

Teaching Mechanisms for Integrating Traditional Health-Preserving Exercise into University Public Physical Education Courses -- A Case Study of Baduanjin

Huiping Zhang*

Huanghe Science & Technology University, Zhengzhou, 450000, China

*Corresponding author: 18838155897@163.com

Abstract: As college physical education pays more attention to health and traditional culture, Baduanjin has been used more often in public PE classes. Compared with many competitive sports, Baduanjin has slow and gentle movements and does not need special places or equipment. It can also be practiced both in class and after class, so it is suitable for college PE teaching. However, simply bringing Baduanjin into the classroom does not mean that the course has been fully improved. At present, some problems still exist. Course goals often focus mainly on learning the movements. Teaching methods are not varied enough. Health and exercise knowledge is not well included. In-class learning and after-class practice are not closely connected. Assessment also depends too much on students' final movement performance.

This study uses literature review, logical analysis, and inductive analysis. Taking Baduanjin as an example, it discusses several important parts of Baduanjin teaching in college public PE, including course goals, teaching content, classroom teaching, learning assessment, the connection between in-class and after-class practice, and teaching support. Based on this analysis, the study proposes a teaching model of "goal guidance - content integration - teaching improvement - learning and practice integration - assessment and feedback - cultural learning."

Baduanjin teaching should not only focus on learning a set of movements. Movement learning, healthy habits, physical and mental regulation, independent exercise, and cultural understanding should be considered together. Through step-by-step teaching, digital learning materials, after-class practice tasks, and process assessment, Baduanjin can play a better role in health education and traditional culture education in college public PE.

Keywords: traditional health-preserving exercise; Baduanjin; university public physical education; physical education teaching; teaching mechanism; health promotion

1. Introduction

The task of college public physical education is not only to teach students a sports skill. In terms of teaching goals, the course should also pay attention to more practical questions, such as whether students can develop regular exercise habits, whether they are willing to continue exercising after class, and whether they can understand basic health knowledge. In recent years, PE curriculum reform has also paid more attention to student participation, the learning process, and the expansion of learning beyond the classroom. Previous studies have shown that blended teaching, classroom interaction, timely feedback, and the connection between in-class and after-class learning can help improve students' learning experience and teaching results in college PE courses^[1-3].

Traditional health exercises have a clear advantage when they are introduced into college PE classes. They include physical exercise, but they also stress the coordination of breathing, attention, and physical and mental states. Baduanjin is one of the more representative forms. Its movements are relatively clear, the level of difficulty is moderate, and it is suitable for ordinary college students. For PE teaching, this means that teachers can do more than teach the movements. They can also teach breathing, exercise rhythm, body awareness, after-class exercise, and traditional sports culture^[1-2].

Current studies in China have provided some evidence on the use of Baduanjin among college students. These studies have focused on mental health, sleep, heart rate variability, physical fitness, self-rated health, and body composition^[4-9,11]. The findings suggest that Baduanjin has a certain basis for health promotion as part of college PE courses. However, studies on health effects mainly answer the question of what changes may happen after practice. Course teaching still needs to answer other questions, such as how to teach, how students should learn, how they should practice after class, and how their learning should be assessed^[1-3]. Therefore, discussing the teaching mechanism of Baduanjin has more practical value than simply discussing whether it is suitable for college PE classes.

2. Value Basis for Integrating Traditional Health Exercises into College Public Physical Education

2.1 In Line with the Goals of Health Promotion and Overall Education in College PE

The direction and goals of college PE reform are clear. PE classes should not only focus on technical movements, but also on health behavior, learning participation, and the ability to keep exercising over time. Gao Ling's study on Baduanjin courses in college PE showed that the use of digital platforms, participatory learning, and feedback in teaching can improve students' participation and skill learning^[1]. Yue Depeng and Lou Shaolin also pointed out that the educational role of college PE should not be limited to the classroom. It should also extend to practical activities and other learning settings^[3]. For Baduanjin, this means that the course goal should move from “finishing the whole routine” to helping students know how to practice, be willing to practice, and keep practicing.

2.2 In Line with the Need for Balanced Physical and Mental Health Development of College Students

In the daily life of college students, academic pressure, long periods of sitting, irregular schedules, and mood changes are common. Baduanjin has a slow rhythm and stresses the coordination of movement and breathing. It is therefore suitable as a simple form of physical and mental exercise. Yang Lin and Bian Bogao found that Baduanjin exercise had positive effects on some mental health indicators of college students^[4]. A randomized controlled study by Liu Ningning et al. showed that Baduanjin could help improve sleep quality in female college students^[5]. Liu Ying et al. found that regular Baduanjin practice improved mood and some physical fitness indicators in medical students^[9]. Wang Yafen et al. also discussed the effects of different practice frequencies from the perspective of heart rate variability^[7]. Although these studies used different research designs, they all suggest that Baduanjin has a practical basis for use as part of health promotion in college PE.

2.3 In Line with Traditional Sports Culture and the Development of Healthy Behavior

If Baduanjin is only taught as a set of movements for an exam, its value as part of traditional sports culture can easily be reduced. The names of the movements, practice principles, and the idea of physical and mental coordination all contain cultural meaning. In class, teachers can properly include movement principles, breathing points, exercise safety, traditional sports culture, and modern health knowledge. This can help students understand “why they practice in this way” and “what benefits and principles are behind the practice,” instead of only remembering “what movement comes next”^[1-2]. Ma Qirui's study from the perspective of health knowledge, attitude, and behavior also suggests that combining Baduanjin with health education can help students develop more positive health knowledge and behavior^[10].

3. Main Problems in Integrating Baduanjin into College Public Physical Education

3.1 Course Goals Focus Too Much on Learning Movements

In some Baduanjin classes, the main goal is still whether students can complete the whole set of movements. As a result, much of the class time is spent on movement routes, directions, hand forms, and footwork. These are basic parts of teaching, but if the whole course only focuses on movement accuracy, it is difficult to fully show the health education and behavior development functions of college public PE. A more reasonable goal for Baduanjin courses should include movement learning,

class participation, after-class practice, independent exercise, and basic health knowledge^[1-3].

3.2 Course Content Focuses More on Skills Than Understanding

Another common problem is that students may know how to do the movements, but do not really know how to practice them. Teachers may spend a lot of time on demonstration and correction, but give less attention to breathing, exercise intensity, after-class practice methods, the effects and principles of the movements, and ways to avoid sports injuries. As a result, students can follow the teacher in class, but may not know how to practice by themselves after class. Therefore, classroom teaching should include more explanation of the effects and principles of the movements, so that students can better understand Baduanjin. Pan Yutong pointed out that step-by-step teaching, guidance on posture and breathing, and the use of multimedia are important for improving the quality of Baduanjin teaching^[2].

3.3 Teaching Methods Are Relatively Simple and Student Participation Is Limited

“Teacher demonstration – student imitation – teacher correction – group practice” is one of the most common teaching methods in Baduanjin classes. This method is useful at the beginning of movement learning. However, if the same method is used throughout the whole semester, students may become passive learners who simply follow the teacher. Gao Ling's study showed that adding pre-class guidance, participatory learning, feedback, and class summaries can help improve student participation and skill learning^[1]. Therefore, group practice, peer assessment, video feedback, and task-based learning can be used as useful additions to traditional demonstration teaching, rather than simply replacing teacher instruction.

3.4 Assessment Focuses Too Much on Final Skill Performance

Assessment can also affect the way students learn. If most of the grade comes from the final performance of the whole routine, students will naturally focus more on practicing for the final exam and pay less attention to regular practice and health knowledge. Baduanjin courses in college PE are more suitable for a combined assessment of both results and learning process. While skill assessment should still be kept, class participation, after-class practice, learning reflection, and independent exercise should also be included in the final evaluation^[1,3]. In this way, the course can keep its skill-based features while also showing its wider educational value.

3.5 Weak Connection Between In-Class Teaching and After-Class Exercise

The limited number of PE classes each week is not enough to provide sufficient practice. Without enough practice, it is also difficult to achieve clear exercise effects. Previous intervention studies usually used regular practice over several weeks. For example, Liu Ying et al. carried out a 12-week Baduanjin program and found changes in mood and physical fitness among medical students^[9]. Wang Yafen et al. added two extra practice sessions each week outside regular classes, and some HRV indicators improved after 12 weeks^[7]. Liu Ningning et al. also used a continuous practice program in their study on the sleep quality of female college students^[5]. These findings show that, if Baduanjin courses are expected to produce exercise effects and health benefits, in-class learning should be closely connected with after-class practice.

4. Teaching Design for College Baduanjin Courses

In teaching practice, it is not necessary to use the same teaching focus throughout the whole semester. A better way is to change the focus according to students' learning progress. Teaching can gradually move from basic movement learning to complete practice, and then to independent practice and practical use.

4.1 Stage One: Course Introduction and Basic Learning

At the beginning of the course, teachers first need to help students deal with problems such as being unfamiliar with the movements, not understanding them clearly, and having difficulty remembering them. Teachers can first demonstrate the whole set of movements so that students can form a general idea. Then, the movements can be taught step by step. Basic posture, breathing, and safety issues such

as sports injuries should also be explained. At this stage, too much abstract theory should not be introduced at one time. It is better to start with simple body feelings, such as shoulder and neck relaxation, movement range, and breathing rhythm. In this way, students can gradually understand that Baduanjin is not simply a group of slow movements^[1-2].

4.2 Stage Two: Learning the Complete Movement Sequence

After students have learned the basic movements, the teaching focus should move to the connection between movements and the overall rhythm. Changes in body weight, coordination between the upper and lower limbs, and smooth movement are often the main problems at this stage. Besides teacher demonstration, group practice, peer assessment, and video review can also be used. Previous studies have shown that digital platforms and feedback can support learning in Baduanjin courses^[1]. Therefore, pre-class videos and movement review can be used as useful support for classroom teaching.

4.3 Stage Three: Mind-Body Coordination and Independent Practice

After students can complete the whole Baduanjin routine smoothly, the course can move to the stage of mind-body coordination. Teachers can guide students to pay attention to whether their movements match natural breathing, whether the body is too tense, and whether they can keep their attention stable. Students should also learn how to adjust the movement range and amount of practice according to their own condition. Traditional theories should be explained in a way that students can understand and use in PE classes. Statements that are difficult to verify should not be directly treated as modern medical conclusions. At this stage, regular after-class practice tasks can be arranged to help students develop more stable exercise habits^[2,7,9].

4.4 Stage Four: Practical Use and Learning Assessment

In the later part of the semester, the teaching focus can move from “following the teacher” to “knowing how to practice by oneself.” For example, students can be asked to design simple practice plans for stretching after long periods of sitting, daily health recovery, or stress relief during exam periods. Course assessment should also move beyond technical movements and include class participation, after-class practice, health knowledge, and learning reflection. This can better show whether students have really developed the ability to exercise independently^[1-3].

5. Supporting Measures for the Effective Operation of the Teaching Mechanism

5.1 Improve Teachers' Overall Teaching Ability

Teaching Baduanjin places high demands on PE teachers. Besides movement demonstration and class organization, teachers also need to know basic exercise load, sports rehabilitation, basic medical knowledge, exercise safety, health promotion, and traditional sports culture. Universities can use special training, group lesson preparation, and class observation to make course requirements more consistent. Teaching teams can also discuss common student mistakes, after-class practice, and assessment standards. This can help reduce differences in teaching among teachers^[1-2].

5.2 Build a Digital Teaching Resource Platform

The main value of digital resources is that they can help solve the problem of limited class time and students' need to watch movements many times. Full movement demonstrations, short teaching videos, common mistakes, practice tips, and safety notes can all be made into simple digital materials for students to use before or after class. This allows teachers to spend more class time on observation, correction, and individual guidance. Gao Ling's study also showed that combining a digital platform with the BOPPPS teaching model can help improve student participation and learning results in college Baduanjin courses^[1].

5.3 Build a Link Between Class, After-Class Practice, and Campus Activities

If Baduanjin only appears in a 90-minute PE class, it is difficult for students to keep practicing over time. Universities can connect classroom teaching with student clubs, traditional sports activities, and

campus health programs. In this way, students can use what they have learned in different settings. Yue Depeng and Lou Shaolin also pointed out that expanding practical and cooperative learning spaces can help improve the overall educational effect of college PE courses^[3].

5.4 Build a Scientific Course Quality Monitoring System

Course quality should not be judged only by whether students like the course or by their final movement performance. A more complete evaluation should include student satisfaction, class participation, movement learning, after-class practice, and independent exercise. When necessary, a small number of health indicators can also be used as supporting evidence. However, short-term changes should not be exaggerated as treatment effects for diseases. Studies in China on Baduanjin and mental health, sleep, heart rate variability, physical fitness, and body composition can provide useful references for selecting these indicators^[4-9,11].

6. Conclusion

Overall, Baduanjin is practical for use in college public physical education. Its movements are relatively slow, and it does not require special places or equipment. It can be used for skill learning in class and can also be practiced independently after class. Existing studies in China have explored Baduanjin from different aspects, including teaching methods, learning participation, mental health, sleep, heart rate variability, physical fitness, and health behavior^[1-11].

What really needs to be improved is not simply adding more Baduanjin class hours, but changing the way the course is organized. Problems such as simple course goals, too much focus on skills, too little attention to understanding, limited teaching methods, too much focus on final assessment, and weak connection between class and after-class practice can reduce the real teaching effect. The teaching mechanism proposed in this paper, “goal guidance – content integration – teaching innovation – learning and practice integration – assessment and feedback – cultural learning,” aims to connect movement skills, health knowledge, independent exercise, and cultural understanding in the same teaching process.

In practical teaching, students' learning can be seen as a gradual process from “being able to do the movements” to “doing them well,” and then to “being able to practice independently” and “knowing what movements to use in different situations.” Classroom learning, after-class practice, and campus activities should be connected with each other. Assessment should also consider both skill performance and the learning process. Future studies can continue to compare different teaching methods and carry out longer follow-up studies by using indicators such as learning participation, exercise habits, sleep, mental state, and physical fitness^[1,5,7,9].

References

- [1] Gao, L. Empirical study on the effect of “Internet + BOPPPS” blended teaching in college Baduanjin physical education courses. *Journal of Physical Education*, 2026, 42(04): 10-19+95.
- [2] Pan, Y. T. Practical study on Health Qigong Baduanjin in physical education teaching at higher vocational colleges. *Contemporary Sports Technology*, 2024, 14(32): 121-124.
- [3] Yue, D. P., & Lou, S. L. Expansion of educational spaces and innovation of teaching carriers in college physical education. *Journal of Suzhou Vocational and Technical College*, 2026, 25(01): 5-9.
- [4] Yang, L., & Bian, B. G. Effects of Health Qigong Baduanjin on the mental health of college students. *Fujian Sports Science and Technology*, 2010, 29(04): 41-43.
- [5] Liu, N. N., Hu, L. M., Zhang, X. H., et al. A randomized controlled trial of Baduanjin and brisk walking on sleep quality in female college students. *Chinese Mental Health Journal*, 2025, 39(08): 691-697.
- [6] Gao, L., Wang, L. H., Xiao, L. G., et al. Effects of Baduanjin exercise on self-rated health among some special groups of Chinese college students. *Journal of Capital University of Physical Education and Sports*, 2020, 32(04): 374-378.
- [7] Wang, Y. F., Wang, Z. B., & Zhang, C. P. Positive effects of Baduanjin teaching at different frequencies on heart rate variability in medical college students. *Sport Science and Technology*, 2026(04): 31-32+39.
- [8] Wang, L. F., Sun, W. L., & Sun, W. S. Effects of new Chinese-style fitness exercise on suboptimal

mental health and sleep quality in college students. *Sport Science and Technology*, 2025, 46(06): 40-42.

[9] Liu, Y., Wang, K. J., Qu, Q., et al. Effects of Baduanjin on the physical and mental health of medical students based on the theory of “preventing disease before it occurs and preventing progression after onset”. *Primary Traditional Chinese Medicine*, 2024, 3(10): 49-54.

[10] Ma, Q. R. Effects of Health Qigong Baduanjin and a balanced diet on health and nutrition KAP among college students. *Sports Excellence*, 2025, 44(05): 89-90+93.

[11] Zhang, D. W., Yang, X. L., Han, M. J., et al. Experimental study on the effects of Baduanjin on weight loss in obese male college students. *Journal of Tianjin University of Traditional Chinese Medicine*, 2023, 42(02): 175-179.

[12] Cao, W., Lu, M. Y., Liu, X. L., et al. Energy expenditure characteristics and prediction equation development for traditional exercises among Chinese youth: A study of Health Qigong Baduanjin, Health Qigong Wuqinxi, and 24-form simplified Tai Chi. *Journal of Beijing Sport University*, 2023, 46(11): 42-51.