

Feasibility Analysis of Introducing Fitness Qigong Baduanjin into Yoga Courses

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Abstract: To promote the reform of physical education teaching in universities, enrich the resources of physical education courses in universities, and enhance students' interest in learning proactively, this article adopts research methods such as literature review and interview, and takes students from Zunyi Normal University's physical education elective course as the survey object. The feasibility analysis and research of introducing the Baduanjin of Fitness Qigong into the university's physical education yoga elective course explore the impact of Tai Chi yoga on the physical form, physical function, physical fitness, and psychology of university students. The research results found that Tai Chi Yoga can effectively reduce the weight of college students in terms of body shape, and improve their physical flexibility and balance ability in terms of physical fitness. In addition, Tai Chi yoga has a good regulatory effect on the mental health level of college students, and relevant suggestions are proposed to address the problems that exist in the research process.

Keywords: Baduanjin; Fitness Qigong; Physical education; Yoga courses

1. Introduction

Among the ancient guiding techniques in our country, the Baduanjin or Eight-section brocade is the most widely circulated and has the greatest impact on the development of guiding techniques. In addition, techniques such as Wuqinxi, Yi Jin Jing, Tai Chi Health Stick, Twelve Section Brocade, and Da Wu are all treasures of Chinese culture that have been passed down for the purpose of improving physical and mental health [1-3]. Yoga is a Chinese vocabulary that originated from the Sanskrit word yug or yuj in India. Its meaning is unity, union, or harmony, exploring the principles and methods of unity between the Brahma and me. Modern people refer to yoga as a series of self-cultivation and mental health methods. This article analyzes the origin, development, and similarities and differences of two fitness systems, and combines them with the objective reality of Zunyi Normal University to explore the organic combination of the two, in order to achieve better physical fitness and relaxation effects.

2. The Origin and Definition of Baduanjin and Yoga

2.1. The Historical Background and Development of Baduanjin

The history and development of Baduanjin are long and rich. It is a treasure of traditional Chinese fitness methods. According to historical records, Baduanjin originated in the Northern Song Dynasty and has a history of nearly 1,000 years [4]. Over the years, Baduanjin has gradually formed a complete system of institutions through the continuous practice and improvement of health preservationists in the past dynasties. It is not only a simple and easy-to-learn fitness method, but also contains profound health wisdom. It is a set of fitness exercises aimed at regulating the internal organs, dredging qi and blood, and strengthening the body through flexible and coherent physical movements. It consists of 8 movements of aerobics. The characteristics of Baduanjin are that the movements are simple and easy to learn, and are not limited by space and time. It is suitable for ordinary people to practice, which is a major feature of Baduanjin exercise. According to research data, people who have long-term exercise of Baduanjin have improved their physical function and immunity, which shows that Baduanjin has a significant role in promoting health [5].

During its development, Baduanjin continuously drew and integrated the essence of multiple traditional health preservation cultural connotations such as traditional Chinese medicine, martial arts,

and qigong. Its action design not only conforms to the physiological structure of the human body, but also emphasizes the coordination of breathing and mind, so as to achieve the effect of regulating qi and blood, unblocking meridians, and enhancing physical fitness. In today's society, people's demands for a healthy lifestyle are increasing, and the Baduanjin is gradually being valued and paid attention by more people. From this perspective, the development prospects of Baduanjin are very promising. It will also be continuously inherited and developed with the revival of traditional culture and the increasing concern for healthy living among people.

2.2. The Historical Origins and Cultural Background of Yoga

The historical origin of yoga can be traced back to the ancient Indian civilization period. The cultural heritage and philosophical ideas of that time laid a solid foundation for the formation and development of yoga. As a means for practitioners to pursue spiritual liberation, yoga gradually developed into a unique way of physical and mental exercise, and was regarded as a bridge to the sacred realm in ancient India. Due to the integration of knowledge from multiple fields such as philosophy, religion, and medicine, a unique theoretical system and practical methods have been formed, which held a pivotal position in ancient India [6].

The cultural background of yoga also endows it with its unique charm. In Indian culture, yoga is seen as a way of life that harmonizes with nature. It emphasizes the concept of physical and mental unity, internal and external balance, which is fully demonstrated in yoga posture practice and also permeates many aspects such as breathing control and meditation. Practicing yoga can help people achieve physical and mental harmony and balance, thereby improving their quality of life and obtaining a spiritual satisfaction and pleasure from it [7].

In addition, including Indian philosophy, yoga also integrates wisdom and insights from various aspects. For example, the "Eight Branches Method" is a practical approach that integrates philosophical ideas, including moral norms, from body purification to posture practice; From respiratory control to sensory adduction; From meditation to intelligent cognition, eight aspects of content are aimed at helping people achieve comprehensive physical and mental improvement. This yoga system, which integrates theory and practice, not only has a profound cultural heritage, but also provides people with a unique way of physical and mental cultivation, making yoga a beloved fitness method and widely spread and developed in modern society.

3. Comparison of Fitness Effects between Baduanjin and Yoga

3.1. The promoting effect of Baduanjin on physical health

As a traditional Chinese fitness method, Baduanjin has a significant impact on the human body. Related research results have shown that long-term practice of the Baduanjin can effectively improve the heart and lung function of the human body, promote the immune system, and improve sleep quality to a certain extent. An experimental study targeting older individuals found that participants who underwent three months of Baduanjin exercise showed a significant increase in heart rate variability, indicating an effective improvement in their heart function. In addition, due to its ability to improve blood circulation, Baduanjin also is positive in preventing and treating chronic diseases such as hypertension [8].

In addition to having a good effect on cardiovascular health, Baduanjin can also effectively exercise the flexibility and coordination of the body. The movement design is scientific and reasonable, comprehensively stretching various parts of the body, enhancing muscle strength and endurance, and is of great significance in preventing falls and improving quality of life. Therefore, it is a very beneficial exercise method and an essential choice for people's daily health care. In addition, the Baduanjin also has a certain effect on regulating tense emotions and relieving excessive stress. During the practice process, people should maintain stable breathing and a calm mentality. Studies have shown that practicing the Baduanjin can reduce the body's stress response and improve psychological adaptability. Therefore, it has a positive effect on improving mental health.

In summary, the multifaceted fitness effects of Baduanjin are unparalleled. It not only improves cardiovascular function, but also enhances physical fitness, and has a positive regulatory and relieving effect on emotions. Therefore, whether young or old, many physical and mental benefits can be obtained through daily practice of the Baduanjin. For the special group of college students, practicing the Baduanjin can also regulate their internal organs and have a certain effect on eliminating fatigue after

exercise. In addition, due to its corrective effect on body shape, Baduanjin can effectively improve some adverse symptoms caused by irregular body shape for college students who have been studying in one posture for a long time.

3.2. The comprehensive benefits of yoga on physical and mental health

Yoga, as an ancient way of physical and mental cultivation, has a significant comprehensive effect on both physical and mental health. Multiple studies have shown that yoga practice has significant benefits in enhancing the body's flexibility, strength, and balance. Studies targeting yoga practitioners have shown that after a period of training, participants' body flexibility has increased by 20% and their balance has greatly improved. In addition, yoga has a good therapeutic effect on relieving chronic pain, such as back pain, arthritis, etc. It also has a significant improvement effect on sleep quality and a positive promoting effect on heart health [9].

Yoga also holds a crucial position in mental health. Its breathing control and meditation exercises are effective ways to help people reduce stress. In a study of white-collar workers with high work pressure, after eight weeks of yoga practice, the anxiety level of the respondents was reduced by 30%, and the depressive symptoms were also significantly improved. In addition, improving an individual's self-awareness and emotional regulation ability during practice can also enhance inner peace and increase happiness. The comprehensive effects of yoga are not limited to the individual level, but also have significant positive implications for social harmony. Practicing yoga can help people better manage their emotional stress and enhance self-awareness, thereby promoting harmonious coexistence between individuals and others.

There are many benefits to practicing postures for college students. In addition to helping them reduce muscle tension and improve their flexibility and strength, yoga can also improve the respiratory system function of college students, enhance lung capacity, and make their breathing deep and even. It can also play a significant role in the mental health of college students. Practicing yoga can improve and strengthen the psychological quality, inner peace, and concentration of college students, helping them to cope with academic and life pressures and achieve good regulation.

4. The Practice Methods and Techniques of Baduanjin and Yoga

4.1. The Basic Actions and Practice Points of Baduanjin

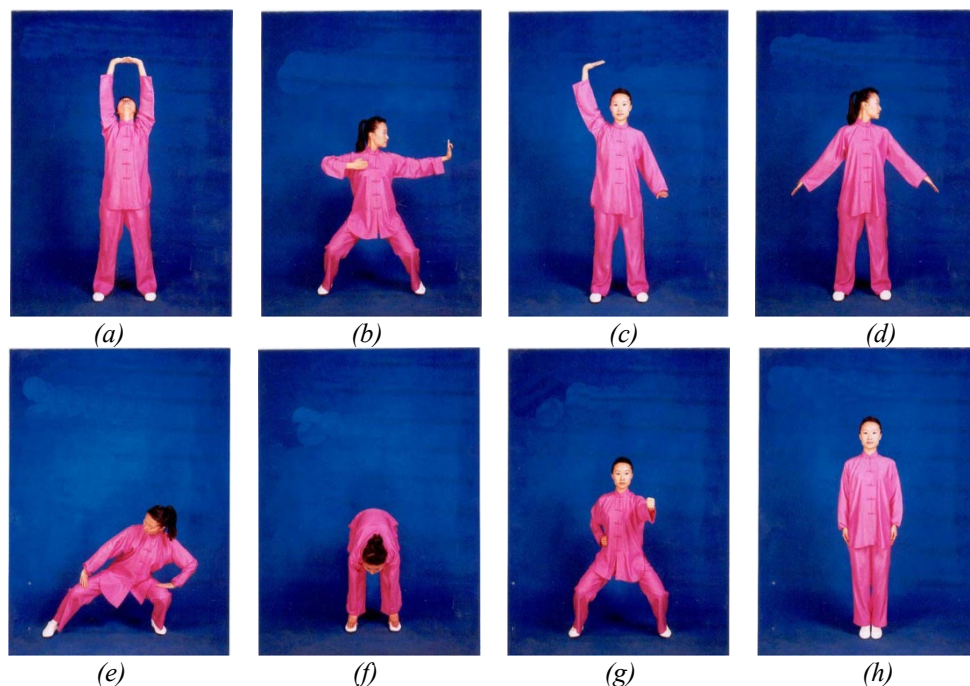


Figure 1: The eight movements of Baduanjin.

Baduanjin is one of the representatives of traditional Chinese fitness techniques, and its basic

movements and practice points contain profound cultural heritage and health wisdom. When practicing the Baduanjin, each movement requires meticulous experience and comprehension in order to achieve the best fitness effect. As the ancient saying goes, when the form is regular and the qi is smooth, the mind is peaceful. In the first style of the Baduanjin, the practitioner should cross their hands to support the Three Jiao of the Heavenly Principle and perform the movements of raising their head, chest, breathing, and abdominal contraction while holding their hands up. This not only helps to stretch the spine but also promotes the flow of qi and blood throughout the body. Under the inheritance of traditional Chinese culture, the Baduanjin undoubtedly provides us with a beneficial way of fitness. According to the recommendation of the General Administration of Sport of China, there are eight fundamental movements of Baduanjin^[10]. The eight movements are shown in figure 1 where each sub-figure means a movement. From figure 1(a) to figure 1(h) is the hands in the sky to support Sanjiao, bending the bow left and right like shooting sculptures, regulating the spleen and stomach, getting rid of fatigue and pain, move around head and waist for anger to be gone, move hand down the leg to strengthen kidney area, tighten fists to gather strength, all diseases gone with the count of seven, respectively.

4.2. The basic postures and breathing techniques of yoga

The basic postures and breathing techniques of yoga are the key to its unique charm. Throughout the entire yoga practice process, postures and breathing are mutually reinforcing and coordinated. For example, using tree pose, the practitioner needs to lift one foot, place the sole of the foot on the inner side of the other leg, and raise both hands together above the head to maintain body stability while taking deep breaths to achieve inner peace and harmony and balance between the body and mind. According to the recommendation of the national health Yoga steering committee, there are one set of fundamental movements and nine set of different levels^[11]. Figure 2 shows partial screenshots of the fitness Yoga position standards level 1 to 9. Figure 2(a) is the six fundamental movements of fitness Yoga positions and figure 2(b) is the sixteen movements of the level 1 standard. It can be seen that low-level actions are relatively simple.

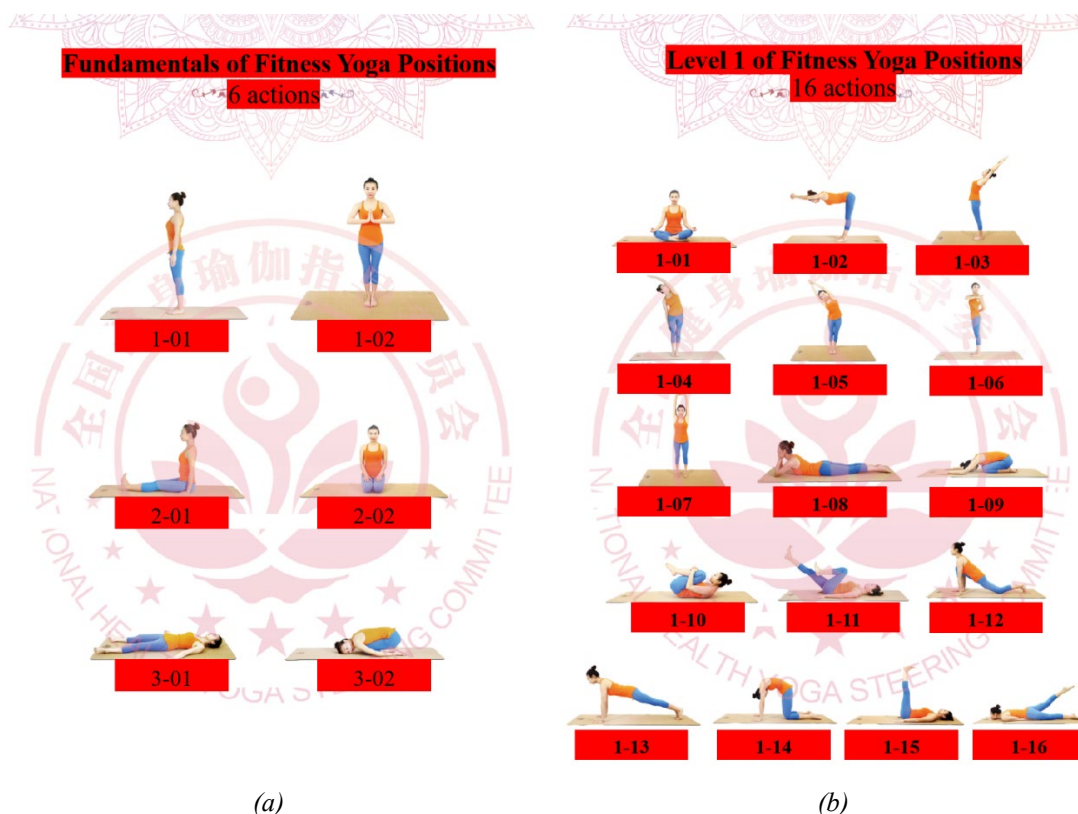


Figure 2: Partial screenshots of the fitness Yoga position standards.

Breathing techniques also play an important role in yoga practice, using deep and slow breathing techniques to help relax and relieve stress by prolonging exhalation time. During meditation, practitioners often use abdominal breathing techniques to take deep breaths, introduce breath into the abdomen, and then slowly exhale, gradually calming the mind. This breathing method not only improves the respiratory

system, but also promotes metabolism and enhances the body's immune system. So as to help practitioners achieve physical and mental relaxation and balance in yoga practice. As the yoga master once said, "Yoga is a transformation of lifestyle, not just physical activity. Through practicing yoga, we have a better understanding of ourselves and find inner calmness and strength.

5. Analysis of the Differences and Similarities between Baduanjin and Yoga

Fitness Qigong Baduanjin and Yoga are both popular fitness methods, with similarities and differences [12]. The following is an analysis of the similarities and differences between the two:

5.1. The similarities

Fitness effect: The combination of Baduanjin and yoga can play a role in strengthening the body, improving various functions of the body, enhancing balance and flexibility, preventing diseases, reducing psychological pressure, and relieving fatigue. It is a relatively comprehensive fitness method.

Respiratory regulation: mainly focuses on the coordination and coordination of two aspects - the mutual coordination of breathing and movement; By regulating breathing to relax the body and mind and promote the circulation of qi and blood, the goal of fitness and health preservation can be achieved. The way of breathing generally follows the following principles - open and close breathing, start and fall breathing, up and down breathing, and open and close breathing.

5.2. The differences

The differences between Baduanjin and yoga are shown in table 1.

Table 1: The Differences.

Item	Baduanjin	Yoga
Origin and Background	Traditional Chinese fitness techniques have a profound cultural heritage and a long history	Originating from ancient India, it is an ancient method of physical and mental cultivation. After a long historical evolution, widely spread as a form of fitness.
Action characteristics	Mainly focusing on stretching and stretching, regulating the body and regulating qi and blood through slow and gentle movements, a combination of elasticity and stillness. The movements are relatively simple and easy to learn, suitable for beginners and fitness enthusiasts	Pay more attention to changes in posture and posture, and achieve the effect of relaxing the body and mind and improving temperament by adjusting the body's posture and breathing. It includes various difficult positions and postures, including basic movements suitable for beginners, as well as advanced movements that require high physical fitness and professional guidance, which can meet the needs of practitioners of different levels.
Key points of exercise	More emphasis is placed on exercising muscle strength, flexibility, balance, and cardiovascular function through movements.	More emphasis is placed on regulating the body and mind through breathing and meditation, enhancing focus and balance, which is beneficial for mental health
Participants	Suitable for people of all ages, especially loved by middle-aged, elderly, and beginners	More favored by middle-aged and young women

Overall, both Qigong Baduanjin and yoga are excellent fitness methods, each with unique characteristics and advantages that can be chosen according to individual needs and preferences. No matter which method someone chooses, as long as persisting in practicing, one can achieve good fitness results.

6. The Organic Integration of Baduanjin and Yoga

By organically combining fitness yoga and Baduanjin in university physical education courses, a

unique and in-depth exercise experience can be created. Based on classroom experience and student characteristics, attention should be paid to the following aspects:

(1) Have a clear understanding of the core characteristics of the two cultivation methods. Emphasis should be placed on imparting theoretical knowledge in the course, so that students can have a clear understanding of the definition, background, and differences from yoga of the Baduanjin before the start of the course.

(2) Design integrated course structure. Warm up stage: Yoga's breathing exercises and simple postures can be used as warm-up exercises, combined with slow and gentle light music to help students adjust their breathing, relax their body and mind, and prepare for future exercises. Main practice stage: The practice of Baduanjin can be carried out before the start of the course, and the joints and muscles of the body can be moved to avoid muscle strains during yoga practice, allowing students to experience the same breathing method in person. Then, yoga movements that correspond to the Baduanjin can be introduced to further deepen students' perception of body flexibility and coordination. For example, the "Tuo Tian Li San Jiao" in the Baduanjin is very similar to the "mothering style" in yoga. Relaxation and Meditation Stage: At the end of the course, arrange yoga meditation or relaxation exercises to help students calm down, breathe again, relax muscles, and achieve a state of physical and mental harmony and unity.

(3) Pay attention to the coordination of breathing. Baduanjin, like yoga, emphasizes the coordination of breathing and movements. In the course, students can be taught how to adjust their breathing according to the changes in movements. For example, some movements in Baduanjin require deep breathing or holding their breath, while in yoga practice, more emphasis is placed on smooth and natural breathing to achieve a state of physical and mental unity.

(4) Emphasize the overall regulation of body and mind. Yoga and Baduanjin are not only physical exercises, but also comprehensive conditioning from both physical and mental aspects. In the course, guide students to pay attention to their breathing patterns, body sensations, and changes in their inner state, thereby helping them establish an understanding and connection between the body and mind, in order to achieve a state of physical and mental unity.

(5) Consider individual differences and adaptability. Students have different physical conditions and exercise levels, so these differences need to be taken into consideration when designing courses. Adjust the difficulty and progress of the course according to the actual situation of the students, ensuring that each student can receive appropriate exercise and benefits in the course. Actions that require high strength and flexibility should be practiced by students with a certain foundation, and should be placed in the latter part of the course. Students are allowed to do progressive exercises when their physical conditions do not allow it.

7. Conclusion and Suggestion

Through practice, it has been proven that the comprehensive application of Baduanjin and yoga in college physical education classes can promote the physical and mental health of college students. The two are organically combined, complementing and promoting each other, providing students with a comprehensive and in-depth exercise experience, which not only improves their physical fitness but also promotes their mental health and inner peace. Moreover, both Baduanjin and yoga emphasize the regulation of the body and the smooth flow of meridians. When practicing, they pay more attention to the harmony and unity of the body and mind, as well as the coordination of breathing. When practicing, in order to ensure the effectiveness, it is necessary to practice according to the correct posture and breathing method.

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References

[1] Klich W, Milert A. *Tai chi and Qigong as a form of physical activity of people of all ages in the*

- context of modern physiotherapy[J]. *Physical Activity Review*, 2018, 6: 22-28.
- [2] Wu Y, Senk C, Coll P, et al. A comparison of two Tai Chi interventions tailored for different health outcomes[J]. *Complementary therapies in medicine*, 2021, 59: 102731.
- [3] Ho K K W, Pong G, Poon Q W C, et al. A community-centric multi-disciplinary education program with the 8-section brocade Tai Chi therapy for patients with osteoarthritis of the knee—a pilot study[J]. *BMC complementary medicine and therapies*, 2021, 21: 1-9.
- [4] Zheng G, Ye B, Xia R, et al. Traditional Chinese mind-body exercise Baduanjin modulate gray matter and cognitive function in older adults with mild cognitive impairment: a brain imaging study[J]. *Brain Plasticity*, 2021, 7(2): 131-142.
- [5] Kong L, Ren J, Fang S, et al. Effects of traditional Chinese mind-body exercise-Baduanjin for type 2 diabetes on psychological well-being: A systematic review and meta-analysis[J]. *Frontiers in Public Health*, 2022, 10: 923411.
- [6] Yatham P, Chintamaneni S, Stumbar S. Lessons from India: a narrative review of integrating yoga within the US healthcare system[J]. *Cureus*, 2023, 15(8).
- [7] Loewenthal J, Innes K E, Mitzner M, et al. Effect of yoga on frailty in older adults: A systematic review [J]. *Annals of Internal Medicine*, 2023, 176(4): 524-535.
- [8] Lin H, Wan M, Ye Y, et al. Effects of Baduanjin exercise on the physical function of middle-aged and elderly people: a systematic review and meta-analysis of randomized controlled trials[J]. *BMC complementary medicine and therapies*, 2023, 23(1): 38.
- [9] Hagen I, Skjelstad S, Nayar U S. Promoting mental health and wellbeing in schools: the impact of yoga on young people's relaxation and stress levels[J]. *Frontiers in Psychology*, 2023, 14: 1083028.
- [10] <https://www.sport.gov.cn/n20001280/n20001265/n20067611/c20106840/content.html>. Accessed online, May 28, 2024.
- [11] http://www.chinayogasport.org/index.php?p=products_show&lanmu=27&id=115. Accessed online, May 28, 2024.
- [12] Pan Y, Huang Y, Zhang H, et al. The effects of Baduanjin and yoga exercise programs on physical and mental health in patients with Multiple Sclerosis: A randomized controlled trial[J]. *Complementary Therapies in Medicine*, 2022, 70: 102862.