

Study on the influence of sports dance course on mental health of college students

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Abstract: With the increasingly fierce competition in modern society, the mental health of college students has gradually become the focus of social attention. As a kind of education form integrating art and sports, sports dance course has been paid more attention by physical education in colleges and universities because of its unique physical beauty and psychological benefits. The 2020 Report on the health of Chinese College Students reveals that the physical and mental health of contemporary college students in China is not optimistic, and their physical fitness has been declining for a long time, and the pressure of life and study also makes related mental health problems increasingly prominent. As a sport dance project, it can not only meet the needs of exercise, but also meet the needs of social communication with people. In the process of dancing, communicate with partners and dance friends, combine physical and psychological two into one, respectively, from two aspects to complete the physical exercise, restrain the generation and spread of bad emotions. Based on many previous theoretical studies, I adopted the experimental method as the core, supported by literature, mathematical statistics and logical analysis, took the physical and mental impact of dance sport courses on college students as the main research object, and selected the movement and combination of elements related to dance sport as the main intervention content. Sixty non-sports dance major college students (30 male and 30 female) from Zhengzhou University were selected as experimental subjects to conduct a 16-week intervention in sports dance course. The changes of various indicators of mental health of the 60 students before and after the experiment were analyzed and self-controlled research was conducted, and the following conclusions were drawn: In terms of mental health, the average scores of somatization, depression, anxiety, interpersonal sensitivity and compulsion showed a downward trend and there were significant differences before and after the experiment ($P < 0.05$). The remaining 4 factors show from the data that there is no significant change in the experimental subjects before and after the experiment, so it is impossible to see whether there is any relevant influence from the experimental results. In general, the practice of sports dance can affect the psychological state of college students. Through the method of literature analysis and questionnaire survey, this study discusses the positive effects of sports dance course on the mental health of college students, including relieving pressure, enhancing self-esteem, improving emotional state, etc., and puts forward corresponding educational suggestions

Keywords: Dance sport classes, college students, mental health, mood, self-esteem

1. Introduction

1.1. Research significance

College students are in an important stage of physical and mental development, facing multiple challenges such as academic pressure, employment competition and interpersonal communication. These stress factors make the mental health problems of college students increasingly prominent, such as the high incidence of anxiety, depression, low self-esteem and other problems ^[1,2]. In recent years, physical exercise has attracted much attention as an effective psychological intervention, while dance sport, with its unique artistic expression form and social attributes, shows its unique advantages in mental health intervention ^[3,9].

1.2 Research purpose

The purpose of this study is to explore the influence of sports dance course on the mental health of college students, and to provide scientific basis for curriculum setting and mental health education in colleges and universities by analyzing relevant data. The main objectives of this study are as follows: 1. To explore the specific impact of dance sport courses on the mental health of college students. 2. Evaluate the effect of dance sport courses on relieving psychological stress and improving mood. 3. Put forward suggestions for the optimization of sports dance courses in universities

2. Research object and method

2.1 Research object

60 students (30 males and 30 females) from Zhengzhou University were selected as the experimental subjects to conduct a 16-week dance sport course intervention, and the changes of various indicators of mental health of 60 students before and after the experiment were analyzed and self-controlled.

2.2 Research Methods

2.2.1 Literature method

By consulting the library materials of Zhengzhou University, CNKI, and the full-text database of academic dissertations in China, this paper searched and collected academic journals, doctoral papers and various books related to the research of this paper. With the key words of sports dance and sports dance, the development of sports dance in Chinese colleges and universities and the research results of the value of sports dance exist. Collect, classify and analyze the obtained data. In this way, we can understand the relevant dynamics and development of the research, and serve as the theoretical support for this study.

2.2.2 Experimental method

The experimental group was given a one-semester dance sport course. The duration of the experiment was 16 weeks, with four classes per week totaling 180 minutes and two classes. All subjects were tested on physical and mental health before and after the experiment. The test results are used as an important basis for self-comparison. The SCL-90 scale was used to measure before and after the experiment. SCL-90 Symptom Self-Rating Scale, as one of the most famous mental health test scales in the world, is the most widely used scientific scale for examining various mental disorders and mental diseases. It has the characteristics of large capacity, rich symptom behavior and accurate location of symptoms. It can intuitively assess the relevant symptoms of the subjects in the recent period of feeling, emotion, thinking, behavior, living habits, interpersonal relations, diet and sleep. It can relatively detect whether an individual has certain psychological symptoms and their severity^[3,4]. The research on the reference value and reliability and validity evaluation of SCL-90 applied to college students in the Humanities and Social Science Fund project of Henan Provincial Department of Education shows that the reliability and validity coefficient of SCL-90 in college students ranges from 0.758 to 0.915^[4,5]. Conclusion SCL-90 is suitable to be used as a test tool in college students. The SCL-90 has 90 self-assessment items and 9 commonly used test factors:

2.2.3 Mathematical statistics

All kinds of data obtained from the investigation and experiment are statistically summarized and analyzed. Excel was used to make tables and IBM SPSS Statistics 24 was used for statistical processing. The results were compared to observe whether there were significant differences.

2.2.4 Logical analysis method

Logical induction and theoretical knowledge are used to summarize and make statistics on all kinds of data collected, so as to conclude whether the physical and mental health indicators of college students participating in the experiment will change under the intervention of standard dance. According to the actual experimental data obtained, some suggestions are put forward for the development and promotion of sports dance in the scope of ordinary universities.

3. Experimental results and analysis

3.1 Data analysis of SCL-90 symptom self-rating scale before and after dance sport intervention

Table 1 Comparison of subjects' scores before and after dance sport intervention

| Factor | Before experiment(N=60) | After experiment(N=60) | P value |
|---------------------------|-------------------------|------------------------|----------|
| Somatization | 1.46±0.25 | 1.42±0.24 | P≤0.05 |
| Forcing | 1.83±0.37 | 1.75±0.34 | P≤0.05 |
| Interpersonal sensitivity | 1.83±0.39 | 1.71±0.35 | P≤0.05 |
| Depression | 1.71±0.42 | 1.65±0.40 | P≤0.05 |
| Anxiety | 1.47±0.38 | 1.43±0.38 | P≤0.05 |
| Hostile | 1.29±0.38 | 1.27±0.36 | P > 0.05 |
| Terror | 1.41±0.42 | 1.39±0.41 | P > 0.05 |
| Bigotry | 1.52±0.35 | 1.51±0.34 | P > 0.05 |
| Psychosis | 1.23±0.45 | 1.23±0.44 | P > 0.05 |

According to the scores of each factor before and after the experiment as reflected in Table 1, the average scores of the nine factors after the experiment were relatively lower than those before the experiment. There were significant differences in the scores of somatization, compulsion, interpersonal sensitivity, depression and anxiety. Hostility, terror, paranoia, although decreased, but did not show a significant difference, mental symptoms were slightly changed, except for a few special exceptions almost no change. In general, after 16 weeks of dance sport practice intervention, the mental health of the experimental subjects has been improved, indicating that the learning of dance sport has a positive effect on the mental health of the experimental subjects. At the same time, the average score of the nine factors before and after the experiment did not exceed 2 points. It shows that there are no participants who need to pay special attention to mental health problems in all the experimental subjects, and all the experimental subjects do not have mental diseases involved in the scale.

3.2 Influence of dance sports on somatization, depression and anxiety factors

From the comparison of test scores before and after the experiment, the score of somatization degree decreased significantly, the score decreased from 1.46±0.25 before the experiment to 1.42±0.24, and depression decreased from 1.71±0.42 to 1.65±0.40. Anxiety decreased from 1.47±0.38 to 1.43±0.38. The degree of somatization, depression and anxiety of the subjects was not serious from the point of view of the scores, while the significant difference showed that the three factors of the subjects had been better improved.

3.3 Influence of dance sports on compulsion and sensitive factors of interpersonal relationship

From the results before the experiment, it can be found that the scores of compulsion and interpersonal sensitivity are relatively high among the nine factors. But they are also the two factors that decreased significantly after the experiment. The forcing was reduced from 1.83±0.37 to 1.75±0.34. Interpersonal sensitivity decreased from 1.83±0.39 to 1.71±0.35. This showed that the subjects' compulsion and interpersonal sensitivity were better improved after dance sport practice. Compulsion is mostly meaningless lingering thoughts and behavioral motives in the brain, similar to the mind constantly playing a certain piece of music, always suspect that the door is not closed and go home to check, walking must walk along the floor tile lines or the center area of the brick and other behavioral ideas. Almost everyone has some form of compulsion, but too much compulsion can seriously affect the mind, and the feeling of being unable to get rid of it is extremely painful. In the long run, this will have a negative impact on the efficiency of work and study.

3.4 Influence of dance sports on other factors

From the data before and after, the four factors of hostility, terror, paranoia and psychosis did not change significantly, but generally showed a downward trend. The combined scores show that the four factors themselves have low scores, so it is true that large fluctuations cannot be observed in a short time. The author believes that antagonism is difficult to observe during the experiment. Terror has a certain relationship with the interpersonal sensitivity mentioned above. Social phobia is a kind of terror, but the factors examined by the terror factor are not only social phobia, so it cannot be concluded that sports dance will have an actual impact on the fear factor. Paranoid personality is characterized by the inability

to coordinate family relations at home, unable to cooperate with friends and colleagues outside. During the experiment, due to the scale of the experiment, the author did not find any experimental subjects in any group that seriously interfered with the experiment process. From the score observation, it is possible that the experimental subjects with mild symptoms did not occur, so it was not obvious. Moreover, paranoia is mostly due to internal influence and personal experience, so the author believes that whether relying solely on sports dance can have an actual impact on paranoia is doubtful. From the point of view of the score, the lowest average score is the psychopathy factor, which indicates that the psychopathy of all subjects is very low, so it is also impossible to effectively observe the influence of sports dance intervention on related aspects^[6,7].

3.5 Shortcomings of the experiment

3.5.1 The total duration of the experiment is not long enough, and the class arrangement is not enough

The duration of the experiment covers the first half of the academic year 2024-2025, and the class arrangement is affected by the unified regulation of the school, which means that the class hours are 4 hours per week, a total of 180 minutes, and no additional classes are arranged. Objectively speaking, if the duration of the experiment is extended appropriately and the number of classes is increased. Then the experimental data obtained will be more explicit and more obviously reflect the actual impact of sports dance on the physical and mental health of college students.

3.5.2 There is a large gap in the number of experimental samples

There were 60 subjects in this experiment, including 30 girls and 30 boys. Constrained by traditional concepts, a small number of male students volunteered to participate in the experiment, which may have a certain impact on the data analysis of male students, while the experimental data of female students is more comprehensive.

3.5.3 Influence of force majeure factors

In the course of the experiment, although 16 weeks of classes were finally completed. However, the discontinuous curriculum has a certain impact on the learning outcomes of students who are in the initial stage of contact and exploration, which is also one of the factors that potentially affect the final experimental test results.

4. Conclusions and Suggestions

4.1 Conclusion

4.1.1 Overall improvement of mental health status

Dancesport practice has a positive effect on the mental health of college students, especially in relieving anxiety, depression, obsessive symptoms and interpersonal sensitivity. This shows that dancesport course is not only a way of physical exercise, but also can play a good role in psychological intervention.

4.1.2 Psychological factors with significant influence

The scores of somatization, depression, anxiety and other factors all decreased significantly, which indicated that the practice of dancesport had a certain effect on reducing psychological pressure and improving negative emotions by promoting physical activity, distracting attention and stimulating positive emotions.

Obsessive-compulsive symptoms and interpersonal sensitivity improved significantly after the experiment. Dancesport helps students ease repetitive thinking and social discomfort through high concentration, integration of musical rhythms, and interaction between partners.

4.1.3 Psychological factors with no significant change

There were no significant changes in the scores of hostility, terror, paranoia and psychosis. This may be related to the initial mental health level of the experimental subjects and the low incidence of related problems.

4.2 Suggestions

4.2.1 Break the thought barrier

Dance sport, as a dance performed by a couple, does not only rely on women to complete all the dance moves. It is a fundamental priority to address the male bias towards dance. Make full use of the power of network self-media in the Internet era, instill sports dance into college students so that they have a more profound and correct understanding of it. From understanding, understanding, contact to love. Thus, more people are called to join the team of learning sports dance to enhance physical and mental health together.

4.2.2 Improve sports dance related teaching materials

Unify the teaching syllabus and teaching materials of sports dance course, standardize the teaching content of teachers in the teaching process, and strengthen the teaching staff by introducing special talents of sports dance. At the same time, according to the characteristics and needs of students' majors and personalities, more targeted teaching content materials for college students are developed.

4.2.3 Broaden the research scope of dance sports

The author only focuses on the relatively superficial system such as physical and mental health indicators, and suggests that subsequent researchers should further study whether sports dance will have an impact on the internal structural system of the body in related studies on the impact of sports dance.

4.2.4 Interdisciplinary and all-round teaching

From the experimental results, we know that the unilateral learning of sports dance is not comprehensive enough for the development of physical fitness and dance technology. Each project must have certain limitations, usually in the professional colleges with sports dance and ballet training will be combined, the purpose is to broaden the technical development space of sports dance through the practice of ballet basic training, while in the process of ballet basic training can also be a good exercise of the agility and flexibility of the practitioners.

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