

The Influential Role of Baduanjin on the Mental Health of Medical Students: A Review

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ABSTRACT

Baduanjin, a traditional Chinese health care practice, not only promotes muscle relaxation and bone strengthening while preventing and treating illnesses but also contributes positively to mental nourishment and emotional regulation. This paper employs a literature review and logical analysis to comprehensively assess the impact of Baduanjin on the mental health of medical students in higher education institutions. The findings indicate a significant prevalence of mental health issues among medical students in recent years, with a myriad of complex influencing factors. Furthermore, interventions aimed at enhancing the mental well-being of college students have become increasingly diverse. Notably, Baduanjin stands out as a traditional physical activity intervention that is both straightforward to implement and effective in bolstering students' mental health. Moving forward, it may serve as a preventive measure for mental wellness in the physical education curricula of universities, fostering the holistic development of both physical and mental health.

KEYWORDS

Baduanjin; Mental health; Freshman; Review

1. INTRODUCTION

The report on Mental Health from China [1] reveals that with the rapid advancement of society and escalating competition, mental health issues among the general population are becoming increasingly pronounced. Notably, among the student demographic—a primary concern for society—there is a discernible trend towards younger ages facing these challenges, indicating a pressing need for preventive and intervention strategies. Baduanjin, a traditional national sporting program that integrates physical exercise, controlled breathing, and psychological regulation aimed at enhancing both physical and mental well-being, has demonstrated substantial benefits in multiple aspects of physical health, along with notable improvements in life satisfaction, cognitive function, and overall mental health [2]. In light of the challenges posed by the COVID-19 pandemic, the physical and mental well-being of college students have raised alarms, prompting higher education institutions to actively reevaluate their physical education curricula [3]. They are exploring the incorporation of fitness Qigong practices such as Baduanjin and Wuqinxi, thereby encouraging student engagement in these activities, which not only bolster their physical and mental health but also foster the preservation and promotion of traditional culture.

2. THE PRESENT CIRCUMSTANCES AND INFLUENCING ELEMENTS REGARDING THE MENTAL WELL-BEING OF COLLEGE STUDENTS.

The university period is a critical time when adolescents undergo changes in physiology, psychology, and social relations [4]. During this period, due to significant changes in further education and employment situations, college students are prone to emotional fluctuations, leading to frequent psychological problems. In an assessment study of the mental health status of students in a higher education institution for Chinese medicine, Shi Dandan [5] observed that the percentage of students with psychological abnormalities was as high as 21.94%, with significant features focusing on obsessive-compulsive symptoms, increased interpersonal sensitivity, a prevalence of depression, and a high incidence of anxiety states, highlighting the multidimensionality and urgency of the mental health problem.

As a unique group among university students, medical students represent the future of the healthcare workforce, and their mental health status is not only related to their own well-being and development but is also crucial for the healthy and sustainable development of patients and the healthcare system. Previous studies have shown that medical students experience higher levels of anxiety, depression, and perceived stress compared to age-matched non-medical students due to the stress of coursework and vocational training [6]. A descriptive study on the mental health and well-being of Iranian medical students by Franck Rolland [7] indicated an increasing prevalence of psychiatric disorders and substance abuse among Iranian medical students compared to previous national studies. Wen Zeng [8] conducted a meta-analysis on the prevalence of mental health problems among Chinese medical students, showing that the rates of depression, anxiety, suicidal ideation, and eating disorders among the 30,817 students in the study were 29%, 21%, 11%, and 2%, respectively, with no significant difference in depression prevalence across different age groups. The prevalence of depression did not differ significantly by age. Huang Yuwen and his research team [9] found that the mental health of medical students generally remained at a moderate level, with elevated scores in somatization symptoms, anxiety, and distress compared to normative standards for university students. Notably, medical students scored significantly higher in somatization than the average university student. This phenomenon may be attributed to the unique study pressures of the medical student population, such as frequent late-night studying and relatively few opportunities to participate in extracurricular sports activities.

Since the concept of mental health was put forward, the related research field has expanded rapidly and flourished like a spring. In this context, researchers have formed two main branches: one is an in-depth exploration of the core elements affecting individual mental health, and the other focuses on how to effectively enhance individuals' mental health status through intervention strategies. Specifically, Wang Xiangli [10] carefully examined the mental health status of newly recruited nurses and the factors influencing it during the pre-service training stage, pointing out that age, gender, department affiliation, educational background, social network, social status, and family support system are all key variables shaping their mental health. Zhu Yongfang [11] on the other hand, took a different approach by focusing on a group of higher vocational students with the experience of being left behind to explore the causes of their mental health status. The results of her study showed that although factors such as gender, origin, and family background impact the mental health of higher vocational students, they are not the decisive factors. Instead, the closeness and harmony of family relationships, including parental harmony, the emotional connection between students and their parents, and the emotional support and care students receive from their parents, are the core elements that significantly affect their mental health. Notably, due to the heavy academic load and the high-stress environment medical students face, they are more likely to experience mental fluctuations and challenges, especially during exam weeks. In summary, different social roles with different responsibilities, social status and environmental backgrounds will lead to corresponding changes and adjustments in the factors affecting mental health.

3. INTERVENTIONS TO PROMOTE MENTAL HEALTH AMONG UNIVERSITY STUDENTS

From a medical professional's point of view, timely identification and assistance for individuals with psychological disorders in the college student population can not only significantly reduce the frequency of psychological crises but also effectively curb the spreading trend of psychological disorders among college students and maintain the overall stability of mental health. The current intervention research on college students' mental health mainly consists of psychotherapeutic intervention and exercise intervention. Psychotherapeutic interventions can be divided into positive thinking training, art therapy, emotional conditioning method and other forms. Positive thinking training has a positive effect on college students' anxiety and depression, and Eddie Yuan's study further pointed out that positive thinking training has a more significant effect on the relief of a single symptom. For example, the relief rate for only one symptom can reach 100%, whereas the relief rate is less than 40% if depression and anxiety coexist. In addition, emotional regulation in the TCM system includes a variety of methods, such as empathy therapy, emotional success, and five-element music therapy. Specifically, five-element music therapy has been proven in several studies to play a positive role in alleviating physical discomfort such as back pain and limb pain, as well as improving anxiety, depression, hostility, and even physical and mental problems such as indigestion and sleep disorders.

Exercise intervention mainly explores the moderating effect of different forms of exercise on different psychological states. For example, studies have found that different sports, such as football and basketball, can effectively buffer the psychological pressure of college students when used as an intervention. Sports dance activities not only provided college students with more positive coping strategies but also significantly contributed to the overall improvement of their mental health. Through systematic physical dance training, college students are able to experience richer positive emotional experiences, which further strengthen the positive aspects of their mental health [14]. Hu Yongbin used exercise prescriptions to assist in improving the mental health of college students and found that the prescriptions had a significant supportive effect. After the meta-analysis of the effect of physical exercise on the mental health of college students, it was found that exercise intervention can promote and improve the mental health of college students, and the intervention effect is best when the intensity of exercise is controlled at a moderate intensity.

Qigong, Taiji, and other traditional exercises are typical representatives, constituting a unique form of health and physical culture in China and an important part of the TCM concept of 'treating the disease before it gets sick. In recent years, research on the use of traditional Chinese medicine exercise therapies such as Baduanjin, Wuqinxi and Taiji to intervene in the mental health of college students has been increasing. A meta-analysis of the effects of traditional Chinese medicine (TCM) exercises on anxiety and depression among college students showed that TCM exercises, such as Taiji, Baduanjin, and Yi Jinjing, were effective in reducing anxiety and depression in college students [15]. Specifically, the intervention effects of exercises like Baduanjin and Yi Jinjing were superior to those of Taiji. This is mainly due to the fact that the practice of Yi Jinjing requires a rigorous number of movements, breathing methods and techniques, as well as specific requirements for the practice environment and time of day. In contrast, the movements of Baduanjin are soothing and natural, making it easier to learn and master. A study of university students' satisfaction with the learning of Baduanjin during the epidemic showed that 86.78% of the students thought that Baduanjin was suitable for home practice and easy to practice [16]. Xu Xumeng [17] used bibliometric methods to analyze the current status of research on Chinese medicine interventions for mental sub-health over the past 10 years, focusing on basic characteristics and interventions in the literature. The study concluded that research on Chinese medicine interventions for mental sub-health is limited in quantity and lacks continuity and inheritance, warranting further in-depth investigation.

4. THE EFFECT OF CHINESE MEDICINE BADUANJIN ON MENTAL HEALTH

As a health care method originating from China's folklore, Baduanjin consists of 8 sections of movement, which is characterized by its simplicity and ease of learning, and is not restricted by time, place, or age. Zhong Shuangchuan's study focused on practical validation, and he organized a three-month intervention trial of Baduanjin practice for a group of 40 middle-aged sub-healthy individuals. The results of the experiment showed that Baduanjin demonstrated significant and positive therapeutic effects in alleviating and improving the state of subhealth, especially for subhealth symptoms caused by physical discomfort. Several researchers [18, 19] have combined SCL-90 with Baduanjin to assess psychological conditions, and the results showed that Baduanjin exercises can significantly improve the psychological health of college students, positively affecting symptoms of psychosomatic illnesses, except for interpersonal sensitivity compared to other factors. Guo Yu [20] monitored and compared the EEGs of college students and found that practicing Baduanjin could effectively improve the mental health of college students with various neurotic personality traits. Additionally, in terms of anxiety, the gentle and slow movements of Baduanjin, combined with breathing and exhaling, can bring the body into a state of tranquility and calm, allowing the practitioner's body and mind to relax, thus achieving emotional relief [21].

5. SUMMARY

Baduanjin, as a form of exercise intervention, has been shown to significantly benefit the mental well-being of college students. For medical students, in particular, whose future careers are often demanding and high-pressure, engaging in Baduanjin not only helps improve physical fitness but also plays a crucial role in emotional regulation and stress relief. Higher education is a pivotal time for establishing lifelong habits related to physical activity. Compared to other forms of exercise, Baduanjin's movements are relatively simple, making it easier to learn and practice, especially for medical students facing intense academic workloads. Incorporating this traditional fitness regimen into university physical education courses not only fosters the preservation and promotion of Chinese cultural heritage but also enhances contemporary students' awareness and appreciation of traditional practices.

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