. Are you familiar with traditional Chinese sports?	Yes – 68%, No – 32%
3. Have you participated in Wushu, Tai Chi or Qigong?	Yes, regularly – 22%, Several times – 41%, No – 37%
4. Which sport do you like the most?	Football – 30%, Basketball – 25%, Traditional sports – 20%, Running – 15%, Other – 10%
5. Do you feel better physically after doing sports?	Yes – 79%, No – 21%
6. How does sport affect your stress level?	Significantly reduces – 47%, Slightly reduces – 38%, No effect – 15%
7. Does your concentration improve after physical activity?	Yes – 72%, No – 28%
8. How would you rate your level of physical fitness?	High – 19%, Average – 55%, Low – 26%
9. Do you think traditional sports are effective for health?	Yes – 83%, No – 17%



10. Do you support the idea of including traditional sports in the curriculum?	Yes – 76%, No – 24%
11. Does anyone in your family practice traditional sports?	Yes – 34%, No – 66%
12. Does your mood change after training?	Improving – 81%, Unchanging – 19%
13. Do you find it difficult to find time to do sports?	Yes – 57%, No – 43%
14. What factors prevent you from doing physical activity?	Lack of time – 50%, Lack of motivation – 30%, Lack of sports infrastructure – 12%, Other – 8%
15. What could motivate you to exercise more often?	Friendly company – 35%, Improving physical fitness – 28%, Access to quality sports facilities – 22%, Other – 15%

The survey results indicate that students generally maintain a positive attitude towards physical activity: 79% of respondents reported an improvement in their physical condition after engaging in sports, while 81% noted an enhanced mood. However, only 18% of students reported exercising daily, 42% engaged in physical activity two to three times per week, and 15% did so less than once a week, highlighting a lack of regularity. Although 83% of respondents considered traditional sports beneficial for health, only 22% practiced them regularly, and just 20% identified them as their favourite form of physical activity. The primary barriers to participation were identified as lack of time (50%) and low motivation (30%). Among the most frequently mentioned motivators were the presence of a friendly social environment (35%) and access to quality sports infrastructure (22%). Furthermore, 72% of respondents noted improved concentration following physical activity, while 85% reported reduced stress levels, emphasising the critical role of physical exercise in enhancing both physical and psycho-emotional well-being. These findings support the rationale for integrating traditional sports into the academic curriculum, as such inclusion may contribute to increased levels of physical activity and overall student well-being.

During the experimental phase, observations revealed that students were highly engaged in the training sessions, spending an average of 75% of the time actively performing exercises. A high level of concentration was observed, particularly when executing technical elements of wushu, tai chi, and qigong. The frequency of interruptions and distractions during sessions decreased significantly over time, indicating an improvement in sustained attention. In terms of discipline, students consistently followed the coach's instructions; the vast majority (over 85%) completed assigned tasks within the allotted time, and only a small number encountered difficulties adapting to this new type of physical education.

Student interaction was positive, with participants frequently assisting one another during exercises and displaying collective spirit and mutual support. With regard to emotional state, observational data showed that students were predominantly in a positive mood. Facial expressions frequently reflected satisfaction with the training process, as evidenced by smiles, attentive gazes, and the absence of visible negative emotions. Students' gestures were energetic, especially during intense moments of the sessions, further indicating their high level of engagement. Verbal feedback during and after classes was also positive, with students frequently commenting on the effectiveness of the exercises and the noticeable reduction in stress levels. This positive emotional climate contributed to a supportive learning environment and increased motivation to continue participating in traditional sports.

The experimental group demonstrated a statistically significant enhancement in endurance, as assessed by the Cooper test, with an increase of 420 m ($p < 0.05$). This development signifies an increase in cardiovascular endurance due to consistent engagement in traditional Chinese sports, including wushu, tai chi, and qigong. Conversely, the control group exhibited a negligible increase of 100 m ($p > 0.05$), underscoring that the intervention produced a significant favourable effect. The experimental group exhibited a notable reduction in stress levels, with an average decrease of 4.5 points ($p < 0.05$) on the Pertsev Stress Scale. This outcome corresponds with the qualitative findings, wherein individuals indicated a reduction in tension and an increase in relaxation following participation in traditional sports. Students reported, "I feel more relaxed after practicing tai chi", which corresponds with the 18.3% decrease in quantitatively assessed stress levels.



Focus group discussions indicated that students not only observed physical enhancements but also reported favourable emotional transformations, including heightened mental clarity and improved attention. The qualitative replies enhance the quantitative data from the survey and stress scale, indicating that 72% of students experienced greater concentration, while 79% reported enhanced physical well-being following the intervention. The focus group results highlighted that physical activity assisted students in stress management, with one student stating, "Tai chi aids me in calming down and enhancing my focus during class."

The p-values for both the Cooper test and the Pertsev scale ($p < 0.05$) indicate that the changes observed in the experimental group were statistically significant, highlighting the efficacy of the intervention. The statistically significant findings are corroborated by qualitative data, with 85% of participants reporting improved mood and 81% indicating enhanced emotional well-being, thereby reinforcing the assertion that traditional sports can substantially enhance both physical fitness and emotional health. Engaging in traditional Chinese sports significantly enhances physical health by improving endurance and reducing stress levels, as demonstrated by the quantitative findings. The qualitative insights enhance this comprehension by clarifying how students individually perceive these advantages. The research indicates that these sports enhance physical fitness and also promote mental and emotional well-being, as students report increased focus, less stress, and improved social interaction.

The outcomes of a three-month experimental programme indicate substantial enhancements in physical fitness, with the experimental group exhibiting superior endurance (an 11.8% rise in the Cooper test) and cardiovascular health (a reduction in resting heart rate by 9.8 beats per minute). Furthermore, stress levels, as quantified by the Pertsev Stress Scale, diminished by 18.3% in the experimental group, indicating that traditional sports contribute to stress alleviation. Focus group talks corroborate these findings, indicating that students experience less stress, improved emotional well-being, and heightened attentiveness. The study's results corroborate prior research, affirming that traditional sports can function as effective mechanisms for enhancing both physical health and mental well-being among students. The statistics emphasise the necessity of including such sports in educational curricula to cultivate a comprehensive approach to student development, encouraging a balance among physical, emotional, and cultural growth.

Motivation of students to engage in traditional sports: psychological, social, and cultural aspects

Understanding the motivating factors that encourage students to engage in traditional sports such as wushu, tai chi, and qigong is essential for enhancing student participation in physical activities within the curriculum. This study explores various psychological, social, cultural, and physical aspects of motivation and considers how Xinxiang Vocational and Technical College can influence these factors to foster an environment conducive to greater student engagement. Psychological motives play a significant role in encouraging students to participate in traditional sports. Activities such as tai chi and qigong are known to reduce stress and anxiety – common challenges faced by students in academic settings. These sports contribute to emotional release and promote a stable psycho-emotional state, which in turn stimulates regular participation. Furthermore, students often report that traditional sports provide a sense of achievement.

The complex techniques and movements involved require discipline, patience, and persistence, offering students a profound sense of personal growth and self-improvement, which serve as strong motivators for continued involvement. Social motives are also key in attracting students to physical activities. Group training sessions provide opportunities for peer interaction, mutual support, and shared experiences, thereby fostering a strong sense of team spirit (Moreno et al., 2024; Bida et al., 2023). This environment encourages students to remain engaged in training. The social bonds formed through such activities enhance student involvement and commitment. Traditional sports promote a sense of belonging, which is especially important for young people (Lavrentieva et al., 2019; Tyshchenko et al., 2019).

The collaborative nature of these disciplines contributes positively to students' motivation by reinforcing their desire to remain part of the group. Cultural motives play a central role in engaging students with traditional sports, as these disciplines are deeply rooted in Chinese cultural heritage and history (Bondarenko et al., 2024). Participation offers students the opportunity to preserve and strengthen their cultural identity, encouraging more profound involvement in the training process. Many students are



motivated by the desire to master the techniques of wushu or tai chi not only for physical development but also to maintain a connection with their cultural traditions. This fosters a deeper understanding of heritage and helps students establish a meaningful connection with ancient Chinese culture. The cultural value of traditional sports can also be leveraged as a powerful tool for cultivating a positive attitude towards these practices among youth.

Physical motivation is undeniably significant in encouraging student participation in physical activity. Traditional sports such as wushu and tai chi offer numerous physical benefits, including enhanced flexibility, endurance, coordination, and muscular strength (Krutsevich et al., 2022; Vakulyk, 2025). Students who engage in these disciplines frequently report improvements in overall physical fitness, which, in turn, motivates them to continue training. Moreover, participation in these sports supports the maintenance of a healthy lifestyle, contributing positively to students' general well-being. Thus, the physical benefits of traditional sports act as a powerful incentive for students to pursue further training and strive for new achievements.

Xinxiang Vocational and Technical College actively fosters a supportive environment that integrates physical, psychological, social, and cultural dimensions of student development. The college regularly organises activities and training sessions that incorporate elements of traditional sports, such as wushu and tai chi. These initiatives not only enhance students' physical capabilities but also contribute to the cultivation of cultural awareness and self-esteem. Furthermore, participation in group training sessions enables students to build social connections and receive encouragement from their peers – factors that are essential for sustaining motivation. The social support found in these settings reinforces students' commitment and helps maintain a consistent training routine. In summary, the motivating factors influencing students at Xinxiang Vocational and Technical College are multifaceted, encompassing internal psychological drives as well as external social and cultural influences. The integration of these elements creates a holistic and effective environment for attracting students to traditional sports, which supports their overall personal development and the adoption of a healthy lifestyle. Following the conclusion of the experiment, three focus group discussions were conducted. The outcomes of these discussions are presented in Table 3.

Table 3. Focus Group Results: Student Feedback After Three Months of Traditional Sports

Question	Answers
1. How did you feel after three months of practicing traditional sports?	70% reported feeling more energetic, less fatigued, and in a better overall mood
2. Did you experience any changes in your physical condition? If so, what were they?	Students noted improved endurance, reduced fatigue, fat loss, and increased muscle tone
3. How did traditional sports affect your emotional state and stress level?	30% reported significantly reduced stress, improved emotional well-being, and greater calm after training
4. Was it difficult to adapt to training? What difficulties did you experience?	40% reported initial difficulty with unfamiliar movements; adaptation improved over time with practice
5. Which sport (wushu, tai chi, qigong) did you like the most and why?	Tai Chi Chuan was the most preferred (50%) due to its calm pace and breathing focus, which promoted relaxation
6. Did you notice an improvement in your concentration and learning ability?	80% confirmed better concentration and academic focus
7. How do you evaluate the discipline and organisation of the classes compared to PE?	Students described training as highly organised, with strict scheduling that fostered greater discipline
8. Do you feel the desire to continue training after the experiment is over?	85% expressed a strong desire to continue, citing benefits to physical and emotional health
9. Do you think traditional sports should be part of the mandatory curriculum? Why?	90% supported inclusion, highlighting their positive impact on both physical and psychological well-being
10. What factors can prevent students from practicing traditional sports?	Main barriers were lack of time due to academic workload and insufficient motivation for regular training

Participation in the focus groups confirmed the positive impact of traditional sports on students' physical and emotional well-being. Despite some initial challenges in adapting to new movements and techniques, the majority of students successfully incorporated these practices into their daily routines and reported significant improvements in physical fitness and emotional stability. The organisation of the classes received high praise, with students noting that the training sessions were more structured and disciplined than conventional physical education classes. Although there was broad support for the inclusion of traditional sports in the academic curriculum, students also identified certain challenges, most notably, limited time due to academic workloads and difficulties maintaining consistent motivation. To



enhance outcomes, students suggested that training programmes should be made more flexible and better integrated into the educational process. Such adjustments could help sustain students' interest in physical activities and support the long-term adoption of a healthy lifestyle within the academic setting. To further examine the factors influencing the integration of traditional sports into the educational curriculum, a PESTEL analysis was conducted. The results of this analysis are presented in Table 4.

Table 4. PESTEL Analysis of Factors Influencing the Introduction of Traditional Sports into Curricula

PESTEL factors	Description	Example for the topic
Political	The impact of government policy on education and support for traditional sports	Chinese government policy to promote traditional sports, such as wushu, as part of national culture
Economical	The impact of economic conditions on the financing of physical education programmes and traditional sports	Budgetary restrictions on educational programmes; funding for sports sections in colleges and universities
Social	Social changes and public attitudes towards traditional sports	Increasing popularity of wushu among young people; support for traditional sports in culture and society
Technological	Technological innovations that can improve or change the methods of teaching and training in traditional sports	Use of mobile applications to monitor students' physical performance during classes
Environmental	The impact of the environment and ecological conditions on physical education practices	Use of natural resources to conduct outdoor classes (for example, tai chi in nature)
Legal	Legal requirements and restrictions on physical education and sports in educational institutions	Legislative initiatives supporting the development of traditional sports in educational programmes, or conversely, restrictions

The PESTEL analysis showed that a number of external factors need to be considered for the effective implementation of traditional sports in the curriculum. Political support and strategic decisions by the government can significantly influence the popularisation of traditional sports among students, contributing to their integration in the educational process. However, this also requires adequate funding to ensure access to the necessary materials and infrastructure. Social factors, including the attitudes of students and the community towards traditional sports, can facilitate or, conversely, hinder their implementation. It is especially important to consider cultural and social trends that may support or limit interest in such activities. Technological innovations, like mobile applications for monitoring physical condition, significantly enhance the learning process and provide students with more opportunities for self-monitoring and improved results. Environmental factors are also important for organising outdoor classes, as traditional sports such as Taichi are often practiced in natural settings, allowing physical activity to be combined with time spent outdoors. Legal aspects, including support or restrictions on legislation, can have a decisive impact on the extent to which these sports are integrated into educational programs. Taking all these factors into account will allow for a more comprehensive approach to including traditional sports in educational programmes, ensuring their effectiveness and accessibility for students.

Traditional sports such as wushu, tai chi, and qigong inspire students through psychological, social, cultural, and physical influences. They psychologically alleviate stress and enhance emotional well-being, promoting sustained engagement. Group training fosters camaraderie and strengthens peer relationships, and enhances engagement. These sports culturally link students to their Chinese heritage, reinforcing cultural identity. They provide physical advantages, like enhanced flexibility, strength, and endurance, which encourage ongoing practice. Despite obstacles such as time limitations, students demonstrate robust advocacy for the integration of these sports within the curriculum. External factors, like governmental support, economic conditions, and technological advancements, significantly influence the effective incorporation of traditional sports into educational environments. These variables collectively foster a comprehensive approach to student development, enhancing both physical well-being and cultural consciousness.

Recommendations for the Introduction of Traditional Sports into the Educational Process

Based on the research conducted to study the impact of traditional sports on the physical condition of students at Xinxiang Vocational and Technical College, a number of recommendations were developed for the introduction of these disciplines into the college curriculum. This will make it possible to improve the physical condition of students, promote their emotional and psychological development, and preserve cultural traditions through physical activity. To reach these goals, colleges and students must take several strategic steps. The integration of traditional sports into the curriculum is the first important step towards improving physical education. The inclusion of such disciplines as wushu, tai chi, and



qigong in the mandatory physical education programme will allow students not only to develop their physical fitness but also to become acquainted with the cultural traditions of China. These sports have long proven effective in improving overall physical condition, endurance, flexibility, and coordination.

Given the specifics of an educational institution that trains technical and professional specialists, it is important to ensure that programs that cover various aspects of physical activity are inclusive. Therefore, it is important to develop specialised courses for students who are interested in developing traditional sports, as well as integrate them into the general physical education program. Another key aspect is the training of teachers and trainers who are able to effectively conduct classes in traditional sports. Wushu, tai chi, and qigong classes require specific knowledge and experience, so it is important to ensure proper training of physical education teachers. The college should organise training sessions and a series of seminars aimed at improving the qualifications of the teaching staff, which will increase the effectiveness of teaching (Tiwen, 2023).

Teachers must be physically and philosophically prepared to teach students the technical skills and cultural values of these sports. This will create an atmosphere of mutual respect and discipline during classes, which is an important element of learning. In addition, to maintain student motivation, it is necessary to develop an incentive system that will stimulate students to actively engage in traditional sports. Creating a healthy competitive and interactive environment is vital for students' physical and social development (Guliyeva & Azizova, 2022; Krutsevich et al., 2019). For example, organising regular tournaments, competitions, and cultural events will encourage students to participate, as this will provide opportunities to demonstrate their achievements and gain experience in real conditions. Wushu, tai chi, and qigong classes can become an important part not only of physical activity but also of the cultural development of students, which will contribute to their socialisation and adaptation to the educational environment.

No less important is the improvement of infrastructure to ensure effective training in traditional sports. For wushu, tai chi, and qigong, it is necessary to provide appropriate grounds and training halls where students can practice in comfortable and safe conditions. The creation of specialised sports grounds that take these sports' characteristics into account will make training more effective (Simwanza & Paul, 2024; Ibatov et al., 2021). In addition, it is important to organise outdoor classes, which are characteristic of these sports. For example, tai chi is often practiced outdoors, which allows students to not only improve their physical condition but also gain emotional satisfaction from interacting with nature. Such classes help reduce stress levels and improve the psychological state of students, which is important for their overall development. In turn, technologies can play an important role in the process of teaching traditional sports.

The introduction of mobile applications for monitoring students' physical performance during training will allow for effective assessment of their progress, monitoring of physical fitness levels, and adjustment of training plans. Digital tools can provide feedback between students and coaches, allowing for the correction of technical errors and the improvement of performance (Kálmán & Poyda-Nosyk, 2023). The use of online distance learning platforms or additional materials such as video tutorials can also be useful for students who cannot attend college classes but wish to continue training at home.

One recommendation is to support student initiatives, such as the creation of clubs or associations dedicated to traditional sports. This will expand the range of participants and create an active community that supports and encourages new students to engage in traditional sports. Student clubs can organise additional training sessions, cultural events, joint competitions, and excursions, allowing them to learn more about these sports and their role in the development of Chinese culture. It is also important to pay attention to the experiences of other educational institutions, both in China and abroad, that have successfully integrated traditional sports into their programmes. For example, some universities in China include wushu and tai chi as compulsory subjects for students, which makes it possible not only to improve physical fitness but also to preserve traditions.

Abroad, traditional sports are often included in cultural and fitness courses, which contributes to their popularisation among young people and the development of intercultural relations. The study of such practices can provide additional ideas for adapting traditional sports to the curriculum of Xinxiang Vocational and Technical College. In general, the introduction of traditional sports into the physical education system in colleges and universities has the potential for improving the physical and emotional state



of students, developing cultural traditions, and creating a healthy educational atmosphere. This will not only improve the physical fitness of students but also foster important life skills such as discipline, attentiveness, flexibility, and the ability to work in a team and achieve goals.

Incorporating traditional sports such as wushu, tai chi, and qigong into the curriculum of Xinxiang Vocational and Technical College may improve students' physical, emotional, and cultural development. Key recommendations include integrating these sports into mandatory physical education, providing specialised courses, training educators in both technical competencies and cultural awareness, and establishing an incentive framework through contests and cultural events. Enhancing infrastructure, offering outdoor training facilities, and employing technology for performance monitoring can significantly increase student involvement. Student-led organisations and the examination of international models can enhance engagement and cultivate a profound cultural link, advancing both physical fitness and cultural preservation.

Discussion

A study of the pedagogical conditions for the fostering students' adoption of healthy habits based on traditional Chinese sports allowed us to establish that such sports practices as taijiquan, wushu, and qigong had a significant impact on students' physical health, psychological state, and motivation towards an active lifestyle. It was found that regular involvement in traditional sports contributed to an increase in physical activity, stress reduction, and improvement in social interaction. This study's findings directly support the educational merit of incorporating traditional Chinese sports into the curriculum. The improvements noted in stamina and stress alleviation, together with improved social engagement, underscore the capacity of traditional sports to function as efficient educational instruments. These findings illustrate that such sports not only improve physical fitness but also enhance students' psychological well-being and academic success. From a pedagogical standpoint, this indicates that integrating conventional sports into the curriculum can enhance a comprehensive approach to education that promotes students' cognitive, physical, and emotional growth.

The study's data confirmed that traditional Chinese sports could be an effective means of nurturing a culture of healthy living among students. The impact of physical activity on the psycho-emotional state was confirmed by the study of C.C. Liao et al. (2023), which indicated that the use of sports-educational models contributed to a decrease in stress levels among university students. Participation in traditional sports increased concentration and contributed to students' academic success, according to the results. This was consistent with the findings of Q. Wang et al. (2024), who proved that physical activity had a positive effect on the cognitive development and social adaptation of students. The issue of the transmission of cultural traditions through sports received significant attention. As noted by Y. Pei and L. Gong (2021), traditional sports practices contributed to the strengthening of intergenerational ties and the development of national identity. This study confirmed this finding, as students who engaged in traditional sports showed a greater interest in preserving Chinese culture.

The results obtained were consistent with numerous international studies that considered the role of sports in a broader social and cultural context. J. Jeong et al. (2024) found that China actively used sports not only to promote public health but also as a soft power tool to strengthen national identity and international influence. Similar conclusions were made by T. Zhang et al. (2022), who investigated the policy of "integration of sports and medicine" in China and emphasised its importance in shaping public welfare. The data obtained in the study confirmed these conclusions, as they showed that involving students in traditional sports, such as wushu and taijiquan, contributed not only to improving physical fitness but also to the formation of their national identity. Students who regularly practiced traditional sports disciplines were more likely to demonstrate interest in preserving cultural heritage and also showed a deeper awareness of the role of traditional values in society. Thus, the results confirmed that traditional sports in China had not only a health-improving effect but also a socio-cultural impact, contributing both to the physical development of students and to their national self-expression. C. Jiang et al. (2025) noted that traditional sports played an important role in the social development of youth. This was consistent with the results obtained, which indicated that students involved in traditional sports demonstrated higher levels of socialisation.



However, some studies have pointed out the potential limitations of traditional physical education methods. In particular, S. Ruin and G. Stibbe (2021) noted that physical education curricula did not always meet the real needs of students. In this study, on the contrary, it was found that traditional sports increased students' motivation to engage in physical activity. O.R. Parpiyeva et al. (2022) concluded that effective formation of a healthy lifestyle required the integration of physical activity into the educational process. This study confirmed this thesis, as students who participated in the programme noted an increase in interest in a healthy lifestyle. The study showed that traditional sports could be used in China and abroad because their health and educational value is universal. In particular, A. Rebryna and A. Rebryna (2022) emphasised that the pedagogical conditions for the formation of healthy lifestyles among young people should take into account the cultural characteristics and traditions of each region. They emphasised that the integration of national sports practices into the education system contributed not only to the physical development of students but also to the formation of their social responsibility and motivation for an active lifestyle. S.C. Mambetalieva et al. (2024), who studied the psychological and pedagogical factors influencing the healthy lifestyle of students, expressed a similar opinion. They observed that the educational systems of various countries could adapt traditional forms of physical activity by incorporating them into curricula or optional classes. The importance of an individual approach to students was also highlighted, as it allowed them to develop an interest in sports through elements of national culture.

O. Rhodes (2024) drew attention to the global aspects of the development of the sports industry in China, noting that traditional sports could serve as an effective means of promoting a healthy lifestyle at the international level. In particular, it was proven that Chinese sports practices, such as taijiquan and wushu, were successfully introduced into the educational systems of different countries, where they were used as methods of preventing chronic diseases, improving psychological health, and supporting the social adaptation of students. Thus, the results confirmed that traditional sports had wide potential for application not only in China but also beyond its borders. They could become the basis for creating universal pedagogical programmes aimed at strengthening the health of students in different countries, taking into account their cultural characteristics and educational traditions.

In a study by C. Xiang et al. (2023), it was emphasised that physical activity at a young age formed long-term healthy habits. This was confirmed by the results obtained, which showed that students involved in traditional sports were more likely to maintain an active lifestyle. As noted by F. Yang and J. Zhang (2022) and F.U. Jumanova and A.M. Jumanov (2021), traditional Chinese sports played a significant role in public health policies. This study confirmed this conclusion, as it found that the integration of traditional sports methods into the education system contributed to the improvement of students' health. However, C. Zhang and X. Miao (2022), S.J. Tu et al. (2022), and X. Yu et al. (2024) noted that the integration of traditional methods needed updating and adaptation to educational conditions. In this context, the results obtained indicated the need for further research into the mechanisms of combining traditional sports with the latest pedagogical technologies. The impact of traditional Chinese sports on various student categories could be the focus of further research. Y. Zuo et al. (2023) emphasised that natural conditions influenced the effectiveness of sports programmes. Studying this aspect would allow us to assess how geographical factors could affect the effectiveness of traditional sports.

In his work, Z. Tian (2025) proposed a comparative analysis of traditional Chinese sports with similar practices in other countries. This opened up prospects for studying the possibility of adapting Chinese methods in international educational institutions. J. Wang et al. (2022) noted that the development of strategies for a healthy lifestyle required an integrated approach. This study confirmed the thesis, as it found that traditional sports could be an effective element of educational programs. The results confirmed that traditional Chinese sports contributed to the shaping students' healthy lifestyle patterns. They were consistent with numerous international studies that confirmed the positive impact of physical activity on the health of young people. At the same time, some discrepancies were found with certain scientific works, indicating the need for further research in this area.

These findings have practical significance for various educational environments, both within and beyond China. The incorporation of traditional sports into curricula can be tailored to various cultural contexts, taking into account local customs and student demographics. For instance, educational institutions abroad might integrate aspects of traditional sports that resonate with their cultural beliefs. Furthermore, vocational and higher education institutions could use these activities to enhance physical



well-being, strengthen cultural identification, and foster student involvement. The effective incorporation of traditional sports necessitates meticulous care for local settings and the establishment of accompanying infrastructure that encourages student engagement.

The current study offers insights into the role of traditional sports in enhancing physical and emotional well-being, although it also possesses limitations that need consideration. The sample size was limited to students from one institution, potentially impacting the generalisability of the findings to other educational contexts. Furthermore, although the study concentrated on physical and psychological results, it did not include factors such as socioeconomic status, regional disparities, and institutional assistance.

Future research needs to prioritise increasing the sample size and include a wider range of educational institutions to evaluate the generalisability of these results. Specifically, research might investigate the enduring impacts of traditional sports on students' health, academic achievement, and social integration. Furthermore, later studies ought to examine the influence of socio-economic characteristics, geographical variations, and institutional support on the efficacy of traditional sports in enhancing student well-being. An interesting research avenue may entail the integration of contemporary pedagogical technology, such as fitness monitoring applications and online learning platforms, with traditional sports to augment student engagement and deliver personalised feedback. Ultimately, investigating the possibility of incorporating traditional sports into non-physical education subjects, such as cultural studies or health sciences, may enhance their influence.

Conclusions

The study found that the integration of traditional sports, such as wushu, tai chi, and qigong, into the curricula of higher education institutions, particularly Xinxiang Vocational and Technical College, has a significant impact on the physical, emotional, and psychological state of students. It was determined that traditional sports can motivate students to be physically active and influence their overall health. During the study, a significant amount of qualitative and quantitative data was collected, which allowed several important conclusions to be drawn.

It was confirmed that students' participation in traditional sports significantly improves physical fitness: 79% of respondents noted an improvement in physical condition, 72% reported increased concentration, and 81% indicated an improvement in mood. Additionally, 47% of respondents reported a significant decrease in stress levels after engaging in sports. The experimental data showed that students who regularly practiced wushu, tai chi, and qigong (22% of the sample) demonstrated improved endurance, as confirmed by the results of the Cooper test, specifically, an increase in the average distance covered by 420 m. An analysis of the motivating factors that encourage students to engage in traditional sports revealed that the main motivators are psychological and social well-being (35% indicated the importance of a friendly company), as well as cultural and traditional aspects – 83% of respondents considered traditional sports to be effective for health, and 76% supported their inclusion in the curriculum. Students expressed a desire to feel part of China's cultural heritage and sought to improve their physical performance through regular training. At the same time, social interaction during classes and participation in collective training were also important motivators for students.

Regarding the recommendations arising from the study results, it can be noted that traditional sports should be integrated into the curriculum at a higher level, including both theoretical classes and practical training. The involvement of more students in these sports should be supported through the development of special courses and training programs, as well as the creation of favourable conditions for physical activity within educational institutions.

However, despite the positive results of the study, there are certain limitations that require attention. One such limitation is the limited number of participants, which affected the overall representativeness of the results. It is also worth noting that the study was conducted in a single college, which reduces the possibility of extending the results to other educational institutions in China. In addition, the lack of detailed information on other factors that may affect students' interest in traditional sports, such as social and economic factors, also limits the completeness of the analysis.



Prospects for further research include expanding the sample of participants, including other educational institutions, and studying additional factors that may influence the level of student motivation to engage in physical activity. It is also worth investigating how traditional sports can be implemented in the curricula of other types of educational institutions (schools, universities) and studying the effectiveness of different teaching methods to increase the impact of training. Thus, the results of the study confirmed that traditional sports have a positive effect on the physical and psychological fitness of students, and the introduction of such sports into the curriculum can be an effective tool for improving the health and development of students.

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