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Chinese minority sports development path research in the perspective of people's livelihood

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ABSTRACT

Chinese minority sports have strong national characteristics, are one kind of comprehensive activities that integrate national culture, sports culture and sports. Develop minority sports has important significances in inheriting minority culture and transmission of traditional national spirits. The paper starts from minority traditional sports development recent situations and their sports development modes, by establish models, utilizing numerical analysis and analytic hierarchy process method, it researches data features and then gets conclusions. Firstly, it makes concrete analysis of minority' masses' gender differences, number of participants, participation frequency and participation motivations in participation in national traditional sports, it finds out Chinese minority traditional sports existing problems. Secondly, it establishes minority' traditional sports development mode analytic hierarchy process model, by comparing weights, it gets conclusion: Chinese minority residents participate in national sports activities are mainly for body building, strengthening physique, annual participation in large-scale national sports activities frequency is basically around five times, and men's enthusiasm in participation in sports activities are obviously higher than women. Compare to the Han nationality masses, minority' residents' national traditional sports consciousness is relative higher. Professional organizations is most suitable Chinese minority traditional sports development mode, secondly is government do the dominant.

KEYWORDS

Minority; Traditional sports; Development mode; Analytic hierarchy process; The perspective of people's livelihood.



INTRODUCTION

With the development of times, people's living standard has gradually improved; many national sports events with local national features have already gradually been lost. Inheritance of national culture and transmission of national spirits are top priorities in contemporary cultural protection, and meanwhile are also our new generation youth tasks.

In minority sports culture researches, Zhong Zhi-Yong by the article "The Mongol nationality traditional sports educational anthropological research", took the Mongol nationality traditional sports as examples, analyzed the Mongol nationality regional traditional sports development. The article started from educational anthropology perspective, by investigating the Mongol nationality traditional sports recent situations, it contained national sports events, and participation masses basic information, cultural standards, and combined with local economic development conditions, made comprehensive evaluation on the Mongol nationality traditional sports. The article pointed out that the Mongol nationality sports development was not going well, it affected by local geographical environment and economic development, its national sports culture had already spread a lot, and protection work was still required to be further strengthened.

In national sports inheritance research, Dai Hai-Bo by the article "Hulun Buir region Mongol nationality and three minorities' traditional sports inheritance and development countermeasure research", took Hulun Buir region as an example, introduced Mongol nationality and three minorities traditional sports development status. The article through analyzing local residents participation in national traditional sports status, investigated their participation times and satisfaction index after participating, found Hulun Buir region national traditional sports existing problems in development process, and put forward corresponding countermeasures. The article put forward that Hulun Buir region due to geographic conditions limitation, its national sports cultural development was not so fast, lots of local participated in sports were just for body building, therefore government should enlarge supports on them, so that could propel to Hulun Buir region national traditional sports development.

In minority sports researches, Zeng Wen-Chao by the article "Hunan province national traditional sports development positioning and orientation research" introduced Hunan province traditional sports development status. The article took Hunan province as an example, positioned national traditional sports, and combined with local development conditions to make research on its development orientation. The article pointed out Hunan province national traditional sports had vivid national features, their development should base on Hunan province economy, took national traditional sports events with most development potentials as development guide, dedicated to national sports inheritance.

The paper takes minority sports development path as entry point to make research, takes minority sports development recent situations as carrier, further researches minority traditional sports development path. By the perspective of statistics, analyze minority traditional sports inheritance and protection to provide orientations for future research.

NATIONAL TRADITIONAL SPORTS DEVELOPMENT RECENT SITUATION

Minority masses to national traditional sports fondness gender differences

In minority regions, due to affected by numerous factors, their fondness on sports is different. Compare to Han nationality region, minority regions masses love own national traditional sports, which is very remarkable in men.

Below TABLE 1 and Figure 1 are different genders to national traditional sports fondness extent comparison, from which it contains minority residents and Han nationality residents horizontal comparison and men and women horizontal comparison.

TABLE 1 : Different genders to minority sports fondness extent

	Minority men	Minority women	Han Chinese men	Han Chinese women
Adore	46.15%	36.69%	10.07%	3.47%
Like	37.98%	39.11%	29.53%	34.68%
Prefer	9.62%	16.53%	36.24%	40.46%
Hate	5.29%	5.24%	20.81%	15.03%
Dislike	0.96%	2.42%	3.36%	6.36%

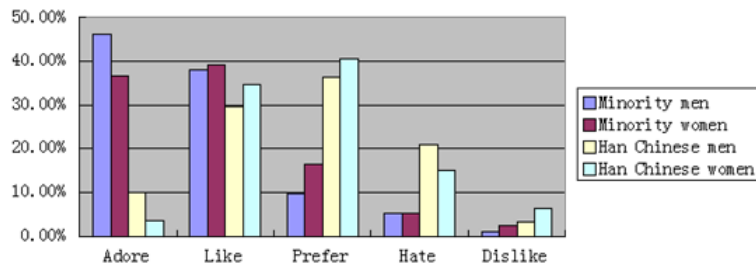


Figure 1 : Different gender on minority sports liking

By above comparative analysis, it gets conclusions that minority men are main group of national traditional sports, their fondness on traditional sports are the highest, there are 46.15% masses adore minority sports, and only 36.69% people in women adore it. By comparing, it is more serious in Han nationality people, people that adore national traditional sports are quite little, men only occupy 10.07%, and women just occupy 3.47%.

National traditional sports events participants’ amount comparison

In order to analyze Chinese masses participation enthusiasm to national traditional sports, now makes statistics of performance, Cuqiu activity, setting-up exercise, martial arts and other events participants’ amount. And further study different national sports events differences in number of participants, finally it gets correlation conclusion.

Below Figure 2 is Chinese national traditional sports events participants’ amount comparative analysis schematic diagram, carry on statistical analysis on it, research on each kind of sports events data features.

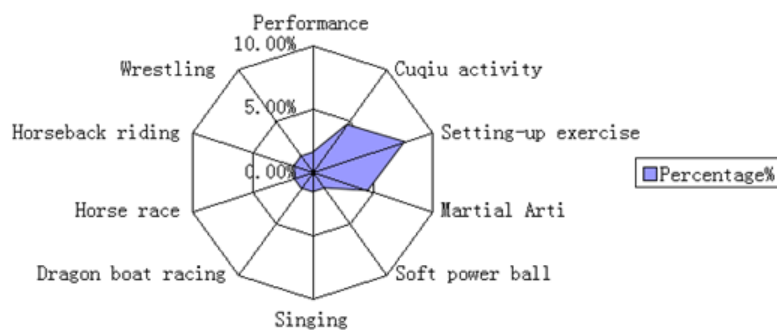


Figure 2 : National sports

Analyze above statistical figure, it can get conclusions: in minority traditional sports numerous events, setting-up exercise, martial arts and Cuqiu activities' number of participants are most, which is mainly because the three kinds of events are collective events, more collective communication in participation process and get closest to public life.

Minority people participate in national sports activities frequency

In the organization of minority national sports activities, due to affected by local environment, economic development and other factors, minority residents participate in traditional sports events frequency is also not the same, most minority residents participation frequency in traditional sports events are basically around five times per year.

Below TABLE 2 and Figure 3 are frequency statistics of minority residents participation in traditional sports events, analyze data features, and on this basis, it gets research results.

TABLE 2 : Minority residents' traditional sports events participation frequency

	Twenty times per year	Ten times per year	Five times per year	Zero per year
Percentage%	3.4%	12.1%	75.1%	9.4%

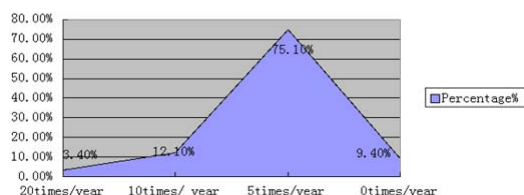


Figure 3 : Residents to participate in the frequency of traditional sports

By above statistical analysis, it can get conclusions: minority residents traditional sports events participation frequency is not very high, the ones that participate for 20 times per year only have 3.4%, ten times per year just occupy 12.1%, and even there are 9.4% people every year participation time is zero.

Main purpose of minority residents participate in traditional sports

Minority traditional sports not only can carry forward national traditional culture, inherit national spirits, but also have functions of body building and strengthening physique. Regular participate in sports events can relieve living and working pressures, relax moods, enrich amateur life, and improve living standards.

Below TABLE 3 are main purposes that minority residents participate in traditional sports, analyze following statistical table data features, and research minority sports correlation features.

TABLE 3 : Minority residents' main purposes in participating in traditional sports

	Percentage%	Ranking
Carry forward national spirits, inherit culture	30%	4
Body building, strengthen physique	45%	1
Personal interests and hobbies	14%	7
Relieve living and working pressure	33%	3
Leisure and entertainment	16%	6
Enhance communication	33%	3
Develop personality	26%	5
Enrich amateur life	6%	8
Follow national customs	30%	4
Else	34%	2

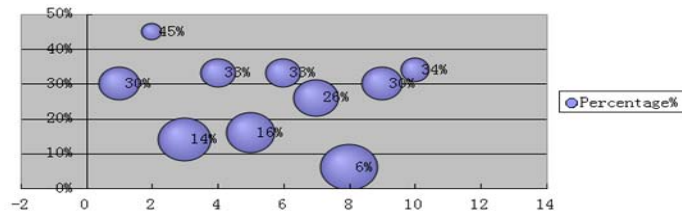


Figure 4 : For purpose of ethnic traditional residents participate in sports

By above statistical Figure 4, it can get conclusions: in minority traditional sports participation, 45% group are for body building, strengthening physique, and some parts of people are for enhancing interpersonal communication, relieving working pressure. With the purposes of carrying forward national spirits and inheriting culture to participate in national sports, such group only occupy little parts.

NATIONAL TRADITIONAL SPORTS DEVELOPMENT MODE RESEARCH

National traditional sports development is always related to Chinese sports advancement, it not only is a type of possessing most national features and national characteristics in Chinese traditional sports, but also the representative of Chinese advanced culture. By far, for national traditional sports, their main development mode are government fully supports, government do the dominant, professional organizations and intermediary organization four ways, to research which kind of way is more fit for Chinese national traditional sports development, now go deeper analysis of them by analytic hierarchy process, and then get conclusions.

(1)Construct hierarchical structure, as Figure 5.

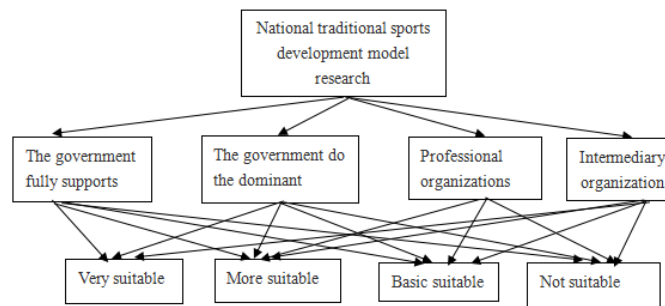


Figure 5 : Hierarchical structural model

Target layer: National traditional sports development model research

Criterion layer: Scheme layer influence factors, C_1 is government fully supports, C_2 is government do the dominant, C_3 is professional organizations, C_4 is intermediary organization.

Scheme layer: A_1 is very suitable, A_2 is more suitable, A_3 is basic suitable, A_4 is not suitable

(2)Construct paired comparison matrix

Construct paired comparison matrix is carrying on paired comparison among elements, using matrix to express each layer every element importance to previous layer all elements, here apply operational research expert proposed 1~9 ratio scale, as TABLE 4.

TABLE 4 : 1~9 scale definition

Scale	Definition
a_{ij}	

1	factor i and factor j have equal importance
3	factor i is slightly more important than factor j
5	factor i is relative more important than factor j
7	factor i is extremely more important than factor j
9	factor i is absolute more important than factor j
2, 4, 6, 8	Indicates middle state corresponding scale value of above judgments

According to above scale TABLE 4, set judgment matrix A as:

$$A = \begin{pmatrix} 1 & 2 & 4 & 3 \\ \frac{1}{2} & 1 & 5 & 4 \\ \frac{1}{4} & \frac{1}{5} & 1 & 3 \\ \frac{1}{3} & \frac{1}{4} & \frac{1}{3} & 1 \end{pmatrix}$$

And constructed scheme layer judgment matrixes correspond to different criterion layers are as following TABLE 5-7:

TABLE 5 : Criterion layer judgment matrix

C ₁	A ₁	A ₂	A ₃	A ₄
A ₁	1	3	3	5
A ₂	1/3	1	4	4
A ₃	1/3	1/4	1	3
A ₄	1/5	1/4	1/3	1

TABLE 6 : Criterion layer judgment matrix

C ₂	A ₁	A ₂	A ₃	A ₄
A ₁	1	3	3	5
A ₂	1/3	1	4	4
A ₃	1/3	1/4	1	3
A ₄	1/5	1/4	1/3	1

TABLE 7 : Criterion layer judgment matrix

C ₃	A ₁	A ₂	A ₃	A ₄	C ₄	A ₁	A ₂	A ₃	A ₄
A ₁	1	2	3	3	A ₁	1	2	2	3
A ₂	1/2	1	3	3	A ₂	1/2	1	3	3
A ₃	1/3	1/3	1	1/3	A ₃	1/2	1/3	1	1/3
A ₄	1/3	1/3	3	1	A ₄	1/3	1/3	3	1

(3)Calculate weight
Consistency test

Consistency indicator: $CI = \frac{\lambda_{\max} - n}{n - 1}$

Random consistency indicator: Randomly generate multiple matrixes, add every matrix consistency indicator and then take average value, it gets RI , as TABLE 8.

TABLE 8 : Random consistency indicator

n	1	2	3	4	5	6	7	8	9	10	11
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51

Consistency ratio: If $CR = \frac{CI}{RI} < 0.1$, constructed paired comparison matrix A passes consistency test.

For judgment matrix:

$$A = \begin{pmatrix} 1 & 2 & 4 & 3 \\ \frac{1}{2} & 1 & 5 & 4 \\ \frac{1}{4} & \frac{1}{5} & 1 & 3 \\ \frac{1}{3} & \frac{1}{4} & \frac{1}{3} & 1 \end{pmatrix}$$

Firstly handling as following:

$$\begin{matrix} \xrightarrow{\text{Column vector normalization}} & \begin{pmatrix} 0.545 & 0.932 & 0.413 & 0.22 \\ 0.212 & 0.335 & 0.831 & 0.816 \\ 0.208 & 0.024 & 0.154 & 0.155 \\ 0.285 & 0.015 & 0.125 & 0.187 \end{pmatrix} \\ \xrightarrow{\text{According to the row sum}} & \begin{pmatrix} 2.011 \\ 2.214 \\ 0.654 \\ 0.677 \end{pmatrix} \xrightarrow{\text{The normalized}} & \begin{pmatrix} 0.713 \\ 0.556 \\ 0.165 \\ 0.149 \end{pmatrix} = W^0 \end{matrix}$$

And then, by $A \times W^0 = \begin{pmatrix} 0.254 \\ 0.191 \\ 0.725 \\ 0.554 \end{pmatrix}$ it further solves $\lambda_{\max}^0 = 4.103$.

By calculation, it can get paired comparison matrix A maximum feature value $\lambda_{\max} = 3.985$, $RI = 0.90$

By consistency indicator $CI = \frac{\lambda_{\max} - n}{n - 1}$, input data, it can calculate and get $CI = \frac{4.242 - 4}{4 - 1} = 0.081$

And by consistency ratio $CR = \frac{CI}{RI} = \frac{0.081}{0.90} = 0.089 < 0.1$, so constructed paired comparison matrix A passes consistency test. Similarly, it can verify criterion layer judgment matrixes also pass consistency test.

Similarly, criterion layer judgment matrix corresponding maximum feature value and feature vector are successively:

$$\lambda_{\max}^{(1)} = 2.874, \omega_1^1 = \begin{pmatrix} 0.577 \\ 0.413 \\ 0.912 \\ 0.883 \end{pmatrix}; \lambda_{\max}^{(2)} = 2.874, \omega_2^1 = \begin{pmatrix} 0.115 \\ 0.057 \\ 0.882 \\ 0.761 \end{pmatrix};$$

$$\lambda_{\max}^{(5)} = 2.865, \omega_5^1 = \begin{pmatrix} 0.436 \\ 0.341 \\ 0.885 \\ 0.761 \end{pmatrix}; \lambda_{\max}^{(6)} = 2.865, \omega_6^1 = \begin{pmatrix} 0.441 \\ 0.252 \\ 0.863 \\ 0.731 \end{pmatrix};$$

(4) Calculate combination weight vector

By $w^1 = (w_1, w_2, w_3, w_4)$, and $W = W^1 \times W^0$ it can calculate and get :

$$W = \begin{pmatrix} 0.101 \\ 0.298 \\ 0.553 \\ 0.257 \end{pmatrix}$$

By above analysis result, compare weight and can get conclusions: in Chinese national traditional sports development process, professional organizations is most suitable mode for its development, secondly is government do the dominant, and government fully supports and intermediary organizations weights are too high, therefore it is not fit for Chinese national traditional sports development.

To further develop Chinese minority traditional sports, propel to its development process, it should enlarge its publicity, strengthen masses understanding on minority traditional sports knowledge, so that make contributions to carry forward minority culture, protect intangible culture, and inherit national spirits.

CONCLUSION

(1) Firstly, the paper starts from minority traditional sports development recent situations, researches minority masses' gender differences, number of participants, and participation frequency and participation motivations in participation in national traditional sports, by numerical analysis, from the perspective of statistics, it finds out Chinese minority traditional sports existing problems, and then points out: Chinese minority residents participate in national sports activities are mainly for body building, strengthening physique, annual participation in large-scale national sports activities frequency is basically around five times and men's enthusiasm in participation in sports activities are obviously higher than women. In addition, vertically compare minority with Han nationality masses, minority' residents' national traditional sports consciousness is relative higher.

(2) Secondly, the paper establishes minority traditional sports development mode analytic hierarchy process model, researches in contemporary national conditions, government fully supports, government do the dominant, professional organizations and intermediary organizations these modes' most suitable Chinese minority sports development optimal mode. By analyzing, it finally points out that professional organizations is most suitable Chinese minority traditional sports development mode, secondly is government do the dominant. When developing Chinese minority sports, it should focus on minority cultural promotion and inheritance, by organizing sports activities forms, let national traditional

cultural to be carried forward, and let more masses to understand national sports, so that propel to national sports development.

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