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Dynamic Mechanism of High Quality Development of National Fitness Public Service: An Analysis Based on Interpretative Structural Model

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Abstract

National Fitness Public Service is integral to people's livelihoods and connects with public sentiment. Promoting the high-quality development of National Fitness Public Service is not only a necessary response to the overall high-quality development of China's economy

and society but also an essential measure to meet the public's expectations for a high-quality life. The "14th Five-Year Plan" period represents a new journey in the construction of National Fitness Public Service in China and a critical period for establishing a high-quality development and high-quality life paradigm. Under these new circumstances, it is crucial to clarify the driving forces behind the high-quality development of National Fitness Public Service. This clarification is significant for local governments to advance National Fitness Public Service and enhance service levels.This study, based on the Interpretive Structural Modeling (ISM), systematically constructs the driving mechanism of high-quality development for National Fitness Public Service. The final model is structured as "1-3-9-19," where "1" represents the goal layer, "3" the superficial direct driving factors, "9" the intermediate driving factors, and "19" the foundational driving factors. This model aids in strengthening the theoretical understanding of the high-quality development of National Fitness Public Service and provides theoretical support for local governments in formulating regional policies.

Keywords: National Fitness Public Service; High-Quality Development; Driving Mechanism; Interpretive Structural Modeling (ISM).

1. Introduction

National Fitness Public Service is provided by the government, to meet the needs of the public to participate in sports activities of the basic public sports services.The public service of national fitness is related to the people's livelihood, connecting the people's hearts and promoting the high-quality development of the public service of national fitness is not only an important cornerstone to speed up the construction of a powerful sports country, but also an internal requirement to conform to the people's expectation for high-quality life, and an important content to promote the common prosperity of all the people to make substantial progress[1].The 14th Five-Year Plan for Public Services clearly points out that it is necessary to clarify the guiding ideology, grasp the basic principles, anchor the development goals, promote the high-quality development of public services in a solid manner, and strive to improve the quality and level of public services.

Since the promulgation of the Outline of the National Fitness Program in 1995, the public service of national fitness in China has been developing continuously, showing the development trend of equalization, integration, wisdom and legalization as a whole[2].However, the development of national fitness public service in various regions of China is still facing many problems .Taking Shandong Province as an example, since the 11th National Games, Shandong Province has been committed to promoting the development of

the public service of national fitness[3], but at present, the public service of national fitness in Shandong Province is still faced with such problems as vague government functions, lack of effect in policy implementation, single service supply pattern, disregard for the public service demand of national fitness, etc.Specific to each prefecture-level city, Qingdao, Jinan, Yantai and other regions as the first category of areas, Zaozhuang, Tai 'an, Jining as the second category of areas, Rizhao, Liaocheng, Heze as the third category of areas of public service level cascade column[4], this phenomenon is not a unique phenomenon in a certain region, Beijing-Tianjin-Hebei region[5], Shanghai City[6], Guangzhou City[7], Yan' an City [8]and other regions exist unbalanced development, development level is not high and other problems.The same is true in foreign countries. For example, there is a gap between urban and rural areas in the layout of public sports venues and facilities in England. There are obviously more cities than rural areas, and there are generally more economically developed areas than underdeveloped areas[9].

Different regions of the national fitness public service level differences, which is due to the existing regional differences in economic conditions, such as foreign scholars have mentioned that the higher the level of economic and social development in the United States[10], the better the supply of sports facilities, regional managers for the development of national fitness public service understanding of the deviation is also a major important reason for the lack of national fitness public service development of the overall understanding.At present, the research on the mechanism of the public service of national fitness is less than the whole.The research results focus on the operation mechanism[11] 、 [12]], guarantee mechanism[13], supervision mechanism[14], publicity mechanism[15] and other aspects. On the dynamic mechanism of public service for national fitness, Zhang Ruilin, a scholar, believes that the dynamic factors of public service for national fitness can be divided into six categories on the basis of literature induction and expert interview, namely, policy incentive, publicity and promotion, market operation, management innovation, financing orientation and performance management[16]; On the basis of systematic induction, the author thinks that the dynamic mechanism is three aspects: clear service subject, intelligent management mode and diversified supply system; or based on entropy theory[17], the author thinks that the dynamic factors of coordinated development and orderly evolution of sports public service system include policy, law, formulation means, the role of non-governmental departments and market-oriented management environment.

In 2022, the Opinions on Building a Higher-level Public Service System of National Fitness jointly issued by the General Office of the CPC Central Committee and the General Office of the State Council drew a new blueprint for promoting the public service of national fitness to a higher level.In the new era and new situation, it is time to upgrade the public service of national fitness.Based on this, this study constructs the dynamic mechanism of high-quality development of national fitness public service based on interpretative structural model, which will help to clarify the logic of high-quality development of national fitness public service, help managers to promote the high-quality development of regional national fitness public service better, and thus provide more equitable, more efficient and sustainable high-quality national fitness public service for the masses.

2. Research technique

Literature method: The literature method mainly collects the analysis related to this research problem, and lays the foundation for the continued development of this research through analysis, induction, and other techniques. The literature sources of this study mainly include 1. Southwest University Library, borrowing and querying dynamic mechanism, high quality, national fitness public service related monographs.2. Domestic literature data platform, including but not limited to China, Wanfang, and other platforms.3, foreign literature database, mainly based on the web of science.

Logical analysis method: On the basis of existing facts, investigation data, and research tools, this paper expounds and demonstrates the relevant problems of the dynamic mechanism of high-quality development of public service for national fitness.Including the theoretical analysis, system deconstruction, and dynamic mechanism operation of the high-quality development of the public service of national fitness.

Questionnaire survey method: integrate the dynamic factors of high-quality development of national fitness public service obtained after sorting out the literature, form a questionnaire, and investigate the majority of respondents to analyze whether the dynamic factors of literature sorting are feasible. On the other hand, consult other dynamic factors of high-quality development of national fitness public service, perfect the scope covered by the dynamic factors as much as possible. This questionnaire is mainly distributed to researchers of public service of national fitness (academic workers in public service of national fitness and sports management), workers (such as leaders of mass sports organizations, local mass sports management personnel, etc.), and enjoyment persons. The questionnaire is mainly

distributed online. Obtain the data objectively and comprehensively as much as possible, there is no geographical limit for this questionnaire distribution. A total of 356 people participated in this questionnaire survey, 34 invalid questionnaires were eliminated, and 322 valid questionnaires were obtained.

Mathematical statistics: all the data collected by the questionnaire are sorted and analyzed to meet the research needs.

3. Construction of Dynamic Mechanism for High-quality Development of National Fitness Public Service

3.1 construction step of dynamic factor system

Analyzing, identifying, and constructing the dynamic factor system of high-quality development of national fitness public service is the basis of studying the dynamic mechanism of high-quality development of national fitness public service. To construct a systematic, comprehensive, and scientific dynamic factor system for the high-quality development of public service for national fitness, this study mainly constructs and analyzes the dynamic factor system for the high-quality development of public service for national fitness based on the research results of existing scholars and expert interviews, combined with the understanding of the law of social development. The construction steps of a high-quality development dynamic factor system of national fitness public service are as follows:

(1) to determine the research objectives. By constructing the dynamic factor system of high-quality development of national fitness public service, finding out the dynamic factors to promote the development of national fitness public service is helpful to analyze the quality and development motivation of high-quality development of national fitness public service, avoid blindness and lag in the process of high-quality development of national fitness public service, and do a good job in the follow-up research on the dynamic mechanism of high-quality development of national fitness public service.

(2) obtain that power factor. To ensure the comprehensiveness and scientificity of the dynamic factor system, on the basis of systematic literature combing and expert interviews, the dynamic factors of high-quality development of public service for national fitness are extracted, analyzed, and revised.

(3) By the analysis steps of the ISM explain structure model, the hierarchical structure of the dynamic factors of the high-quality development of the national fitness public service is constructed.

3.2 Dynamic Factor Identification

3.2.1 dynamic factor extraction

At present, scholars have studied the motive force and influencing factors of the development of public service for national fitness. Therefore, to identify the motive force factors of high-quality development of public service for national fitness, it is necessary to sort out and analyze the existing research first. It is worth mentioning that the national fitness public service and sports public service (public sports service) overlap in content, and the connotation between the dynamic factor and the influencing factors also has a certain correlation. Based on this, the literature combing mainly takes A set (national fitness public service, sports public service, public sports service)+B set (power, quality, efficiency, influencing factors) as the main keywords, and combines the specific explanation of the connotation of high-quality development of national fitness public service in Chapter IV, carries out literature retrieval and combing on CNKI, Wanfang and other databases. The total number of literature retrieval is 1350, among which 38 literature are highly relevant.

Collation and analysis of the relevant literature and listed power factor, we can see that although the current scholars for the national fitness public service development factors were studied, due to the analysis of the perspectives between the scholars are not the same, many impact factors expressed by the connotation of both homogeneity and heterogeneity, such as Chen Yang, Li Jinpeng scholars respectively from the urban and rural areas as the starting point. Therefore, to clarify the impact factors of the development of public services for national fitness, it is necessary to combine the impact factors with similar components, such as "policy," policy incentive," policy promotion force" and "policy support system" as "policy support." Secondly, the impact factors with vague meanings are split, such as

"responsiveness" can be split into "feedback mechanism" and "feedback efficiency," and finally the meanings that are inconsistent with the development of national fitness public services are eliminated, such as "industrial interaction."

Table 1. Statistics of dynamic factors involved by investigators

Factor Investigator	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
Zhang Jing[18]		√	√								√		√							√
Qiu Zongzhong[19]	√			√																√
Li Hailong[20]	√	√	√		√															
Wen Ye[21]								√			√		√							
Zhang ruilin[22]		√						√			√		√							
Qiu Yan[22]	√		√	√																
Wu Enjun[23]	√				√						√									
Ding Xiushi[24]									√	√		√	√							
Yao Jiwei[25]			√	√					√					√			√			
Lang Xianfen[26]	√	√	√		√										√			√		
Zheng Qi[27]									√	√										
Zhao Chenyang[28]					√			√			√		√							
Hu Juan[29]		√	√						√			√								
Wang Hongbin[30]		√																		
Xu Caiming[31]							√			√	√								√	
Gao Bangguo[32]	√	√			√															√
Liu Junxian[33]					√					√		√								√
Chen Yang[34]	√				√															
Li Xin[35]	√								√											
Yuan Xinfeng[36]													√							
Xu Ming[37]					√	√												√		√
Wang Xiang[38]	√	√	√																	
Li Linzhu[39]	√		√	√																
Jiao Changgeng[40]			√		√								√		√					
Yuan Xinfeng[41]									√	√			√						√	

Yuan Xinfeng [42]							√	√													
Liu Xi[43]							√			√			√			√	√				
Zhang Shiliang[44]							√	√													
Sun Guifang[45]		√							√						√						
Li Jinpeng[46]				√		√		√	√												
Tian Shunran[47]		√													√						
Yue Jianjun[48]			√		√				√												
Li Li[49]	√									√											
Wang Huanran[50]		√					√		√		√										√
yang xiangjun[51]							√			√							√				
Xu Liqun[52]					√			√			√								√		
looked[53]	√	√	√				√												√		

Note: A1-A32 refer to: A1 government-led;A2 market support;A3 social participation;A4 public participation;A5 public demand;A6 public satisfaction;A7 personal income;A8 publicity and promotion;A9 human resources;A10 site and facility resources;A11 policy incentives;A12 financial input;A13 system design;A14 cultural environment;A15 regional economic level;A16 population density;A17 demand response rate;A18 technical environment;A19 service resources; A20 Organizational Resources.

From the above statistical results, it can be found that policy incentives, public demand, government-led, market support, social participation, public participation, public satisfaction, publicity and promotion, and other factors are regarded as important driving factors in the development of national fitness public services.

3.2.2 Improvement of dynamic factor

Through sorting out, screening, and analyzing scholars 'relevant research on the influencing factors of the development of national fitness public service, this paper preliminarily sorted out 20 influencing factors of the high-quality development of national fitness public service.Due to the gap between the existing research results and the actual situation of the development of national fitness public service, to further improve the impact factors of the high-quality development of national fitness public service, based on the previous literature review, a questionnaire on the driving force factors of the high-quality development of national fitness public service was designed and oriented to the researchers of national fitness public service (such as the direction of the national fitness public service, sports management and other academic workers), workers (such as mass sports organization leaders, local mass sports management personnel, etc.), to enjoy the questionnaire.The questionnaire is mainly distributed online. In order to obtain the data objectively and

comprehensively as much as possible, there is no geographical limit for this questionnaire distribution.A total of 356 people participated in this questionnaire survey, 34 invalid questionnaires were eliminated, and 322 valid questionnaires were obtained.The 322 valid questionnaires were analyzed by factor analysis, and the factors obtained from the questionnaires were split and merged according to the opinions of experts. Finally, 31 influencing factors for the high-quality development of public service for national fitness were obtained. The statistical results are as follows:

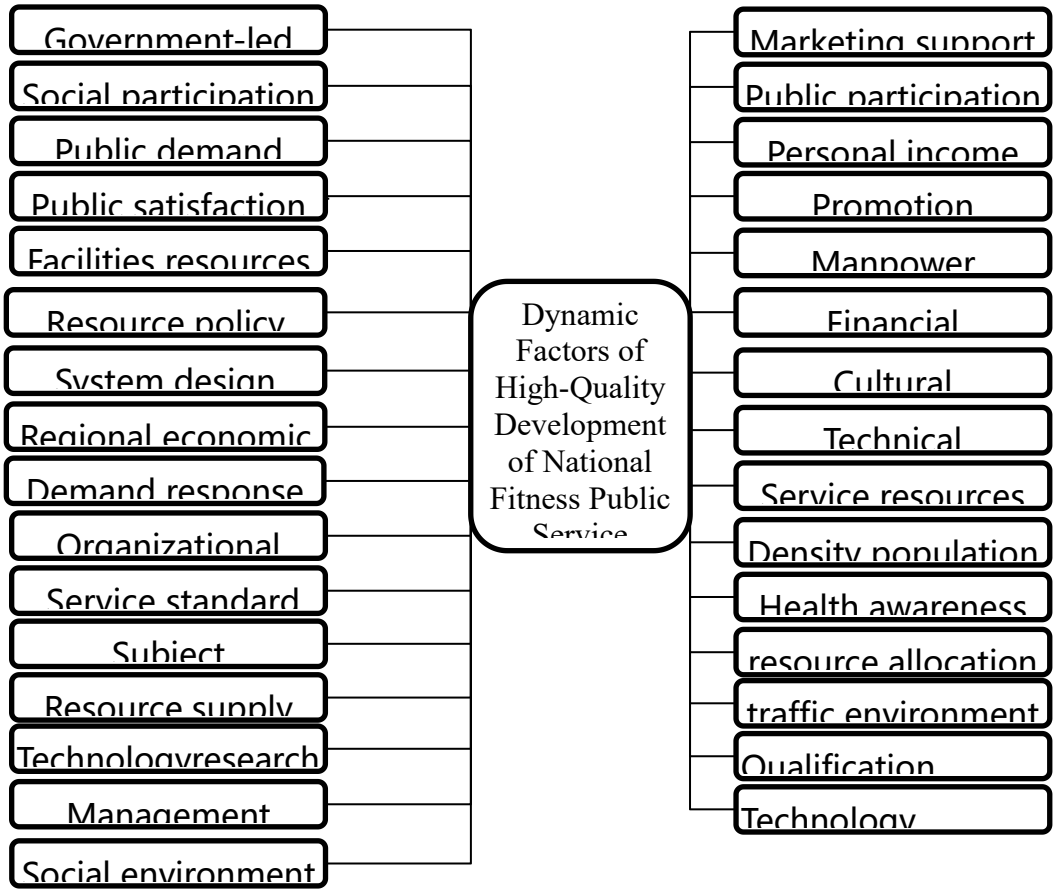

Fig. 1. Statistical Chart of Driving Force Factors for High-quality Development of Public Service of National Fitness

3.3 the construction of a dynamic factor system

The influencing factors of the high-quality development of the public service of national fitness are not isolated, but interrelated, so it is necessary to analyze the correlation and hierarchy among the influencing factors.ISM is a widely used analysis method in modern system engineering, which can transform the factor set with many factors and complex

relationship structure into a structural model with an obvious hierarchy structure and clear relationship ordering. Therefore, this paper analyzes the influencing factors of the high-quality development of the public service of national fitness by using ISM.

(1) Dynamic factor variables of high-quality development of national fitness public service

According to the research questions, the dynamic mechanism of the high-quality development of the public service of national fitness is set as system A, which is an organic whole composed of sub-components (A1, A2, A3, A4, A5) with certain relations through certain hierarchical relations. Taking the high-quality development of national fitness public service as a systematic, complex, and structured functional system, the motive force factor of the high-quality development of national fitness public service is the constituent element of the functional system. According to the results of the previous study, there are 31 main driving factors for the high-quality development of national fitness public service. If the high-quality development of national fitness public service is taken as the target factor of the functional system, the functional system is mainly composed of 32 factors (see the table below), and the set of driving factors are as follows:

$$A=\{A_1, A_2, A_3, A_4, A_5, \ldots\ldots A_{32}\}$$

Table 2. Combination of Elements for High-quality Development of Public Service for National Fitness

variable	dynamic factors	variable	dynamic factors
A1	National Fitness Public Service High-Quality Development	A17	social environment
A2	dominated by government	A18	public participation
A3	social participation	A19	marketing support
A4	public demand	A20	personal income level
A5	public satisfaction	A21	Publicity
A6	facilities resources	A22	manpower resource
A7	policy incentives	A23	financial investment
A8	system design	A24	cultural environment
A9	regional economic level	A25	technical environment
A10	demand response rate	A26	service resources
A11	organizational resources	A27	population density
A12	service standard	A28	health awareness

A13	Subject collaboration	A29	resource allocation
A14	resource supply	A30	traffic environment
A15	technology research	A31	qualification training
A16	management means	A32	technology application

(2) the dynamic factor variable set of binary relations

A binary relationship generally refers to the mutual influence between the factors, the relationship between the factors I and j to Rij said, if the factors I lead to j, then Rij=1, if the factors I lead to j, then Rij=0.The set of relationships between the factors is denoted by Rb.

Through the focus discussion of the ISM group and the opinions and suggestions of experts, the binary relationship between the driving forces of high-quality development of national fitness public service is discussed and perfected, and the relationship set between the driving forces of high-quality development of national fitness public service is finally determined. And according to the relationship set, draw the national fitness public service high-quality development power factor directed graph (as shown in the figure), to represent the interaction and complex connection between the factors.

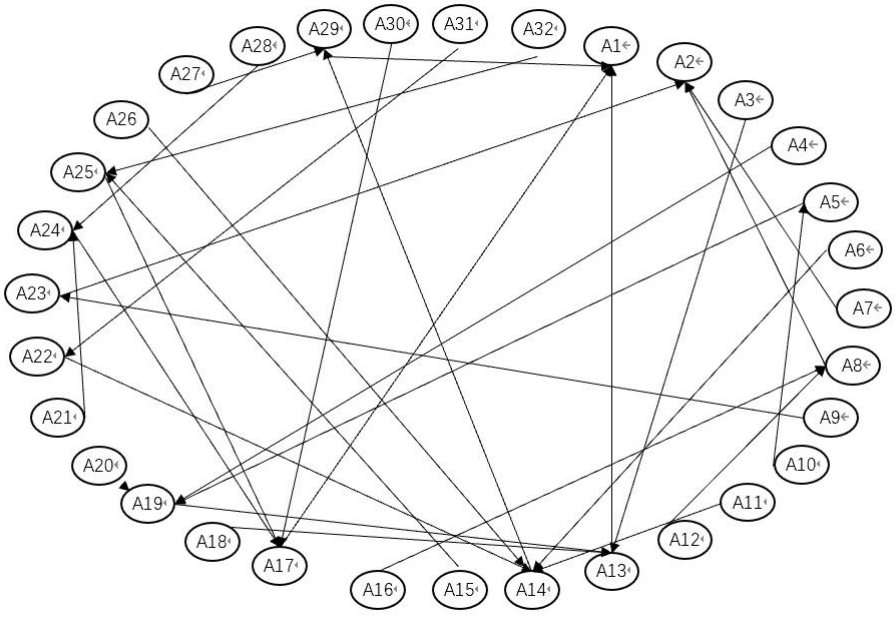

Fig. 2. Binary Relation Diagram of Dynamic Factors

(3) the power factor variables adjacency matrix construction

Quantify the relationship between the dynamic factors of high-quality development of national fitness public service, and adopt the mode of adjacency matrix (expressed by S). The relationship is defined as follows:

$$S_{ij}=\begin{cases}0, & Ai\rightarrow Aj \text{ does not exist in a direct binary relationship}\\ 1, & Ai\text{-}Aj \text{ there is a direct binary relationship}\end{cases}$$

According to the directed graph of high-quality development of national fitness public service and the above formula, the adjacency matrix is finally obtained as follows:

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32
A1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A10	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
A15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
A16	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A19	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
A22	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
A28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
A29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Fig. 3. Adjacency Matrix of Driving Force Factors for High-Quality Development of Public Service of National Fitness

(4) the power factor variable reachable matrix

The above-mentioned adjacency matrix explains the direct influence relationship between the driving factors of high-quality development of national fitness public service, but the influence between variables is transitive. Therefore, it is necessary to discuss the indirect

relationship between the driving factors of high-quality development of national fitness public service on this basis, that is, to construct the accessibility matrix and analyze how the elements can affect other elements through indirect relationships. The reachability matrix can be obtained by Boolean algebra operation, with M said reachability matrix, then M reachability matrix calculation formula is as follows:

$$M=（S+I）^{(K-1)}≠（S+I）^{k}=（S+I）^{(k+1)}$$

$$M=（S+I）(K-1)≠（S+I）k=（S+I）(k+1)$$

In the above formula, S is the adjacency matrix, I is the identity matrix, and K is the number of operations. Analyze with SPSSAU analysis software, and finally obtain the reachable matrix M, as shown in the figure below.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32
A1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A2	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A3	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A4	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A5	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A6	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
A7	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A8	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A9	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A10	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A11	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
A12	1	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A13	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A14	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
A15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
A16	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A18	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A19	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A20	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
A21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
A22	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
A23	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
A24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
A25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
A26	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
A27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
A28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
A29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
A30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
A31	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0
A32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1

Fig. 4. Accessibility matrix of driving force factors for high-quality development of national fitness public service

(5) the hierarchical structure of dynamic factors

According to the accessibility matrix of the high-quality development dynamic factors of the public service of national fitness, the reachable set R, the leading set Q, and the intersection M are sorted out for each factor. Among them, the reachable set R refers to the set of elements affected by Ai factors but not Ai, the leading set Q refers to the set of elements that affect the elements Ai but not Ai, and the intersection M refers to the set of elements that exist in the leading set and are in the reachable set. Finally, the hierarchical division of the driving force factors for the high-quality development of the public service of national fitness is obtained as shown in the following table.

Table 3. Hierarchical Structure Division of Dynamic Factors

	reachable set R	Advance Set Q	intersection A=R $> Q
A1	1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32	1
A2	1,2,13	2,7,8,9,12,16,23	2
A3	1,3,13	3	3
A4	1,4,13,19	4	4
A5	1,5,13,19	5,10	5
A6	1,6,14,29	6	6
A7	1,2,7,13	7	7
A8	1,2,8,13	8,12,16	8
A9	1,2,9,13,23	9	9
A10	1,5,10,13,19	10	10
A11	1,11,14,29	11	11
A12	1,2,8,12,13	12	12
A13	1,13	2,3,4,5,7,8,9,10,12,13,16,18,19,20,23	13
A14	1,14,29	6,11,14,22,26,31	14
A15	1,15,17,25	15	15
A16	1,2,8,13,16	16	16
A17	1,17	15,17,21,24,25,28,30,32	17
A18	1,13,18	18	18
A19	1,13,19	4,5,10,19,20	19
A20	1,13,19,20	20	20
A21	1,17,21,24	21	21

A22	1,14,22,29	22,31	22
A23	1,2,13,23	9,23	23
A24	1,17,24	21,24,28	24
A25	1,17,25	15,25,32	25
A26	1,14,26,29	26	26
A27	1,27,29	27	27
A28	1,17,24,28	28	28
A29	1,29	6,11,14,22,26,27,29,31	29
A30	1,17,30	30	30
A31	1,14,22,29,31	31	31
A32	1,17,25,32	32	32

Note: The number represents an element, for example, the number 2 represents the A2 element

Combined with the hierarchical division diagram of the accessibility matrix and the dynamic factors, according to the binary relationship between the dynamic factors, the multi-level ladder structure model of the high-quality development of the public service of national fitness is finally drawn.

Observing the multi-level ladder structure model of driving force factors for the high-quality development of national fitness public service, we can find the driving force factor system for the high-quality development of national fitness public service, and its overall structure mainly includes one target driving force.(High-quality development of public service for national fitness), 3 surface direct dynamic factors (Subject coordination, social environment, resource allocation), 9 intermediate indirect dynamic factors (government-led, social participation, market support, public participation, cultural environment, technical environment, transportation environment, resource supply, population density) and 19 underlying dynamic factors (policy incentives, system design, financial input, service standards, management means, regional economic level, public demand, personal income level, public satisfaction, demand response rate, health awareness, publicity and promotion, technology research and development, technology application, facility resources, organizational resources, Service resources and human resources qualification training finally constitute the "1-3-9-19" dynamic factor system for the high-quality development of national fitness public services, as shown in the figure.

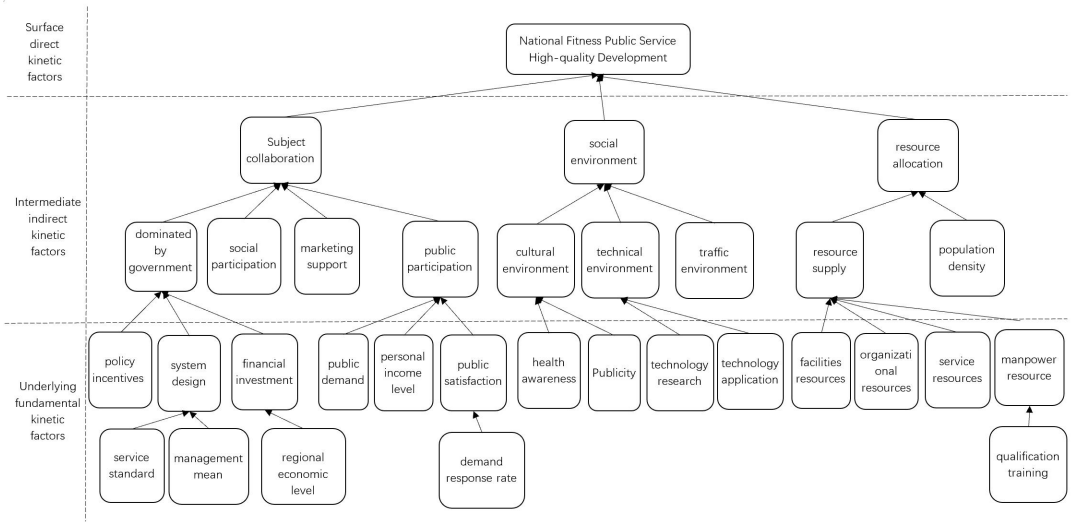

Figure 5. Dynamic system architecture of high-quality development of national fitness public service

4. Analysis of the Dynamic Mechanism of the High-Quality Development of National Fitness Public Service

In the previous chapter, the construction of a dynamic factor system for the high-quality development of national fitness public service has been basically completed, and a multi-level ladder structure model for the high-quality development of national fitness public service has been drawn. This chapter will combine the specific connotation of the dynamic mechanism, from the perspective of systematic principles of high-quality development of national fitness public service dynamic mechanism for systematic analysis. In systems theory, dynamic mechanism refers to the dynamic source, structure, and action principle that promotes the development of a specific system.

4.1 The driving force for the high-quality development of national fitness public services

The power source is the source of power to promote the development and change of things. The relationship between the power source and the power mechanism for the high-quality development of the national fitness public service can be described by the relationship between the "driving force and operating mechanism". Only under the drive of various power sources can the operation process of the high-quality development of the national fitness public service be realized. The driving force provides the kinetic energy for the high-quality

development of the national fitness public service, and the operating mechanism makes this kinetic energy be converted. Finally, the high-quality development of national fitness public service can be realized.

According to the dynamic factor system of high-quality development of national fitness public service, it can be found that the driving force sources of high-quality development of national fitness public service mainly include policy incentive, service standard, management means, regional economic level, public demand, personal income level, demand response rate, health awareness, publicity and promotion, technology research and development, technology application, facility resources, organization resources, service resources, and qualification training. These bottom powers together constitute the engine of the high-quality development of national fitness public service, providing a power source for the high-quality development power system of national fitness public service (see figure below).

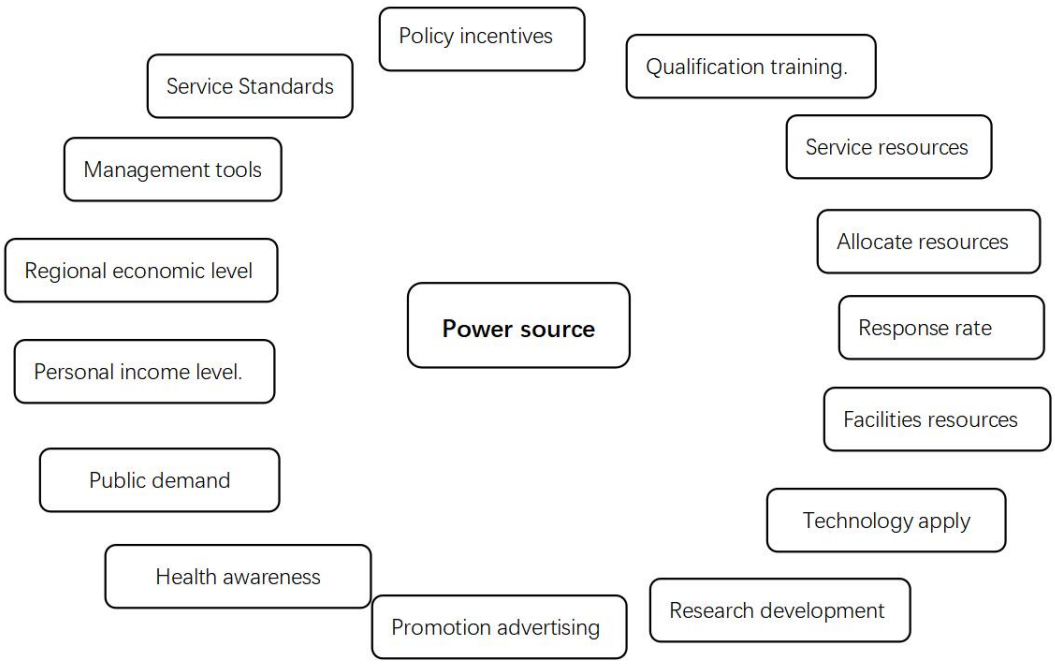

Figure 6. National Fitness Public Service High-quality Development Dynamic System 15 Dynamic Elements Sources

4.2 Dynamic structure of high-quality development of national fitness public service

Dynamic structure is the sum of the mutual connection and interaction among dynamic elements, which constitutes the relatively stable organization form and combination mode of

the dynamic system of high-quality development of national fitness public service. According to the dynamic factor system of high-quality development of national fitness public service, the dynamic system of high-quality development of national fitness public service can be divided into a driving force module, external dynamic module, and internal dynamic module coupled system structure (see Figure 15).

Among them, the driving force module is the foundation of the high-quality development of the national fitness public service, mainly including the main driving force module, the environmental driving force module, and the resource driving force module. The main driving force module includes policy incentives, service standards, management tools and other main thrust and public demand, personal income level, demand response rate, and other pull forces, but also includes the embodiment of the main demand. The environmental dynamics module includes health awareness, publicity and promotion, technology development and technology application, and other dynamic factors. The resource driver module consists of facility resources, organizational resources, service resources, and qualification training. The adequacy and efficiency of these resources are crucial to the development of public services for fitness for all.

The external power module is an important support for the development of public service for national fitness, including government leading, social participation, market support, public participation, cultural environment, technical environment, traffic environment, resource supply, and population density. The importance of government-led is self-evident, social participation and market support also have an important impact on the development of public service for national fitness, public participation, cultural environment, technical environment, transportation environment, resource supply, and population density will also affect the development of public service for national fitness.

The internal power module is the inherent element of the high-quality development of public service for national fitness, including resource allocation, social environment, and subject coordination. The scientific rationality of resource allocation, the relaxation and stability of the social environment, and the effectiveness of subject coordination are important guarantees for the high-quality development of national fitness public service.

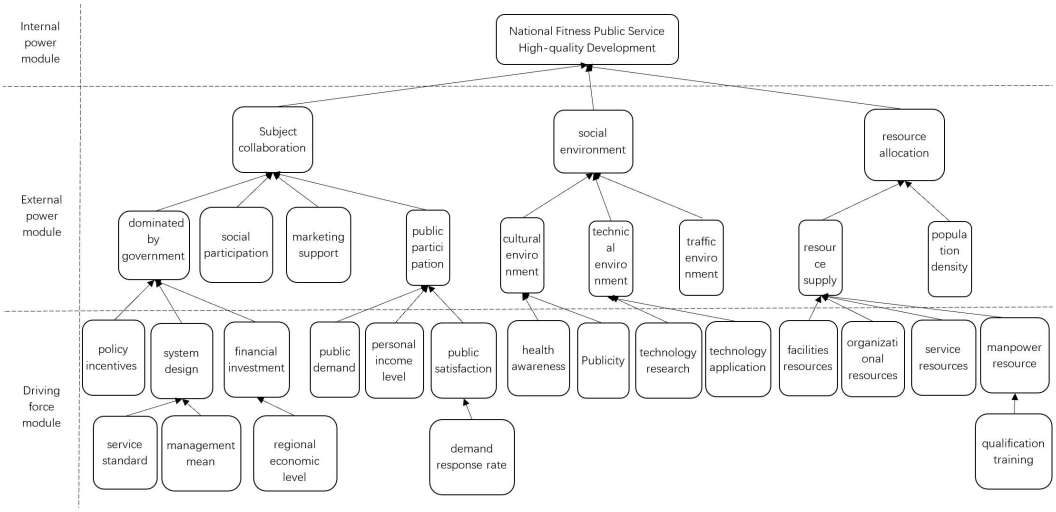

Figure 7. Dynamic structure of high-quality development of national fitness public service

The driving force module, external power module, and internal power block constitute the power structure system of high-quality development of national fitness public service. The driving force module composed of the subject driving force, environment driving force, and resource driving force provides a power source for the high-quality development of national fitness public service, and the external driving force module brings external conditions and support for the high-quality development of national fitness public service through government leading, social participation, market support, public participation, cultural environment, technical environment, traffic environment, resource supply, and population density. The internal power module converts and couples these external supports, coordinates different power sources and finally realizes the high-quality development of national fitness public service. The power diagram of the high-quality development system of the national fitness public service is as follows.

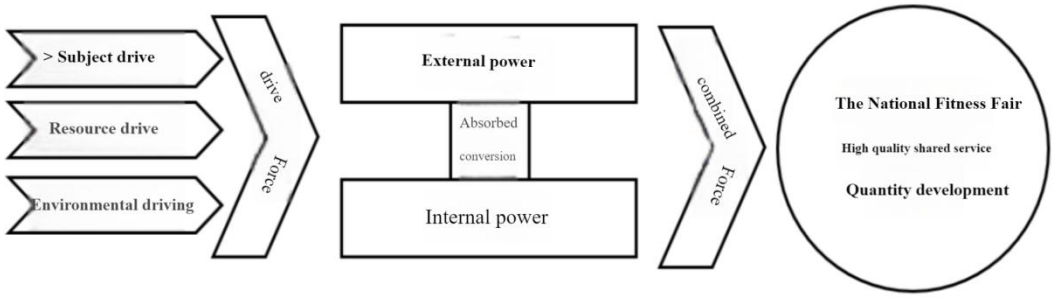

Figure 8. Dynamic diagram of high-quality development system of national fitness public service

4.3 Dynamic operation of high-quality development of national fitness public service

The high-quality development of public service of national fitness is not driven by independent factors but by the dynamic system composed of interaction and coupling relationships among various factors. The process of high-quality development of national fitness public service is also the process of power generation, power transmission, and power output of high-quality development of national fitness public service.

In the operation process of this system, four dynamic elements, such as policy incentive, service standard, management means, and regional economic level, are the first to exert power, thus activating the subject-driven thrust. At the same time, public demand, personal income level, demand response rate, and other dynamic factors activate the subject-driven pull. Dynamic factors such as health awareness, publicity, technology development, and technology application activate the environment-driven power module. Dynamic elements such as facility resources, organizational resources, service resources, and qualification training activate the resource-driven power module.

Once the body drive, environment drive, and resource drive modules are activated, power begins to flow forward. The intermediate indirect power factor receives the power from the power module and condenses it into external power such as government leading power, social participation power, market support power, public participation power, cultural environment support power, technical environment support power, traffic environment support power, resource supply power, etc. These external forces will be affected by regional population density and then transformed into main body synergy power, social environment development trend power, and resource allocation power. Ultimately, these dynamics will achieve high-quality development of public services for national fitness.

Therefore, the high-quality development of public service of fitness for all is driven by a complex dynamic system of multiple factors interacting. To achieve high-quality development, it is necessary to activate various dynamic factors and promote synergies among them. At the same time, attention needs to be paid to the interaction between external and internal dynamics in order to achieve sustainable development of public services for fitness for all. The dynamic model diagram is as follows.

Figure 9. Spherical dynamic model diagram of high-quality development of national fitness public service

5. Conclusion

This study adopts the literature method, logical analysis method, questionnaire survey method and mathematical statistics method. Combining the results of literature combing and survey results, utilizing the ISM explanatory structural modeling research tool, the theoretical model of the power mechanism of high-quality development of national fitness public services with the structure of “1-3-9-19” was finally constructed, in which “1” is the target layer, namely, “1” is the goal layer, i.e. The “1” is the target layer, i.e., the high-quality development of national fitness public services, the “3” is the surface layer of direct motivational factors, including subject synergy, social environment and resource allocation, and the “9” is the intermediate layer of motivational factors, including government-led, social participation, market support, public participation, cultural environment, technological environment, transportation environment, resource allocation, and so on. The “19” is the bottom level motivating factors, including policy incentives, system design, financial input, service standards, management tools, regional economic level, public demand, personal income level, public satisfaction, demand response rate, health awareness, publicity and

promotion, technology research and development, technology application, facility resources, and organizational structure. technology application, facility resources, organizational resources, service resources, and human resources qualification training.

After completing the construction of the motivation factor system and the multilevel ladder structure model, this paper analyzes the motivation mechanism of the high-quality development of national fitness public service by combining the principles of systematics. The power mechanism includes three parts: power source, power structure and power operation.

Sources of power: 15 underlying dynamics such as policy incentives, service standards, management tools, regional economic level, public demand, etc. constitute the basic source power of development. These elements work together to promote the development of public services for national fitness.

Power structure: The power system is divided into driving force, external power and internal power module. The driving force module includes the main driving force (policy incentives, etc.), environmental driving force (health awareness, etc.) and resource driving force (facility resources, etc.); the external driving force module involves government-led, social participation, etc.; and the internal driving force module covers resource allocation, social environment, etc.

Power operation: the development of national fitness public services is the result of the interaction of various power elements. Elements such as policy incentives and service standards activate the main drive, elements such as health awareness activate the environmental drive, and elements such as facility resources activate the resource drive. These dynamics are transmitted and transformed to finally realize the high-quality development of national fitness public services.

Disclosure:

Authors'contribution:

Liang Deng: Selecting the topic, setting the framework, writing, unifying and revising the manuscript.

Zongqian Yang:categorize and analyze information

LiZhen Shi::categorize and analyze information

Xiaoling Huang:Review and revise the full text.

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Reference

[1] "Opinions on Building a Higher Level Public Service System for National Fitness Issued by the State Office of the CPC Central Committee," *People's Daily.*2022-03- 24,001,doi:10.28655/n.cnki.nrmrb.2022.002948.

[2] Shi Xiaoqiang, Dai Jian.The situation requirement, realistic foundation and target measure of national fitness development in China during the 14th Five-Year Plan period."*Sports Science.*41.04(2021):3-13+59.doi:10.16469/j.css.202104001.

[3] Sun Huayu, Fan Shoumin, Zhou Yuizhi, Guo Longjian.Dilemma and Thinking: Review on the Development of National Fitness Public Service in Shandong Province.*Journal of Shandong Institute of Physical Education*.2014, 30 (01):1-5.DOI:10.14104/j.cnki.1006-2076.2014.01.004.

[4] Sun Huayu, Fan Shoumin, Zhou Yuizhi, Guo Longjian.Dilemma and Thinking: Review on the Development of National Fitness Public Service in Shandong Province.*Journal of Shandong Institute of Physical Education.* 2014(01), 1-5.doi:10.14104/j.cnki.1006-2076.2014.01.004.

[5]Liyan."Beijing-Tianjin-Hebei national fitness public service coordinated development path choice.*Journal of Wuhan Institute of Physical Education* 50.09(2016):17-21.doi:10.15930/j.cnki.wtxb.2016.09.003.

[6]Ye Shenghao.Research on Supply and Demand Matching of National Fitness Public Service in Shanghai City from the Perspective of Health China. 2020. *Shanghai University of Engineering Technology*,MA thesis.doi:10.27715/d.cnki.gshgj.2020.000640.

[7]Tang Rongtao.Investigation and research on the current situation of national fitness public services in Nansha District, Guangzhou City. 2018. *Guangzhou Institute of Physical Education*.

[8]Li Xiaolan, Yang Xueda,and Liu Xiangdong.An Empirical Study on the Development of National Fitness Public Service in Yan 'an City under the Background of Urban-Rural Integration.*Journal of Yan 'an University (Natural Science Edition)* 35.01(2016):113-115+120.doi:10.13876/J.cnki.ydnse.2016.01.113.

[9] Melvyn Hillsdon, Jenna Panter, Charlie Foster, Andy Jones. Equitable Access to Exercise Facitities. *American Journal of Preventive Medicine*,2007,32(6):506-508.

[10]Gordon-Larsen P, Nelson MC, Page P, Popkin BM.Inequality in the built environment underlies key health disparities in physical activity and obesity.*Pediatrics* 2006, 117 (2):417 - 424.

[11]Luo Xu, Miao Xiangjun, Xing Wenhua."Theoretical analysis of the operation mechanism of public service for national fitness sports."*Journal of Shenyang Institute of Physical Education* 28.06(2009):11-14.

[12]Xiao Linpeng, Sun Ronghui."On the Service System and Operating Mechanism of National Fitness". Abstract Collection of Papers of the Second National Fitness Scientific Conference.Ed. Scientific Research Department of Tianjin Institute of Physical Education; *College of Physical Education of Tianjin Normal University*, 2010, 72.

[13]Liu Jindan, Zhang Xiao; Liu Kai; Liu Yuchuan."Analysis on the Public Service Guarantee Mechanism of National Fitness.""*Stationery and Technology*. 06 (2017):201-202.

[14]Zhou Wen."Construction of supervision mechanism of government purchasing public sports service under the background of national fitness.""*Stationery and Technology*. 07 (2020):253-254.

[15]Wang Xiaofang, Zhang Ruilin, Pang Hui."Analysis on the Publicity Mechanism of National Fitness Public Service in China."*Sports Culture Guide*. 11 (2013):17-20.

[16]Zhang Ruilin, Wang Xiaofang, Wang Xianliang."China's national fitness public service system dynamic mechanism construction.*Journal of Shanghai Institute of Physical Education* 37.01(2013):19-22+27.doi:10.16099/j.cnki.jsus.2013.01.007..

[17]Wang Xiang.A study on the dynamic mechanism of community sports public service system construction under the background of urbanization construction."*Sports Fashion*. 05 (2020):294.

[18]Zhang Jing.Dissipative structure characteristics and dynamic mechanism of sports public service system.*Journal of Capital Institute of Physical Education* 22.04(2010):36-39+47.doi:10.14036/j.cnki.cn11-4513.2010.04.008.

[19]Qiu Zongzhong, Zhou Tao, Zhao Jinghua, Li Jianchen.Analysis on the elements of dynamic mechanism construction of urban community sports public service system."*Sport and Science* 32.05(2011):54-56.doi:10.13598/j.issn1004-4590.2011.05.014.

[20]Li Hailong. A Study on Dynamic Mechanism of Urban-Rural Integration of Sports Public Service.*Nanjing Normal University*, 2011.

[21]Wen Ye, Tang Yan.Development Path and Model Construction of Rural Sports Public Service in China.*Journal of Tianjin Institute of Physical Education*, 2012, 27 (03):230-235.DOI:10.13297/j.cnki.issn1005-0000.2012.03.011.

[22]Zhang Ruilin, Wang Xiaofang, Wang Xianliang.Building the Dynamic Mechanism of National Fitness Public Service System in China.*Journal of Shanghai Institute of Physical Education*, 2013, 37 (01):19-22+27.DOI:10.16099/j.cnki.jsus.2013.01.007.

[23]Qiu Yan, Wang Xiangyu.A study on the dynamic mechanism of urban community sports public service system construction.*Sports Science Research*, 2013, 17 (06):20-23.DOI:10.19715/j.tiyukexueyanjiu.2013.06.005.

[24]Wu Enjun.Research on the Dynamic Mechanism Construction of Public Service System of Fitness Sports Tourism in China.*Shandong Sports Science and Technology*, 2013, 35 (05):115-118.DOI:10.14105/j.cnki.1009-9840.2013.05.003.

[25]Ding Xiushi, Yao Jiwei, Liu Binhua, He Chao.A Study on the Path to Improve the Quality of Community Sports Public Service in China--Based on the Construction and Management of Community Stadium Facilities.*Sichuan Sports Science*, 2014, 33 (06):1-4+15.DOI:10.13932/j.cnki.sctykx.2014.06.01

[26]Yao Jiwei, Ye Chunhui, Liu Binhua, Ding Xiushi.Analysis on the Path to Improve the Quality of Community Sports Public Service in China from the Perspective of Cultural Soft Power.*Journal of Hebei Institute of Physical Education*, 2014, 28 (06):9-13.

[27]Lang Xianfen. Dynamic model of urban community sports public service development.*Qufu Normal University*, 2014.

[28]Zheng Qi, Zhang Peng.Evaluation and Improvement of Service Quality of County Public Sports Facilities: Based on IPA Analysis and Demonstration.*Journal of Shanghai Institute of Physical Education*, 2015, 39 (06):11-15+27.DOI:10.16099/j.cnki.jsus.2015.06.003.

[29]Zhao Chenyang.A Study on Dynamic System of Equilibrium of Public Sports Service.*Sports*, 2016 (16):129-130+148.

[30]Hu Juan, Yang Jingsan, Chen Gang, Qiao Jun.Analysis on Allocation Level and Influence Mechanism of County Public Sports Service Resources in Jiangsu Province.*Sports Science*, 2016, 36 (10):18-25.DOI:10.16469/j.css.201610003.

[31]Wang Hongbin.A Study on the Power, Power and Pressure Governing Subject of Public Sports Service.*Journal of Jilin Institute of Physical Education*, 2017, 33 (03):12-16.DOI:10.13720/j.cnki.22-1286.2017.03.003.

[32]Xu Caiming, Guan Shan, Wu Chuanxi.Analysis on the strategic environment of rural public sports service development under the background of new urbanization in China.*Journal of Xi'an Institute of Physical Education*, 2017, 34 (06):676-681.DOI:10.16063/j.cnki.issn1001-747x.2017.06.007.

[33]Gao Bangguo. A Study on the Dynamic Mechanism of Supply-side Reform of National Fitness Public Service in China.China Sports Science Society.*Abstracts of the fourth national fitness scientific congress*.2018:204-205.DOI:10.26914/c.cnkihy.2018.001433.

[24]Liu Junxian, Xun Sun.Dynamic mechanism of public service operation mechanism of youth sports under self-organization theory.*Contemporary Sports Technology*, 2018, 8 (05):215+223.DOI:10.16655/j.cnki.2095-2813.2018.05.215.

[35]Chen Yang, Zhang Lingyan, Kong Qingbo. Dynamic Factors and Path Construction of Rural Public Sports Service Collaborative Supply//China Sports Science Society.*Abstracts of Theses of the Seventh China Sports Doctor Forum*. 2018:63-64.

[36]Li Xin.Study on Efficiency of Public Sports Service in Minority Autonomous Prefecture of China Based on DEA Model.*Journal of Guangzhou Institute of Physical Education*, 2018, 38 (04):78-82.DOI:10.13830/j.cnki.cn44-1129/g8.2018.04.020.

[37]Yuan Xinfeng, Zhang Ruilin, Wang Fei, Chen Hongxin.Public sports service quality: concept definition and analysis of influencing factors.*Journal of Tianjin Institute of Physical Education*, 2019, 34 (03):232-237.DOI:10.13297/j.cnki.issn1005-0000.2019.03.009.

[38]Xu Ming, Chang Juan.Connotation and practice path of high quality development of public sports service from social quality perspective.*Hubei Sports Science and Technology*, 2021, 40 (05):418-421.

[39]Li Lin Zhu.Dynamic mechanism of community sports public service system construction under the background of urbanization construction.*Stationery and Technology*, 2020 (15):119-120.

[40]Jiao Changgeng, Dai Jian.Evolution and Transmutation of Public Sports Service Supply Mechanism in China--Logic Analysis Based on "Characteristic-Power-Path".*Journal of Shandong Institute of Physical Education*, 2020, 36 (03):14-20. DOI:10.14104/j.cnki.1006-2076.2020.03.003.

[41]Yuan Xinfeng, Zhang Ruilin, Wang Fei.Design and Empirical Test of Public Sports Service Quality Evaluation Model Based on IPA .*Journal of Chengdu Institute of Physical Education*, 2020, 46 (01):60-66.DOI:10.15942/j.jcsu.2020.01.010.

[42]Liu Xi. Evaluation of Public Sports Service Efficiency Based on DEA-Tobit Model .*Guangxi University*, 2020.DOI:10.27034/d.cnki.ggxiu.2020.000047.

[43]Zhang Shiliang.Construction and Research of Basic Public Service Quality Evaluation System for National Fitness in Ningbo City Based on Service Quality .*Journal of Guangzhou Institute of Physical Education*, 2021, 41 (02):32- 36. DOI:10.13830/j.cnki.cn44-1129/g8.2021.02.010.

[44]Sun Guifang.Factors influencing public service quality of urban community sports and exploration of its promotion path--comment on research on planning and service quality of urban community sports facilities.*Science Management Research*, 2021, 41 (24):213.

[45]Li Jinpeng. Model construction and empirical study on urban residents 'public sports service acquisition perception.*Shanxi Normal University*, 2021.DOI:10.27287/d.cnki.gsxsu.2021.000118.

[46]Tian Shunran. Study on realistic dilemma and path optimization of high quality development of public sports service in china from the perspective of new public service theory.Sports Culture Development Center of State Sports General Administration, Sports History Branch of China Sports Science Society. *2022 Annual Meeting of China Sports History and Abstract Collection of the Second "Belt and Road" Sports Culture Academic Forum*.2022:132-133.DOI:10.26914/c.cnkihy.2022.048547.

[47]Yue Jianjun, Gong Junli, Xu Jinxing.How to form the pattern of co-construction, co-governance and sharing of national fitness--empirical analysis based on network governance perspective.*China Sports Science and Technology*, 2022, 58 (09):15- 22. DOI:10.16470/j.csst.2021124.

[48]Li Li, He Yuanchun, Wang Ping. Demand, Supply and Its Realistic Dilemma: Research on Improving Rural Public Sports Service Ability in Post-poverty Era//China Sports Science Society.*Abstracts of the 12th National Sports Science Conference--Wall Newspaper Exchange* .2022:120- 122. DOI:10.26914/c.cnkihy.2022.007022.

[49]Wang Huanran, Shan Linlin, Guo Guangzhao, et al. Research on the power and path of high-quality development of rural public sports service under the new relationship between workers and peasants and urban and rural areas.China Science

Association.*The 12th national sports science conference paper abstract assembly-wall newspaper exchange (sports social science branch)*. 2022:43- 44. DOI:10.26914/c.cnkihy.2022.006985.

[50]Yang Xiangjun, Guo Xiujin.The historical opportunity, internal mechanism and path selection of urban and rural sports integration development.*Physical Education Research*, 2022, 36 (02):65- 74. DOI:10.15877/j.cnki.nsci.20220124.002.

[51]Hsu Liqun.Construction and Empirical Research on the Dual Evaluation System of Public Sports Service Quality.*Zhejiang Sports Science,* 2022, 44 (05):41-46.

[52]Zhang Wang, Zhang Yu.Research on the Evaluation of Public Sports Service Quality Based on Principal Component Analysis.*Hubei Sports Science and Technology*, 2022, 41 (07):565-569+642.

[53]Zhang Qilin, Ma Yidan.Evaluation and influencing factors of provincial public sports service efficiency in China.*Decision and Information*, 2023 (02):52-61.