

Study on the Effect of Taijiquan on Depression of Female College Students

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ABSTRACT. *Objective: To explore the influence of Taijiquan on depression of female college students. Methods: 60 female college students aged 19-24 years old from Southwest Jiaotong University were randomly divided into two groups according to the principle of voluntariness: one group was the group participating in Taijiquan exercise (40 people), the other group was the group not participating in Taijiquan exercise (20 people), the female students in Taijiquan exercise group were given one hour a day, three times a week, and the heart rate was controlled at 60% - 70% of the maximum heart rate, In the control group, girls did not take any regular physical exercise, and observed the changes of depression before and after exercise. Results: After the experiment, the scores of mental state in energy and self-esteem of female students in Taijiquan group were significantly higher than those before the experiment, while the scores in tension, fatigue and depression were significantly lower than those before the experiment, the total score of TMD was significantly lower than that before the experiment, and the mental state was improved, There was no significant change in the scores of mood subscales of female students in the control group before and after the experiment. Conclusion: Taijiquan has a good effect on depression of female college students.*

KEYWORDS: *Taijiquan, Depression, Female college students*

1. Introduction

Taijiquan is an important intangible cultural heritage of our country, is a cultural treasure of our country, and is loved by the masses. Taijiquan not only embodies the simple ancient philosophy of taijiwuxing and Yin Yang dialectics, but also integrates fitness, competition, interest and entertainment. Since ancient times, Taijiquan has been a kind of traditional martial arts, which has a very important value for people's physical and mental health. Scholars generally believe that the development of Taijiquan is conducive to students' better use of sports, feelings of sports, love of sports, to comprehensively improve their physical quality, shape and function, improve their mental health, enhance the continuity of their sports experience, and promote their lifelong physical exercise habits. At present, Taijiquan, as an optional course, has been widely carried out in many colleges and universities. However, there are not many research results on the impact of Taijiquan and students' physical and mental health in the academic circle, especially the research on the combination of quantitative and qualitative is still blank[1]. Therefore, this paper studies the physical and mental changes of female college students before and after taking part in Taijiquan movement, aiming to further explore and analyze the influence of Taijiquan training on female college students' physical and mental health, and promote the healthy development of Taijiquan movement in Colleges and universities.

2. Research Object and Method

2.1 Research Object

60 female college students aged 19-24 in 2018 from Southwest Jiaotong University were selected, with an average age of (20.35 ± 0.88) ; an average height of (160.80 ± 4.30) cm and an average weight of (51.22 ± 9.43) kg.

2.2 Experimental Method

2.2.1 Before Test

The intervention method of Taijiquan was combined with quantitative research and qualitative research

without interrupting the normal life order of college students, supplemented by questionnaire survey, structural interview and detection method.

2.2.2 Under Test

The subjects were randomly divided into two groups according to the principle of voluntariness. One group was the Taijiquan group (40 people) who participated in the exercise of Taijiquan. They learned to practice the simplified 24 forms of Taijiquan, with music accompaniment. Every day for one hour (10 minutes of preparatory activities, 40 minutes of Taijiquan, 10 minutes of relaxation exercises) three times a week (Monday, Wednesday, and Friday respectively). The exercise intensity was monitored by the telemetry heart rate instrument, and the heart rate was controlled at 100-120 Within the aerobic exercise range of time / min, lasting for 12 weeks; the other group was not involved in Taijiquan exercise group (control group, 20 people), each Taijiquan exercise group gave them lectures on physical exercise and mental health at the same time, and watched videos and morning news about women's weight loss and physical exercise, 2 times a week, also lasting for 12 weeks, During the 12 weeks, the girls in the control group were told not to participate in any physical exercise. The whole experimental process was monitored by a special teacher. The teacher received training and guidance before the experiment. No one in the whole experimental process quit midway, and the attendance rate reached 80%.

2.2.3 After Test

The Zung's self rating Depression Scale, The highest score was 24 and the lowest score was 0[2].

2.3 Statistical Analysis

The original data was input into the computer and analyzed with SPSS11.0 software. The paired t-test and correlation analysis were used for statistical processing. The statistical results were $p \leq 0.05$ as the significance standard and $P \leq 0.01$ as the very significance standard.

3. Results

1) In Taijiquan exercise group, the average score of depressed was significantly lower than that before the experiment and the control group ($P < 0.05$). 2) In the control group, the average score of depressed was significantly lower than that before the experiment ($P < 0.05$). See Table 1.

Table 1 -1 Comparison of Scores of Mood Scale between Two Groups Before and after the Experiment (Points, $\bar{x} \pm s$)

Groups	Time	Depressed
Taijiquan group (n = 40)	Before experiment	5.7±1.3
	After experiment	4.4±1.2
Control group (n = 20)	Before experiment	5.5±1.2
	After experiment	4.9±1.7

4. Discussion

Emotion and emotion are the reflection of the relationship between the objective things and people's needs, and mood is an infectious, long-lasting, diffuse, weak emotional state. Keeping a good leading mood is one of the important indicators of mental health. This study shows that In Taijiquan exercise group, the average score of depressed was significantly lower than that before the experiment and the control group ($P < 0.05$). In the control group, the average score of depressed was significantly lower than that before the experiment ($P < 0.05$), which is consistent with the research results of Chen Xinfu; the control group is in tension, anger, fatigue, panic, These four negative factors of self-esteem were higher than before the experiment, but there was no significant difference. TMD score, energy and depression factor were all decreased, but there was no significant difference. Through the analysis of variance, the influence of Taijiquan Exercise on female college students' mood is significantly different in five factors: tension, depression, anger, self-esteem and energy. This shows that the traditional Chinese Taijiquan is conducive to the improvement of mental health. Taijiquan emphasizes the

integration of body and spirit. The combination of body and mind can moderately improve the mental state of female college students, while the control group fails to improve the mental state of female college students [3-4].

Some studies have pointed out that physical activities related to emotional effects include: pleasant and interesting activities; aerobic exercise or rhythmic abdominal breathing; activities without interpersonal competition; self-control activities; exercise for at least 20-30 minutes each time. According to the results, Taijiquan can improve the mood of participants more effectively than the control group. The possible reason is that Taijiquan requires “thin, long, even, slow and deep” rhythmic abdominal breathing. Through the internal movement to the external movement, the shape of Taijiquan is combined with the internal movement, from the internal and external, from the external to the internal, and finally to the internal and external integration, It shows that Taijiquan can improve the emotional state and mental health through the cultivation and exercise of inner mind, sex and mind. At the same time, this study focuses on motivating female college students to participate in Taijiquan, such as the establishment of self-awareness, belief and attitude, so as to moderately reduce the negative emotions of female college students and improve the positive emotions of female college students, There were no such requirements for the control group [5-6].

Berge et al. Believed that the positive change of emotion depends on the interaction among the participants, exercise forms and exercise conditions of physical exercises, and through the integration of the above three factors, developed a method model to maximize the emotional benefits, and believed that regular participation in moderate intensity, duration of at least 20-30 minutes, at least 3 times a week, happy sports activities, Will get the most emotional benefits. This experiment is carried out scientifically. However, some studies also believe that for healthy people, only short-term physical exercise can produce better emotional effects. This study lasts for 8 weeks, which can be considered as medium and long-term physical exercise, but the results seem to be inconsistent with these studies. As for how long to use physical exercise to achieve better emotional effect, this is the future research direction [7-8].

5. Conclusion

In conclusion, Taijiquan has a good effect on depression of female college students, which is worthy of clinical application.

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References

- [1] Chen Jinxia, Li Yuanhao, Wu Yingqing, et al (2019). The effect of Taijiquan Exercise on depression and serum inflammatory factors of female college students [J]. *School health of China*, vol. 40, no.7, pp. 1065-1068.
- [2] Song Xiaoyan, Du bin, Du haoying (2017). Study on the influence of Taijiquan and aerobic jogging on depression of female normal university students [J]. *Contemporary sports technology*, vol. 7, no. 15, pp. 107-108
- [3] Mo Lianfang, Wu Zuhua (2018). The influence of different physical exercises on the mental health of female college students [J]. *Elite sports (Academic Edition)*, vol. 37, no. 10, pp. 70-71.
- [4] Feng Zhenqi (2013). Influence of Chen Style Taijiquan and Yang Style Taijiquan on cardiovascular function of college students [J]. *Journal of Zhengzhou University (Medical Edition)*, vol. 48, no. 2, pp. 253-257.
- [5] Sui Xintong, Zhao Qian, Yu Kewei (2018). Experimental study on the influence of Taijiquan on the physical and mental health of female college students [J]. *Martial arts research*, vol. 3, no. 10, pp. 46-49.
- [6] Ayguri mukatayi (2017). The influence of Taijiquan on the physical health index of female college students [J]. *Contemporary sports science and technology*, vol. 7, no. 11, pp. 200-201.
- [7] Chen w h, Yang Y P, Lin y B, et al (2015). Study on the influence of exercise prescription intervention on the quality of life of adolescents [J]. *Journal of Guangzhou Institute of physical education*, vol. 35, no. 2, pp. 105-109.
- [8] Wang Zhe Pei, Zhang Kai, Paul, et al (2018). The influence of Taijiquan on the static balance, proprioception and functional activities of the lower limbs of the elderly women [J]. *Chinese Journal of geriatric orthopaedics and rehabilitation*, vol. 4, no. 5, pp. 296-301.

