

## **A study on the influence of Physical education courses on female college students' Body self-esteem—Take Yunnan University as an example**

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**Abstract:** In the face of the continuous psychological problems of college students, domestic and foreign scholars and experts take physical exercise as a means to intervene in the treatment of mental illness, research has proved that physical exercise has a positive effect on mental health, different physical exercise can produce different psychological effects of exercise. This paper analyzes the four artistic performance sports courses of flower ball cheerleading, sports dance, aerobics and aerobics set up by Yunnan University, selects non-sports major female students who choose these four courses independently as the research object, and uses the Body Self-esteem Scale (PSPP) to test the students. Therefore, we should explore the influence of the same group and different characteristics of artistic expression sports courses on the improvement and enhancement of female college students' physical self-esteem, promote the extensive development of artistic expression sports courses in colleges and universities, promote the reform of physical education in colleges and universities, and promote and improve the psychological cognitive ability of college students.

### **1. The research significance of the topic**

University stage is an important and special stage of individual psychological development. From the perspective of pedagogy development stage, college students have entered a new stage of development, namely youth.

Body-esteem is a specific field of global self-esteem. It is an individual's sense of satisfaction or dissatisfaction with different aspects of the body which is closely related to social evaluation. Research shows that physical exercise can improve body self-esteem, and the change of body self-esteem in specific areas can affect the overall self-esteem. How to maximize the effect of exercise and promote the physical and psychological development of female college students through college physical education courses is a problem that our college teachers should consider.

Physical education plays an important role in enhancing and improving the physical and mental health of contemporary college students. Artistic performance sports course is an art-oriented sports course with artistic characteristics. It is composed of a series of "artistic sports" items that integrate artistic components (including music, dance, modeling, performance, etc.), have high artistry, can stimulate people's emotions, develop people's creative imagination and expression, and is an important part of school sports. In the study of physical education courses of artistic expression, students can show musical beauty, posture beauty, physical beauty, coordination beauty and temperament beauty through body movements. At the same time, students can imperceptibly cultivate and improve their perception ability, identification ability and appreciation ability of beauty. Through the change of individual external form and internal cognition, they can show the healthy beauty of the body and promote students' physical and mental health. Improve artistic accomplishment, cultivate and improve artistic expression, and eventually form a higher self-esteem stability.

This study selects the artistic performance sports courses such as ball cheerleading, sports dance, aerobics and calisthenics as the entry point, studies the difference of the influence of artistic performance sports courses on the body self-esteem of female college students, and discusses the

role of the same group and different courses of physical exercise in improving and enhancing the body self-esteem of female college students. Promote the extensive development of art performance sports courses in colleges and universities to promote and improve the psychological cognitive ability of college students.

## 2. Research objects and methods

### 2.1 Research Object

According to the research needs, this paper will be opened in Yunnan University flower ball cheerleading, sports dance, aerobics and aerobics four sports courses of non-sports major female students as the object of study. In the study, due to different reasons, the effective sample size was finally 125 people. The basic information is shown in Table 1:

Table 1 Basic information of research objects

course	Number of girls	age
Flower ball cheerleading	31	19.52 + / - 1.57
Dance of sport	33	19.68 + / - 0.91
Aerobics	26	19.80 + / - 0.89
Calisthenics	35	19.16 + / - 0.69
A combined	125	19.56 + / - 1.12

### 2.2 Research Methods

#### 2.2.1 Literature method

In order to study, I read a lot of the latest trends, scientific and technological achievements, relevant policies and regulations related to this research field to obtain relevant information and theoretical basis.

#### 2.2.2 Questionnaire survey

##### 2.2.2.1 Questionnaire selection

In this study, the body self-esteem level of female college students was set as the dependent variable, and the Body Self-esteem Scale (PSPP), newly revised by Xu Xia and Yao Jia and compiled by Fox, was used to test students before and after teaching. The scale consists of a master scale and four subscales. The specific distribution and scoring method of the scale are shown in Table 2:

Table 2 Distribution and scoring methods of Body self-esteem Scale (PSPP)

Name of subscale	Subscale question number
Physical self-worth (master scale)	<u>5, 10, 15, 20, 25, 30</u>
Athletic ability (subscale)	1, 6, 11, 16, 21, 26
Physical Condition (subscale)	2, 7, 12, 17, 22, 27
Physical Attractiveness (subscale)	<u>3, 8, 13, 18, 23, 28</u>
Physical Fitness (subscale)	<u>4, 9, 14, 19, 24, 29</u>

Note: "\_\_\_" means reverse scoring, others are positive scoring.

##### 2.2.2.2 Questionnaire distribution and recovery

Questionnaires were conducted in the first week and the 17th week of the course. The details of distribution and recovery are as follows: Table 3 and Table 4:

Table 3 Statistics of the distribution and recovery of questionnaires before the study

course	Number issued	Number of recoveries	Recovery rate	Number of significant	Efficiency rate
Flower ball cheerleading	35	35	100%	34	97%
Dance of sport	36	36	100%	33	92%
Aerobics	27	27	100%	26	96%
Calisthenics	40	38	95%	35	92%

Table 4 Statistics of the distribution and recovery of questionnaires after the research

course	Number issued	Number of recoveries	Recovery rate	Number of significant	Efficiency rate
Flower ballcheerleading	36	36	100%	31	86%
Dance of sport	36	34	94%	34	100%
Aerobics	27	27	100%	26	96%
Calisthenics	40	38	95%	35	92%

### 2.2.3 Mathematical statistics

The survey data were classified and summarized, and SPSS for windows 17.0 software was used for descriptive statistics, parameter and non-parameter test to process and analyze the data.

## 3. Analysis and discussion

### 3.1 The influence of artistic expression sports courses on female college students' body self-esteem

#### 3.1.1 Overall description and analysis

Before and after the teaching, 125 female college students were tested in four sports courses of artistic realization, namely flower ball cheerleading, sports dance, aerobics and aerobics, which are currently offered in Yunnan University.

Table 5 Total description and Wilcoxon test of body self-esteem before and after teaching (n=125)

indicators	Before teaching M + / - SD	After teaching M + / - SD	P
Self worth	12.62 + / - 2.51	14.44 + / - 2.58	0.00 * *
Ability of movement	12.25 + / - 2.80	14.04 + / - 2.95	0.00 * *
Physical Condition	13.92 + / - 2.95	15.49 + / - 3.07	0.00 * *
Physical attraction	13.12 + / - 2.68	14.93 + / - 2.17	0.00 * *
Physical fitness	13.90 + / - 2.38	14.98 + / - 2.19	0.00 * *
Total PSPP score	65.81 + / - 10.33	73.87 + / - 9.40	0.00 * *

Note: "\*" has a significant difference, "\*\*\*" has a highly significant difference.

As can be seen from Table 5, the body self-esteem of female college students before teaching is at a medium level. It shows that they have an understanding of body self-esteem and can evaluate their body correctly. The improvement of body self-esteem can make the evaluation of students' sports feeling and physical condition become more positive, so as to enhance the awareness of students to participate in physical exercise, develop the habit of lifelong exercise, and improve life satisfaction and subjective well-being. The shaping of college students' body self-esteem is inseparable from teachers, curriculum objectives, contents, teaching methods and organizations.

Compared with before teaching, both the total score of PSPP and the average score of each dimension were improved after teaching, among which the self-worth and physical attraction were significantly improved, and the total score of PSPP and each dimension had highly significant differences. This shows that the art performance sports course can meet the sports needs of female college students, can make them energetic and invigorated; Their cheerful music and powerful movements are very in line with their actual needs. They are fashionable and healthy, which can not only achieve their exercise goals, but also fully show themselves in sports. Through strong and

powerful movements, showing personal ability and control while showing the body beauty; Through different kinds of music, students are guided to express their inner emotions with their bodies, and improve their physical self-esteem through the combined effect of internal and external body.

### 3.1.2 Description and analysis of body self-esteem in each course before and after teaching

#### 3.1.2.1 Description and analysis of body self-esteem in each course before teaching

After the overall description and analysis of the influence of art performance sports courses on the body self-esteem of female college students, descriptive statistics were carried out for female college students in four courses, namely, flower ball cheerleading, sports dance, aerobics and aerobics.

Table 6 Descriptive statistics of body self-esteem in each course before teaching

indicators	cheerleading (n=31)	Dance sport (n=33)	Aerobics (n=26)	Calisthenics (n=35)
Self worth	13.10 + / - 2.86	12.48 + / - 1.94	12.35 + / - 3.53	12.54 + / - 1.69
Ability of movement	11.77 + / - 2.64	12.15 + / - 3.00	12.85 + / - 3.34	12.31 + / - 2.27
Physical Condition	13.84 + / - 2.48	13.67 + / - 2.96	14.12 + / - 3.80	14.09 + / - 2.69
Physical attraction	12.84 + / - 2.70	13.18 + / - 2.87	13.15 + / - 3.20	13.29 + / - 2.09
Physical fitness	14.32 + / - 1.98	13.88 + / - 2.74	13.92 + / - 2.76	13.51 + / - 2.07
Total PSPP score	65.87 + / - 9.70	65.36 + / - 9.66	66.38 + / - 14.30	65.74 + / - 8.21

As can be seen from the descriptive statistics in Table 6, before teaching, the average score of the flower ball cheerleading exercise in the sense of physical self-worth and physical quality is higher than that of other courses, while the average score of the exercise ability and physical attractiveness is lower than that of other courses. Calisthenics had a higher average score for physical attractiveness than other classes; The average score of the total score of the PSPP is higher than that of the aerobics course.

Table 7 Mann-Whitney U test of body self-esteem in each course before teaching

indicators	Dance sport cheerleading		Dance sport calisthenics		Dance sport fighting		Cheerleading calisthenics		Cheerleading fighting		Aerobics combat	
	Z	P	Z	P	Z	P	Z	P	Z	P	Z	P
Self worth	0.75	0.46	0.11	0.92	0.39	0.70	0.83	0.41	0.47	0.64	0.41	0.69
Ability of movement	0.26	0.80	0.45	0.65	1.00	0.32	0.83	0.41	1.46	0.14	1.00	0.32
Physical Condition	0.28	0.78	0.62	0.53	0.73	0.47	0.20	0.84	0.57	0.57	0.34	0.74
Physical attraction	0.52	0.87	0.42	0.68	0.27	0.79	0.42	0.67	0.49	0.62	0.21	0.84
Physical fitness	0.43	0.60	0.74	0.46	0.05	0.96	1.39	0.17	0.37	0.71	0.73	0.47
Total PSPP score	0.67		0.20	0.84	0.83	0.41	0.30	0.77	0.57	0.57	0.95	0.34

Note: "\*" has a significant difference, "\*\*\*" has a highly significant difference.

After further statistical test, it can be seen from Table 7 that although there are some differences in the total score of PSPP and the level of each dimension of female college students' body self-esteem before teaching, there is no statistically significant difference, indicating that the overall level of body self-esteem of female college students in each program is basically in one dimension, which can meet the conditions of the research.

#### 3.1.2.2 Description and analysis of body self-esteem in each course after teaching

After one semester (16 weeks) of teaching, female college students in each course were tested. Table 8 shows the descriptive statistics of body self-esteem of female college students in each course after teaching.

Table 8 Descriptive statistics of body self-esteem in each course after teaching

indicators	cheerleading (n=31)	Dance sport (n=33)	Aerobics (n=26)	Calisthenics (n=35)
Self worth	14.35 +/- 3.01	13.58 +/- 2.74	14.69 +/- 1.98	15.14 +/- 2.25
Ability of movement	13.48 +/- 3.61	13.88 +/- 3.04	15.58 +/- 2.49	13.54 +/- 2.13
Physical Condition	15.48 +/- 3.75	15.36 +/- 3.27	16.65 +/- 2.40	14.74 +/- 2.47
Physical attraction	14.97 +/- 2.59	14.58 +/- 2.32	14.88 +/- 1.90	15.26 +/- 1.80
Physical fitness	15.19 +/- 2.81	14.55 +/- 2.18	15.38 +/- 2.04	14.89 +/- 1.64
Total PSPP score	73.48 +/- 11.87	71.94 +/- 10.59	77.19 +/- 7.99	73.57 +/- 5.73

After one semester of teaching, the comparison with the descriptive statistics in Table 6 shows that the average value of the athletic ability, physical condition and PSPP total score of the aerobics is still higher than that of other courses, and the average score of the physical quality is also higher than that of other courses. The average score for physical attractiveness was still higher than in the other classes, as was the average score for physical self-worth.

Table 9 The Mann-Whitney U test of body self-esteem in each course after teaching

indicators	Dance sport cheerleading	Dance sport calisthenics	Dance sport fighting	Cheerleading calisthenics	Cheerleading fighting	Aerobics combat
	Z P	Z P	Z P	Z P	Z P	Z P
Self worth	0.92 0.36	2.73 * 0.01	2.08 * 0.04	1.35 0.18	0.83 0.41	0.83 0.41
Ability of movement	0.53 0.59	0.59 0.56	2.21 * 0.03	0.16 0.87	2.38 * 0.02	3.21 * 0.00 *
Physical Condition	0.12 0.91	1.06 0.29	1.78 0.08	0.85 0.40	1.64 0.10	2.90 * 0.00 *
Physical attraction	0.49 0.63	1.91 0.06	0.99 0.32	0.95 0.34	0.29 0.77	0.89 0.38
Physical fitness	1.46 0.14	0.78 0.44	1.62 0.11	0.92 0.36	0.12 0.90	0.91 0.36
Total PSPP score	0.48 0.63	0.77 0.44	2.29 * 0.02	0.27 0.79	1.54 0.12	1.66 0.10

Note: "\*" has a significant difference, "\*\*\*" has a highly significant difference.

Through further statistical test, it can be seen from Table 9 that there are highly significant differences in athletic ability and physical condition between the aerobics class and the aerobics kickboxing class. The physical self-worth of the dancesport class was significantly different from that of the aerobics class, and the PSPP total score, physical self-worth and athletic ability were significantly different from that of the aerobics class. There is a significant difference in athletic ability between flower ball cheerleading class and cardio kickboxing class. This shows that although they belong to the same class of courses, different project characteristics, music selection, teacher requirements, teaching objectives, teaching content, teaching methods and organization have different influences on female college students' body self-esteem.

## 4. Conclusions and Recommendations

### 4.1 Conclusion

1) The teaching of art expressive physical education can improve the body self-esteem of female college students. Both the total score of PSPP and the average score of all dimensions are improved, among which, the sense of self-worth and physical attraction are significantly improved, and the total score of PSPP and all dimensions have highly significant differences.

2) Through teaching, there are highly significant differences in athletic ability and physical condition between aerobics class and aerobics kickboxing class; There were significant differences in the physical self-worth between the dancesport class and the aerobics class, and there were significant differences in the total score of PSPP, physical self-worth and athletic ability between the dancesport class and the aerobics class. There is a significant difference in athletic ability between flower ball cheerleading class and cardio kickboxing class.

## 4.2 Suggestions

1) Body self-esteem is a multi-dimensional and multi-level cognition involving individuals' views and evaluation of their own appearance, body shape and physical ability. To explore the changes of body self-esteem, only the score of the Body Self-esteem Scale (PSPP) is a little weak as the assessment, so the test of body size, posture, body function and quality should be increased.

2) Improve the ratio of male to female teachers to show students different physical and artistic beauty. Teachers should keep pace with The Times, constantly improve and improve themselves, reasonable guidance in the classroom, teach students to respect themselves, respect the body.

3) Improve your appreciation. In the classroom, modern microteaching method, video teaching method and other methods are used to improve students' appreciation ability, a clearer understanding of themselves, to understand themselves.

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