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Research on the Status and Development Countermeasures of Square Dance Based on Yongchuan District of Chongqing

DENG Xiaoyan[a],*; LUO Jia[b]

[a]Lecturer, School of Mathematics and Finances, Chongqing University of Arts and Sciences, Chongqing, China.
[b]Master Degree Candidate, Xiangtan University, Xiangtan, China.
*Corresponding author.

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Abstract

With the rapid economic growth, the people have a higher pursuit of physical health and spiritual culture, so square dances spread all over the streets and are an important part of the cultural life of the people and a key form of expression. Through the study of square dance, it is possible to seek a good development platform for mass sports and to better promote the development of national fitness. This topic takes the current status of square dance in Yongchuan District of Chongqing as the research object, investigates the development of square dance here, and applies SWOT analysis to the research results, establishes a structural model and conducts a factor analysis finally. From the research, rules will be summed up, problems be found and recommendations be come up with to provide some basis for filling the gaps in the study of square dance in Yongchuan District, and also to offer references for the development of square dance in other regions.

Key words: Square dance; Structural model; SWOT analysis; Factor analysis

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INTRODUCTION

In recent years, the upsurge of national fitness has been actively rising. Of course, this is largely due to the "National Fitness Outline" promulgated by the State Council in 1995. This is a national fitness program with the participation of the national people, and with purpose, meaningfulness as well as tasks and measures, and will help improve the overall quality of the Chinese nation, enrich the lives of the broad masses of people, and promote the building of spiritual civilization.

For square dance, we took Yongchuan District as an example to design a survey questionnaire, so as to understand the current status of square dance and its influence factors and measurement indicators in its development. In order to ensure the rationality and accuracy of the survey, and a comprehensive understanding of the development of the square dance in Yongchuan District, a questionnaire for dancers and non-dancers was designed. Combined with the interviews, the factors affecting the development of the square dance were elaborated and according to relevant conclusion put forward suggestions for improvement, aiming to provide reference for the development and promotion of square dance.

1. EMPIRICAL RESEARCH

This paper uses three-stage sampling, questionnaires and interviews in investigation. 10 square dance gathering places in Yongchuan City were randomly selected for field survey, and then the dancer version and the non-dancer version of the questionnaire carefully designed. A total of 443 questionnaires were distributed, of which 402 valid questionnaires returned, and the effective recovery rate was 90.74%. The reliability and validity of the collected questionnaires has basically reached 90% or higher, all in all the credibility was relatively high. Combined with the corresponding literature and data, the SWOT analysis was conducted, and its influence factors and measurement indicators in the development and promotion of the dance were proposed, and hypothesis models were built

in related to the development and promotion of square dance in the urban areas of Yongchuan District. Through multivariate statistical analysis software and structural equation modeling software, the data obtained from the questionnaire survey were analyzed and processed to verify the model.

1.1 Descriptive Statistical Analysis

Table 1
Basic Information of Dancers and Their Views on Issues Related to Square Dance

variable	attributes	percentage(number of samples)	variable	attributes	percentage(number of samples)
gender	male	25.83（78）	working condition	serving officers	28.25（163）
	female	74.17（224）		students	18.20（105）
age	under 50	44.37（134）		retirees	15.77（91）
	50-60 years old	25.17（76）		unemployed at home	4.51（26）
	60-70 years old	20.53（62）		others	8.32（48）
	≥ 70 years old	9.93（30）	The positive influence of square dance (multiple choices)	improve physical fitness	100（302）
marital status	single	2.98（9）		active community atmosphere	54.30（164）
	married but without children	5.63（17）		promote cultural development	24.83（75）
	married and have children	91.39（276）		spiritual enjoyment	10.60（32）

From Table 1 and other related issues, it can be concluded that among the crowds participating in the square dance, women are the main ones, and their ages are basically below the age of 60; The vast majority are selected to participate in square dances for physical exercise, and will basically participate in it every day ; The team that take the aerobics as the main activity has basically more than 80 people.

We also understand some of the problems that existed. 54.30% of the dancers thought that their venue was too small, 24.83% thought the lights were too dark. During the interview, the foreman and dancers reflected poor speaker equipment, etc. In terms of traffic, there was 27.15% of dances thought that too many people getting together would hinder pedestrians from walking and affect traffic smooth; 10.93% of the dancers believed that some may leave garbage on the activity site, causing environmental pollution, affecting the appearance of the city and even increasing the workload of sanitation workers; 33.11% of the dancers thought it was possible that the noise was too great to affect the normal work and rest of the surrounding residents.

1.2 SWOT Analysis

Based on the above descriptive statistical analysis, we can summarize the analysis of the development advantages, disadvantages and opportunities of square dance in Yongchuan District, and draw the SWOT analysis table of square dance in Yongchuan District as shown in Table 2.

Table 2
SWOT Summary Analysis of Square Dance in Yongchuan District

	advantage(S)	disadvantage(W)
Internal capability（S-W） external factors（O-T）	S1.economic advantages S2.Intensification of aging S3.Square Dance's own needs	W1.square dance team management W2.Shortage of funds W3.Insufficient facilities W4.Insufficient leadership of the team leader W5.Serious imbalance in gender structure
Opportunity （O）	S-O strategy rely on advantage, take advantage of opportunities	W-O strategy take advantage of opportunities to overcome disadvantages
O1.National policy advocates national fitness O2.Conducting Square Dance Competition to Improve Professional Quality	Rely on the support of national policies, raise the awareness of national fitness, and establish and improve square dance competitions.	To seize the opportunity of the upsurge of square dancing, increase public attention, and invest in square dance training, management, capital, and facilities.
threat(T)	**S-T strategy**	**W-T strategy**
T1.Insufficient government support T2.Laws and regulations are not sound	The government to increase its investment in square dance, mainly by formulating policies and granting subsidies.	Formulate and improve relevant laws and regulations and ensure that they are implemented, attracting more talents with their own advantages.

1.3 Structure Models of Measurement Criteria and Influencing Factors

This article summarizes the measurement standards for the development and promotion of square dance as the two aspects of the square dance, those are team's own construction capacity Y1 and the public's love level Y2. The former one is the basic requirement for the development of square dance, with which its human resources (leadership

number), dance category, venue equipment, scale and funding are closely linked. At the same time, the degree of public love is the main manifestation of the scale of square dance and the source of funding. In view of the specific conditions we have learned, the measurement standard for the development and promotion of square dance will be set to 2 main categories with 4 secondary indicators, and the influencing factors of square dance will be set to 4 main categories with 16 secondary indicators. Some models are shown below.

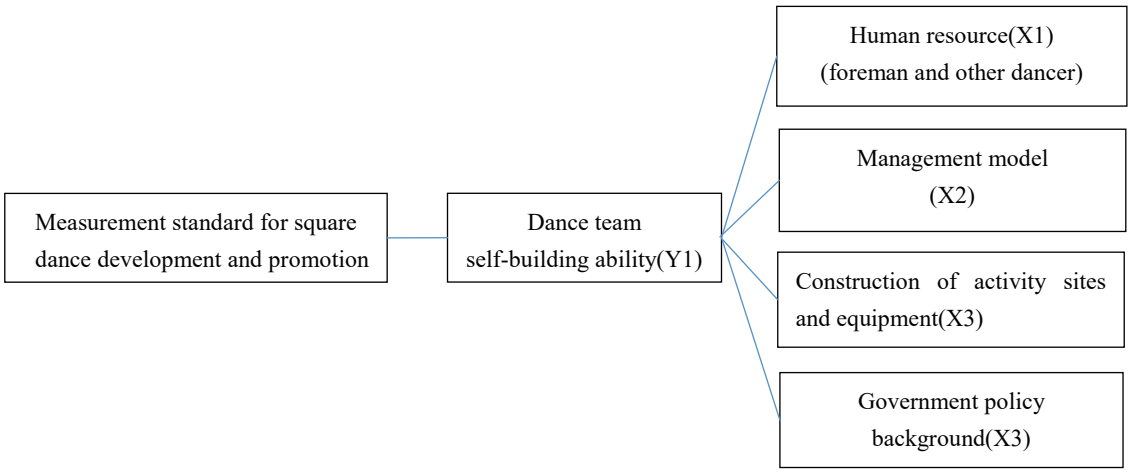

Figure 1
Structure Model Diagram Between Metrics and Metrics

Finally through structural verification factor analysis, the following diagram shows the relationship between the various factors.

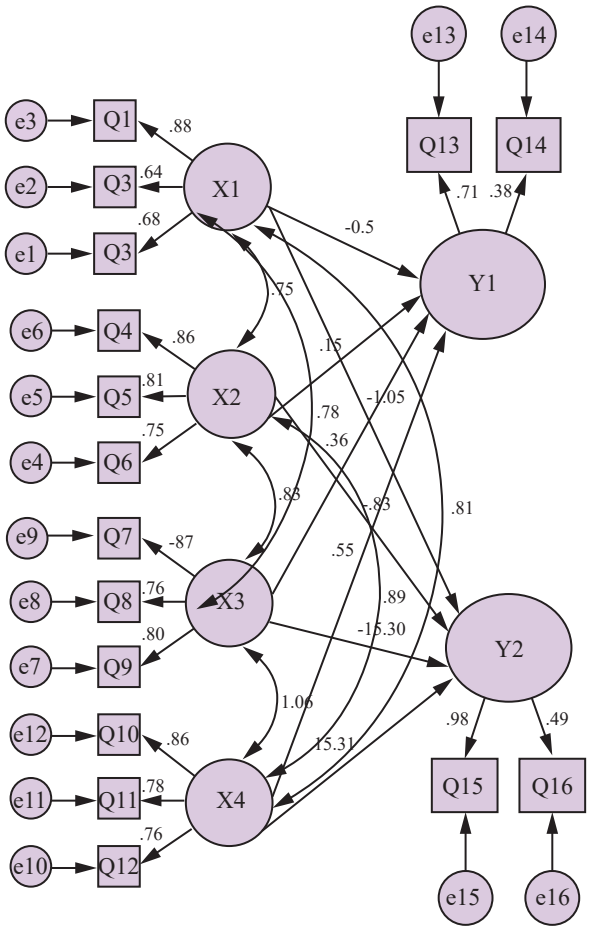

Figure 2
Structure of Each Factor

From the structure diagram obtained above, it can be seen that the 12 research hypotheses proposed in this study are all established, thus the corresponding factor analysis can be done.

1.4 Factor Analysis

Through the analysis of the reliability and validity of each index and the correlation analysis of each index, each variable has a high correlation. All of the 16 indicators can be used for factor analysis. This can further refine the above-mentioned indicators, eliminate factors that have little effect on them, and retain the main impact factors, and classify these factors (that is, the hypothesized indicators) to extract more accurate indicators for the development and promotion of square dance, and also provide specific direction for follow-up conclusion analysis.

1 Factor analysis of factors influencing the development and popularization of square dance

Table 3
Rotating Component Matrix and Component Score Coefficient Matrix Table

factor	Rotating component matrix						Component score coefficient matrix					
	1	2	3	4	5	6	1	2	3	4	5	6
Q1	.374	.592	.550	.139	.232	-.094	-.069	.365	.597	-.285	.073	-.591
Q2	.136	.790	.052	.319	-.024	.226	-.147	.542	-.333	.332	-.236	.171
Q3	.200	.827	.168	-.015	.175	.095	-.060	.570	-.107	-.286	.128	-.015
Q4	.318	.155	.650	.374	.155	.315	-.181	-.153	.533	.205	-.190	.018
Q5	.282	.161	.760	.158	.170	.305	-.185	-.154	.813	-.208	-.083	-.026
Q6	.253	.231	.333	.149	.186	.815	-.088	.020	-.183	-.196	-.019	1.126
Q7	.611	.152	.306	.459	.326	.102	.284	-.152	-.096	.318	.020	-.168
Q8	.330	.162	.223	.239	.837	.190	-.241	-.039	-.200	-.221	1.316	.008
Q9	.346	.247	.291	.744	.258	.149	-.272	-.011	-.134	1.147	-.128	-.112
Q10	.603	.189	.329	.371	.270	.224	.288	-.100	-.082	.122	-.057	.027
Q11	.706	.232	.344	.111	.125	.250	.518	-.049	-.020	-.313	-.212	.085
Q12	.835	.223	.149	.168	.174	.104	.779	-.039	-.329	-.251	-.180	-.025

First, the reliability and validity test results show that the KMO value is 0.951, which is suitable for factor analysis. The P value of Pap test is 0.000, so qualitative analysis of 12 variables can be done. Second, in order to achieve an accuracy of more than 85%, six common factors, namely M1, M2, M3, M4, M5, and M6, must be extracted using the principal component analysis method. Kaiser normalizes its orthogonal rotation to obtain the corresponding rotation component matrix, and normalizes its coefficients to obtain the score matrix of each principal component.

As can be seen from Table 3, the main influence factors of M1 are Q7, Q10, Q11, and Q12; the main influence factors of M2 are Q1, Q2, and Q3; the main influence factors of M3 are Q1, Q4, and Q5; and the main influence factor of M4 is Q9. The main influence factor of M5 is Q8; the main influence factor of M6 is Q6. Therefore, the first 6 eigenvalues and the corresponding eigenvectors are extracted to establish a 6-component regression model, which is as follows:

$$\begin{cases} M_1 = -0.069Q_1 - 0.147Q_2 - 0.060Q_3 + L + 0.518Q_{11} + 0.779Q_{12} \\ M_2 = 0.365Q_1 + 0.542Q_2 + 0.57Q_3 + L + (-0.049)Q_{11} - 0.039Q_{12} \\ M_3 = 0.597Q_1 - 0.333Q_2 - 0.107Q_3 + L + (-0.02)Q_{11} - 0.329Q_{12} \\ M_4 = -0.285Q_1 + 0.332Q_2 - 0.286Q_3 + L + (-0.313)Q_{11} - 0.251Q_{12} \\ M_5 = 0.073Q_1 - 0.236Q_2 + 0.128Q_3 + L + (-0.212)Q_{11} - 0.18Q_{12} \\ M_6 = -0.591Q_1 + 0.171Q_2 - 0.015Q_3 + L + (-0.085)Q_{11} - 0.025Q_{12} \end{cases}$$

The comprehensive score M of the factor is obtained by weighting the weighted contribution rate of each factor to the total variance contribution rate of the six factors as a weighted sum.

$$M = 0.7M_1 + 0.09M_2 + 0.07M_3 + 0.05M_4 + 0.04M_5 + 0.04M_6$$

2 Factor analysis of the metrics affecting the development and popularization of square dance

Table 4
Rotating Component Matrix and Component Score Coefficient Matrix

factor	Rotating component matrix			Component score coefficient matrix		
	1	2	3	1	2	3
Q1	.797	.433	.041	.675	.122	-.302
Q2	.170	.961	.072	-.284	.983	.052
Q3	.817	.003	.380	.699	-.337	.009
Q4	.215	.077	.964	-.283	.054	1.043

According to its corresponding reliability and validity test, the KMO value is 0.653, which is suitable for factor analysis. The P value of Pap test is 0.000, so qualitative analysis of 4 variables can be done. Next, according to the operation steps of the above-mentioned influencing factors, the results of Table 4 above can be obtained.

From Table 4, we can see that the main influence factors of F1 are Q13, Q15; the main influence factor of F2 is Q14; the main influence factor of F3 is Q16. Therefore, the first three eigenvalues are extracted from the corresponding eigenvectors to establish a regression model with three principal components. The regression models for F1, F2, and F3 are as follows.

The comprehensive score F of the factor is obtained by weighting the weighted contribution rate of each factor to the total variance contribution ratio of the three factors as a weighted sum.

$$\begin{cases} F_1 = 0.675Q_{13} - 0.284Q_{14} + 0.699Q_{15} - 0.283Q_{16} \\ F_2 = 0.122Q_{13} + 0.983Q_{14} - 0.337Q_{15} + 0.054Q_{16} \\ F_3 = -0.302Q_{13} + 0.052Q_{14} + 0.009Q_{15} + 1.043Q_{16} \end{cases}$$

$$F=0.58F_1+0.27F_2+0.15F_3$$

Calculate the comprehensive scores of metrics and influencing factors for the development and promotion of square dance separately, and then perform the arithmetic average of the comprehensive scores of the metrics and influencing factors. Finally, the average composite score of the metrics and influencing factors is 2.897 and 2.398, respectively. In comparison, the scores of the four metrics extracted are slightly higher than the scores of the 12 influencing factors. This may also be due to an excess of components assumed by the influencing factors, which may contain some correlations. High impact factor.

From the above formula, the scores of each component of the square dance development promotion are F1 = 2.916, F2 = 2.898, and F3 = 2.826, indicating that the score of the first principal component extracted is higher than that of the other two. In the first component, the main factors are Q13 and Q15. This shows that the team's own organizational management skills and the number of dancers participating in square dance are the two main indicators for measuring the development and promotion of square dance. Each component score of the influence factors of development and promotion of square dance is M1=2.570, M2=2.769, M3=1.749, M4=1.539, M5=1.458, M6=1.846. The scores of the first and second components are relatively high. From the perspective of the rotation factors of the individual factors mentioned above, the leading factor of lead dancers, the age distribution of the participants and their positive awareness, site scale, government propaganda and subsidies are the main factors influencing the development and promotion of the square dance.

Combined with the previous descriptive analysis and SWOT analysis, the 16 indicators extracted have a certain influence on the development and promotion of square dance. Therefore, if it is necessary to further improve the building ability of the square dance team to develop and promote square dance activities, we can increase the leadership of the dance team, expand the number of people participating in the square dance, and increase the government's publicity in this area and provide subsidies for square dance construction. As long as the publicity is in place and the dancers are in demand, the dancers are certainly willing to participate in square dances.

CONCLUSIONS AND RECOMMENDATIONS

At present, the participants in the square dance event in Yongchuan District have a large gender difference and are mainly female, while the age span of the participating population is large, mainly middle-aged and old people. Improving physical fitness is the main motivation for people to participate in square dancing. For most dancers, they said that they did not participate in dance because of the bad weather and the lack of space. There has less relevant training for square dance and lacks professional instructors in Yongchuan District, this not only indirectly caused the issue that noise nuisances people, but also its corresponding rules and regulations are not perfect.

The government should consider square dance as part of cultural construction, and increase attention and investment in dance square through TV, newspapers, large display screens in busy areas or media tools on public transport, etc. Taking festivals as an opportunity to hold cultural festivals, in which square dance can be combined with traditional cultural features for publicity. Government should also formulate some subsidy policies and incentive systems to mobilize the enthusiasm of the people, install lights for lighting at the venue of the square dance to reduce some of the safety problems caused by the darkness.

Dancer organizers should improve their own management capabilities and play a better leading role. When adjusting the equipment, it should be based on the size of the team, so as to satisfy individual needs without causing any trouble to other residents. They should pay attention to improving their own quality, arrange healthy and harmonious dance music, and better promote the construction of a spiritual and civilized city. Innovative teaching methods can be used to specifically select some good dancers to perform one-on-one teaching, or to record some videos to share with the square dance enthusiasts in need. A better male dancer should be choose to become a member of the team leader, thereby stimulating men's enthusiasm for participation and balancing the ratio of men and women.

Dancers should improve their own qualities and strive to be advocates of building a harmonious, civilized and healthy society., should develop a good sense of environmental protection, such as taking away rubbish at the end of the square dance and not bringing pets to

participate in square dance activities, also improve the awareness of scientific and healthy exercise, and choose the dance step and rhythm that suits your own physical condition with light dress, talk to other dancers around you and share experiences, bring friends and family around you to participate in the activity, thus letting the positive influence of the square dance infect other people.

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