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Impact of Ballroom Dance on Body-Esteem of Middle-Aged Urban Citizens

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Abstract: *Aim:* To explore the impact of ballroom dance on the body-esteem of urban middle-aged groups, and to provide references for the promotion of physical and mental health of the group. *Method:* Middle-aged people who meet the age standard and live in cities were selected as the experimental subjects, and the experimental group was given an 8-week ballroom dance exercise intervention. *Result:* After a period of ballroom dance intervention, the body-esteem and its various dimensions of the experimental group were significantly improved to varying degrees ($P < 0.05$). *Conclusion:* Ballroom dance exercises have a significant promotion effect on the urban middle-aged population's body-esteem and its various dimensional levels, and have an extremely significant promotion effect on the physical state, physical fitness and the level of physical self-worth.

Keywords: Ballroom dance; Middle-aged group; Body-esteem; Exercise

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1. Introduction

With the rapid development of Chinese economy, people's demand for a better life is becoming increasingly stronger. National wide fitness program is an indispensable part of building a well-off society in an all-round way. Since the report of the 19th National Congress of the Communist Party of China proposed to "accelerate the construction of a sports power," national wide fitness program has been promoted to an upsurge. In recent years, the number of people participating in national fitness programs such as DanceSport, mass aerobics, and sailor dance has increased exponentially in various parts of our country, and has received strong government support accordingly. As an "exotic product," DanceSport has ever-changing postures, which is extremely attractive to the urban middle-aged group. As the backbone of society, urban middle-aged groups must not only take on the important task of building the country, but also take care of their families. They also face risks such as sub-health and out-of-shape bodies. The heavy pressure has eliminated some barriers for ballroom dance to integrate into the urban middle-aged group, and provided the group with an opportunity to balance themselves and others, improve their physical and mental health while improving their physical health, thereby improving their self-esteem.

2. Literature review

Self-esteem refers to a positive or negative evaluation and emotional experience of an individual's self. It is a personality variable that can regulate an individual's living conditions and emotions. It has a certain explanatory effect on an individual's behavior ^[1]. Body-esteem refers to an individual's sense of

satisfaction or dissatisfaction with all aspects of his body [2]. Ballroom dance is a branch of DanceSport. It originated in Europe and has now become one of the Asian Games competitions. Ballroom dance has attracted the attention of middle-aged groups with its noble and elegant dance style, soothing, soft and powerful unique music style and its unique cultural background.

Scholars at home and abroad often use body-esteem to test the psychological benefits after exercise. Therefore, there is no doubt about the effect of physical exercise [3-4]. Studies have found that exercise such as soft ball and winter swimming can promote the body-esteem of middle-aged and elderly people [5-6]. Latin dance can also improve the body-esteem of middle-aged women [7]. It can be easily seen that there are very few studies on ballroom dance. Therefore, based on previous studies, this study carried out ballroom dance exercise intervention to explore the improvement effect of ballroom dance on the psychological aspects of the group, trying to reveal the relationship between ballroom dance exercise and the body-esteem of the middle-aged group, provide theoretical support for future research in this direction, and provide reference for scientific fitness of middle-aged group.

3. Experiment

3.1. Subject and content

The World Health Organization of the Federation divides people aged 45-59 into middle-aged groups. According to this standard, taking a certain sports dance club in Chengdu as the scope, 28 new members who live in the urban area and meet the age standard were selected, and 7 subjects with other regular physical exercise programs were excluded, and the remaining 21 were used as the experimental group. 20 middle-aged people without regular daily exercise habits in a certain community were selected as the control group. The age of the experimental group and the control group are shown in **Table 1**. All subjects are required to have clear thinking and be able to complete the questionnaire independently.

Participants in the experimental group performed ballroom dance exercises for 8 weeks (3 times/week, 90 min/ time). Except for the experimental requirements, all subjects did not participate in regular physical activities during the experiment as much as possible.

Table 1. Age status of the experimental subjects

	Male	Female	Max	Min	M±SD	P
Experimental group	7	12	59	45	52.32±4.423	0.845
Control group	8	12	58	45	52.05±3.993	

3.2. Tool

The PSPP revised by Chinese scholar Xu Xia was adopted, which can measure the five dimensions of an individual's various dimensions of body-esteem. There are 30 items in the scale, and each item is worth 1-4 points. The Cronbach alpha coefficients of the main scale and subscale are between 0.752 and 0.824, which also have high reliability and validity for middle-aged and elderly people [8]. 41 questionnaires were issued and 41 were retrieved. There were 39 valid questionnaires, with an effective rate of 95%.

3.3. Statistical method

All data in the experiment were sorted by Excel, and t-test was performed by SPSS 24.0

4. Results

4.1. Comparison between two groups before experiment

It can be seen in **Table 2** that there was no significant difference between the two groups of subjects'

body-esteem and its dimensions before the experiment ($P>0.05$). Although there are certain differences in body-esteem and its dimensions between different genders, but it was not significant ($P>0.05$).

Table 2. Comparison of the body-esteem between two groups before experiment ($M\pm SD$)

	Gender	Experimental group (score/P)		Control group (score/P)	t	P
Sport competence		13.26±2.257		13.25±3.059	.015	.988
	M	12.29±2.984	.155	12.88±3.907	.667	.751
	F	13.83±1.586		13.50±2.505		.701
Condition		14.16±3.976		14.75±2.845	-.537	.594
	M	12.14±4.598	.092	14.25±2.252	.536	.270
	F	15.33±3.200		15.08±3.232		.851
Body		14.47±3.580		14.35±3.031	.117	.908
	M	13.71±3.039	.496	14.13±3.399	.795	.810
	F	14.92±3.919		14.50±2.908		.770
Strength		14.05±2.392		14.00±3.212	.117	.954
	M	13.43±3.155	.400	13.00±3.207	.267	.799
	F	14.42±1.881		14.67±3.172		.816
General physical self-worth		14.00±1.886		14.30±2.755	-.395	.695
	M	13.29±2.138	.217	13.63±2.560	.385	.787
	F	14.42±1.676		14.75±2.896		.733
Body-esteem		68.26±12.422		70.65±12.930	-.587	.561
	M	62.71±14.209	.141	67.88±13.336	.448	.481
	F	71.50±10.553		72.50±12.895		.837

* $p<0.05$, significant; ** $p<0.01$, very significant; *** $p<0.001$, extremely significant.

4.2. Comparison between two groups before and after the experiment

4.2.1. Comparison between experimental group before and after the experiment

It can be seen from **Table 3** that after the ballroom dance practice, the body-esteem of the experimental group was significantly improved ($P<0.001$). In the sub-dimensions, the physical state, physical fitness, and sense of physical self-worth increased extremely significantly ($P<0.001$), the improvement of exercise ability is very significant ($P<0.01$), and the improvement of physical attractiveness is significant ($P<0.05$).

Table 3. Comparison between experimental group before and after the experiment ($M\pm SD$) ($N=19$)

	Before	After	P
Sport competence	13.26±2.257	13.84±2.544	.001**
Condition	14.16±3.976	16.47±2.970	.000***
Body	14.47±3.580	15.00±3.815	.037*
Strength	14.05±2.392	14.00±3.212	.000***
General physical self-worth	14.00±1.886	15.00±1.826	.000***
Body-esteem	68.26±12.422	76.95±10.069	.000***

* $p<0.05$, significant; ** $p<0.01$, very significant; *** $p<0.001$, extremely significant.

4.2.2. Comparison between control group before and after the experiment

It can be seen from **Table 4.** that the body self-esteem and its sub-dimensions of the control group decreased slightly before and after the experiment, but the difference was not significant compared with that before the experiment ($P>0.05$).

Table 4. Comparison between experimental group before and after the experiment (M±SD) (N=20)

	Before	After	P
Sport competence	13.25±3.059	13.20±2.966	.666
Condition	14.75±2.845	14.60±2.644	.083
Body	14.35±3.031	14.30±2.744	.666
Strength	14.00±3.212	14.05±3.103	.666
General physical self- worth	14.30±2.755	14.30±2.830	1.000
Body-esteem	70.65±12.930	70.45±12.348	.408

* $p<0.05$, significant; ** $p<0.01$, very significant; *** $p<0.001$, extremely significant.

4.2.3. Comparison of two groups after the experiment

It can be seen from **Table 5** that after a period of ballroom dance practice, the experimental group and the control group have certain differences in body-esteem and various dimensions. Among them, the physical state dimensions are significantly different ($P<0.05$), and the physical fitness dimensions. The difference is very significant ($P<0.01$), especially in men, and there is no significant difference in other sub-dimensions and the total score of body self-esteem ($P>0.05$).

Table 5. Comparison of two groups after the experiment (M±SD)

	Gender	Experimental group (score/P)	Control group (score/P)	t	P
Sport competence		13.84±2.544	13.20±2.966	.724	.474
	M	12.71±3.147	12.88±3.682	-.090	.930
	F	14.50±1.977	13.42±2.539	1.166	.256
Condition		16.47±2.970	14.60±2.644	2.084	.044*
	M	15.29±2.752	14.13±2.031	.938	.365
	F	17.17±2.980	14.92±3.029	1.834	.080
Body		15.00±3.815	14.30±2.744	.658	.515
	M	14.14±2.968	14.13±3.227	.011	.991
	F	15.50±4.275	14.42±2.575	.752	.460
Strength		14.00±3.212	14.05±3.103	3.142	.003**
	M	16.71±2.289	13.00±2.928	2.706	.018*
	F	16.58±1.621	14.75±3.137	1.798	.086
General physical self-worth		15.00±1.826	14.30±2.830	.912	.367
	M	14.29±2.138	13.63±2.925	.493	.630
	F	15.42±1.564	14.75±2.800	.720	.479
Body-esteem		76.95±10.069	70.45±12.348	1.795	.081
	M	73.14±10.189	67.75±13.047	.882	.394

*p<0.05, significant; **p<0.01, very significant; ***p<0.001, extremely significant.

5. Discussion

5.1. Body-esteem of the subjects before the experiment

Before the experiment, the total body self-esteem of all subjects was 69.49±12.576 points, and the sub-dimension scores are 13.26±2.663, 14.46±3.409, 14.41±3.266, 14.03±2.805, and 14.15±2.346 points. It is generally believed that the score of the main scale and the subscale above 70 and 15 points indicate the subjects have good body-esteem and its sub-dimension level [9]. It can be seen that the body-esteem and its various dimensions of the urban middle-aged population in my country are slightly lower than good level. The reason may be that the middle-aged population is a transitional period for individuals to enter old age. At this stage, the body functions such as heart function and muscle strength show a gradual decline [10], and there will also be certain manifestations in the individual's daily behavior, making the individual's satisfaction with self-exercise ability, physical condition and other dimensions decrease.

5.2. Reasons of the ballroom dance for improving the body-esteem of the middle-aged urban groups

For middle-aged groups, body-esteem has a certain impact on their living conditions. Especially with age, middle-aged people gradually feel a series of physical problems such as decline in physical function, hair loss, urinary incontinence, etc., which lead to psychological depression and irritability, and their sense of self-esteem is also affected accordingly [11]. DanceSport requires dancers to dance continuously with music, and usually a single exercise lasts a long time, which has been proven to improve male aerobic exercise capacity [12]. Ballroom dance requires dancers to maintain a straight body posture. After a period of practice, the dancer can maintain a good posture in daily life, and the dancer's health status can also be significantly improved [13]. Not only the physical aspect, but the dancer's coping ability and mental sub-health also have a significant improvement effect [14]. Dancers have certain control beliefs about their physical appearance [15], and after middle-aged groups begin to practice ballroom dance, they will also have certain requirements for their physical appearance, and after their body posture improves, the self-confidence of the physical appearance will also increase, and ultimately the dancer's sense of physical self-worth, body-esteem and self-concept will be significantly improved [16].

In summary, the role of ballroom dance in promoting body-esteem of urban middle-aged groups is unquestionable, indicating that ballroom dance is a good exercise method for this group and can improve the group's physical and mental health. However, this study did not discuss the subjects' academic qualifications, work, etc., and its influence on body-esteem cannot be ruled out. If the intervention time is appropriately extended, the intervention effect may be more obvious.

6. Conclusion

Ballroom dance exercise can extremely significantly improve the level of body-esteem of urban middle-aged groups, and it also significantly improves its sub-dimensions. It can be seen that the ballroom dance exercise is extremely effective in promoting the overall development of the urban middle-aged group's body-esteem.

Disclosure statement

The authors declare no conflict of interest.

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