Public Satisfaction and Policy Implications of The National Fitness System Under The Healthy China Strategy

Hui Wang[a]
Wiradee Eakronnarongchai[b*]

[a] *Major of Physical Education and Health Education, Faculty of Graduate Studies, Udon Thani Rajabhat University, Udon Thani 41000, Thailand, E-mail: 13735590206@163.com*
[b*] *Major of Physical Education and Health Education, Faculty of Education, Udon Thani Rajabhat University, Udon Thani 41000, Thailand, E-mail: wiradee.e@gmail.com*

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Abstract

This study aimed to 1) examine the level of public perceptions of the national fitness system based on satisfaction-related indicators in China, and 2) To examine demographic differences in public perceptions of the national fitness system based on satisfaction-related indicators. The study emphasizes satisfaction dimensions and their implications for governance and public service delivery under the Healthy China strategy. A quantitative survey design was adopted, and data were collected through a structured questionnaire administered to 1,034 respondents in Zhejiang Province using a random sampling approach. Descriptive statistics, independent-samples t-tests, and one-way analysis of variance (ANOVA) were employed to analyze the data using SPSS version 27.0.

The results indicate that overall public satisfaction with the national fitness system is at a moderate to relatively high level. However, statistically significant differences in satisfaction were observed across age groups, educational backgrounds, and residential environments, while no significant differences were found by gender. In particular, younger respondents and individuals with higher educational attainment reported greater satisfaction, whereas middle-aged groups and urban residents expressed comparatively lower levels of satisfaction. These findings provide empirical evidence for improving the effectiveness of national fitness policies, optimizing public service provision, strengthening governance coordination, and promoting more equitable access to national fitness resources in support of the Healthy China strategy.

Keywords: National Fitness System, Public Satisfaction, Healthy China, Sports Governance, China

Introduction

National fitness has become a central pillar of public health governance in China under the implementation of the Healthy China strategy. As China transitions from a development model focused primarily on economic growth to one that emphasizes comprehensive human development and quality of life, physical fitness has been elevated from an individual lifestyle choice to a national strategic priority. Policy frameworks such as the Healthy China 2030 Planning Outline and the National Fitness Plan (2021-2025) explicitly identify national fitness as a foundational mechanism for improving population health, preventing chronic diseases, and promoting social well-being (State Council of the People's

Republic of China, 2016; General Administration of Sport of China, 2021). Within this policy context, national fitness is no longer regarded solely as a sports issue but as an integral component of public governance, social equity, and sustainable development.

Over the past two decades, substantial progress has been made in the construction of China's national fitness system. Government-led investments have significantly expanded sports infrastructure, community fitness facilities, and public exercise programs, while institutional reforms have promoted the integration of national fitness with healthcare, education, and community governance (Dong, 2005; Pei, 2003). Existing research has contributed valuable insights into system design, policy frameworks, and service supply, often adopting a top-down perspective to analyze governance structures, administrative mechanisms, and policy effectiveness (Wang & Li, 2011; Chen et al., 2025). These studies have laid a solid foundation for understanding how the national fitness system operates at macro and meso levels.

However, as public service systems mature, policy success can no longer be evaluated solely on the basis of institutional completeness or service availability. Public satisfaction has increasingly been recognized as a critical indicator of policy effectiveness and governance quality in public administration and public health research. Satisfaction reflects citizens' subjective evaluations of whether public services meet their needs, expectations, and values, thereby serving as a bridge between policy supply and social demand (Bouckaert & Van de Walle, 2003). In the context of national fitness, public satisfaction captures not only the adequacy of facilities and programs but also perceptions of accessibility, fairness, convenience, and cultural relevance.

From a governance perspective, public satisfaction plays a dual role. First, it functions as an outcome indicator, signaling the extent to which national fitness policies achieve their intended social objectives. Second, it serves as a feedback mechanism, enabling policymakers to identify gaps between policy intentions and public experiences, thus supporting evidence-based policy adjustment and service optimization (Van de Walle & Bouckaert, 2007). In China's governance system, which emphasizes people-centered development and social harmony, understanding public satisfaction is particularly important for enhancing policy legitimacy and strengthening public trust in government institutions (Xi, 2021).

Despite its importance, empirical research on public satisfaction with the national fitness system remains relatively limited. Many existing studies focus on participation rates, behavioral motivations, or awareness levels of fitness policies, while fewer studies systematically examine satisfaction as a multidimensional construct linked to governance performance and service delivery (Shi, Mo, & Sun, 2012). Moreover, satisfaction is not uniformly distributed across social groups. Prior research in public service evaluation suggests that demographic factors such as age, education, income, and residential environment can significantly influence individuals' perceptions of public services (Ma & Wu, 2016; Lin, 2018). In the context of national fitness, disparities in urban–rural development, educational resources, and lifestyle constraints may lead to differentiated satisfaction outcomes that warrant closer examination.

The Healthy China strategy explicitly calls for equitable access to fitness resources and the coordinated development of urban and rural public services. However, empirical evidence suggests that disparities persist in terms of facility accessibility, program diversity, and service quality across regions and population groups (Chen et al., 2025). Evaluating public satisfaction across demographic groups therefore provides a practical lens through which the inclusiveness and effectiveness of the national fitness system can be assessed. Such analysis not only reveals which groups benefit most from existing policies but also

highlights populations that may be underserved or overlooked in current governance arrangements.

Furthermore, national fitness is increasingly linked to broader governance objectives, including social integration, community cohesion, and cultural development. Fitness activities function as social spaces where individuals interact, form social networks, and develop shared norms and values. As Fan (2009) argues, the cultural dimension of national fitness-encompassing values, attitudes, and social participation-is essential for sustaining long-term engagement and policy effectiveness. Public satisfaction, in this sense, reflects not only material service provision but also the symbolic and cultural alignment between fitness policies and citizens' lived experiences.

Against this background, this study focuses on public satisfaction with the national fitness system under the Healthy China strategy. By adopting a quantitative survey approach and analyzing satisfaction differences across demographic groups, the study seeks to contribute to a more people-centered evaluation of national fitness governance. The findings aim to provide empirical evidence to support policy refinement, enhance governance coordination, and promote more equitable and responsive public fitness services. In doing so, this research complements existing system- and awareness-oriented studies and advances understanding of how national fitness policies are experienced and evaluated by the public in contemporary China.

Objectives

1. To examine the level of public perceptions of the national fitness system based on satisfaction-related indicators in China.
2. To examine demographic differences in public perceptions of the national fitness system based on satisfaction-related indicators.

Literature Review

1. Research on the National Fitness System Framework

Previous studies on national fitness in China have primarily focused on the construction and optimization of system frameworks. Scholars have proposed various structural models emphasizing governance, service provision, institutional support, and cultural development within the national fitness system (Pei, 2003; Dong, 2005). These studies highlight the importance of coordinated policy design and systematic operation in achieving national fitness goals. More recent research has further examined the integration of national fitness with public health, education, and community governance under the Healthy China strategy (General Administration of Sport of China, 2021). While these contributions provide a solid theoretical foundation, most remain concentrated on system design rather than public evaluation outcomes.

2. Public Awareness and Participation in National Fitness

Another major research stream examines public awareness, participation, and behavioral motivation related to national fitness. Studies suggest that awareness of fitness policies, health knowledge, and access to information significantly influence individuals' participation in physical activity (Shi, Mo, & Sun, 2012). Empirical research has shown that demographic factors such as age, education, and residential environment shape levels of awareness and participation in national fitness programs (Ma & Wu, 2016). Although these

studies contribute to understanding behavioral mechanisms, awareness and participation alone cannot fully capture public evaluations of policy effectiveness.

3. Public Satisfaction as an Indicator of Policy Effectiveness

In public administration and public service research, satisfaction is widely regarded as a key indicator of policy effectiveness and governance performance. Satisfaction reflects citizens' subjective assessments of whether public services meet their needs, expectations, and perceived rights (Bouckaert & Van de Walle, 2003). Studies have demonstrated that satisfaction is influenced by service quality, accessibility, transparency, and perceived fairness in service delivery (Van de Walle & Bouckaert, 2007). Applying this perspective to national fitness allows researchers to move beyond objective indicators and examine how policies are experienced by the public in everyday life.

4. Demographic Differences in Public Satisfaction with Public Services

A substantial body of literature indicates that public satisfaction with public services varies significantly across demographic groups. Factors such as age, education level, income, and urban–rural residence affect individuals' expectations, service usage patterns, and evaluations of service quality (Lin, 2018). In the field of sports and health services, younger and more educated populations often report higher satisfaction due to greater access to information and resources, while middle-aged and urban populations may experience time constraints and higher expectations (Chen et al., 2025). These findings suggest the necessity of differentiated policy strategies in national fitness governance.

5. National Fitness, Governance, and the Healthy China Strategy

Under the Healthy China strategy, national fitness is increasingly viewed as an essential component of modern governance and social development. Policy documents emphasize people-centered development, equitable access, and the coordination of public services across regions and social groups (State Council of the People's Republic of China, 2016). Scholars argue that evaluating public satisfaction with national fitness services provides critical feedback for improving governance capacity, enhancing policy legitimacy, and promoting sustainable health outcomes (Xi, 2021; Fan, 2009). However, empirical studies explicitly linking public satisfaction with national fitness governance remain limited, highlighting the need for further research in this area.

Research Methodology

Research Design

This study adopted a quantitative cross-sectional survey research design to examine the level of public satisfaction with the national fitness system and to analyze differences in satisfaction across demographic groups. The research design was appropriate for capturing participants' perceptions and evaluations at a single point in time and for identifying patterns of variation among different population groups. A structured questionnaire was used as the primary data collection instrument, allowing for systematic measurement and statistical comparison of public satisfaction levels. The cross-sectional approach enabled the study to efficiently assess current conditions of the national fitness system and provided empirical evidence to support policy evaluation and governance improvement under the Healthy China strategy.

Population and Sample Size

The target population of this study comprised residents of Zhejiang Province, China. To improve representativeness across key demographic characteristics, a stratified random sampling procedure was employed. The province was categorized based on residential

background (urban, rural, and urban–rural fringe areas), and respondents were proportionally selected from community fitness centers, public sports venues, and residential communities within these strata. Within each selected site, participants were randomly invited to complete the questionnaire.

A total of 1,086 questionnaires were distributed. After screening for completeness and response consistency, 1,034 valid questionnaires were retained for analysis, yielding a response rate of 95.2%. The final sample size was considered sufficient to ensure adequate statistical power for independent-samples t-tests and one-way ANOVA.

Research Tools

The research instrument used in this study was a structured questionnaire designed to measure public satisfaction with the national fitness system. The questionnaire consisted of two main sections. The first section collected demographic information, including age, gender, education level, and residential background. The second section assessed public satisfaction across multiple dimensions of the national fitness system using a five-point Likert scale, ranging from 1 (strongly dissatisfied) to 5 (strongly satisfied). The questionnaire items were developed based on relevant literature and national fitness policy documents and were reviewed by experts to ensure content validity.

Data Collection

Data were collected using a questionnaire survey administered through both online and offline methods. The questionnaires were distributed to the general public in Zhejiang Province, China, using a random sampling approach. Prior to data collection, participants were informed of the purpose of the study and assured of the confidentiality and anonymity of their responses. A total of 1,086 questionnaires were distributed, and after screening for completeness and validity, 1,034 valid responses were retained for data analysis.

Data Analysis

The collected data were analyzed using SPSS version 27.0. Descriptive statistics were employed to summarize demographic characteristics and overall levels of public satisfaction with the national fitness system. Independent-samples t-tests and one-way analysis of variance (ANOVA) were conducted to examine differences in public satisfaction across demographic groups. Statistical significance was set at the 0.05 level.

Conceptual Framework

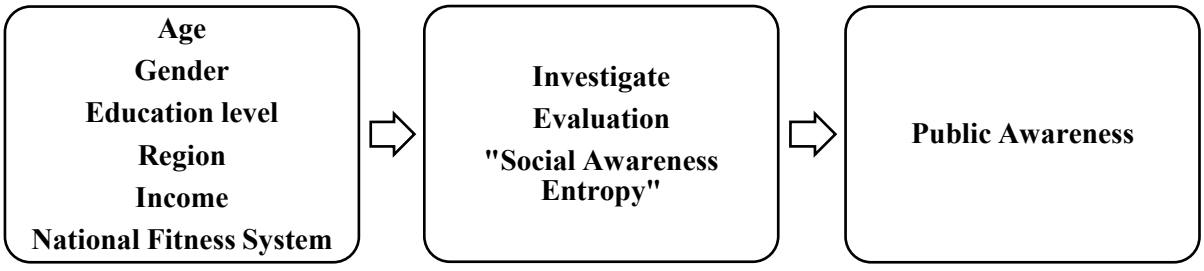


Figure 1: Conceptual Framework

The conceptual framework presented in Figure 1 is grounded in public service satisfaction theory and governance evaluation perspectives, which emphasize citizens' perceptions as a crucial indicator of policy effectiveness and governance quality (Bouckaert & Van de Walle, 2003; Van de Walle & Bouckaert, 2007). In this study, demographic characteristics including age, education level, and residential background are conceptualized as antecedent variables that shape individuals' expectations, access conditions, and usage experiences of national fitness services. These demographic factors influence citizens' perceptions of key dimensions of the national fitness system, such as management effectiveness, service supply adequacy, institutional guarantees, and cultural environment. Public satisfaction, operationalized through the concept of "social awareness entropy," is treated as the outcome variable reflecting the overall evaluative judgment of citizens toward the national fitness system. The framework therefore assumes that variations in demographic characteristics contribute to differentiated perceptions and satisfaction levels, thereby providing a structured basis for examining equity, governance performance, and policy responsiveness under the Healthy China strategy.

Research Finding

1. To examine the level of public perceptions of the national fitness system based on satisfaction-related indicators in China.

To examine the basic situation of the "awareness entropy" of the national population towards the national fitness system, we conducted descriptive statistics on the scores of " awareness satisfaction entropy (dis)", " awareness dissatisfaction entropy (des)", and "total awareness entropy (ds)" of the 1034 respondents participating in this survey. The results are shown in Figure 2.

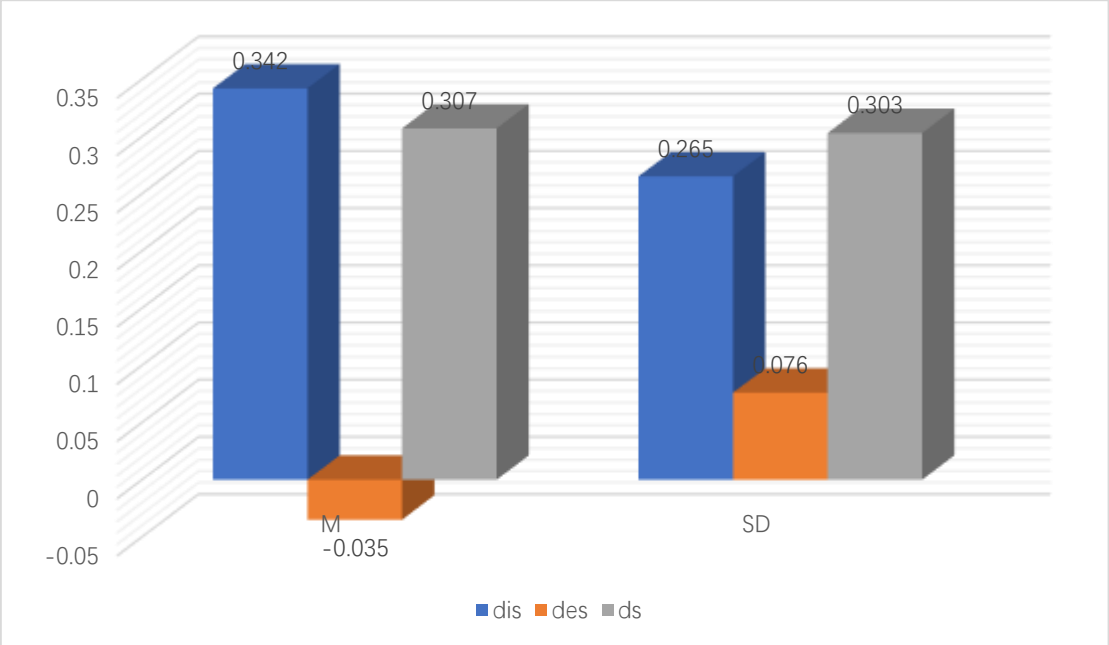


Figure 2: Statistical Analysis and Comparison of Public Awareness and Satisfaction with the National Fitness System

According to the derived calculation formula of the "social awareness entropy" of the national fitness system, the range of the "total awareness entropy" is (-1, 1). From the descriptive statistics results shown in the above figure, it can be found that the average "total awareness entropy" of the public for the national fitness system is 0.307. It is not difficult to see that the public's evaluation of the national fitness system tends to be satisfactory, but compared with its value range, the degree of satisfaction is still relatively low.

The standard deviation is an important indicator for measuring the stability and reliability of data. From the perspective of standard deviation, the data values of " awareness satisfaction entropy", " awareness dissatisfaction entropy" and "total entropy" of the national fitness system are closely distributed around the average value, and the differences among the data are relatively small. This indicates that the degree of recognition of the national fitness system by the public is tending to be stable at present.

2. To examine demographic differences in public perceptions of the national fitness system based on satisfaction-related indicators.

2.1) Demographic Differences in Satisfaction-Related Public Perceptions across Age Groups

To examine age-related differences in public perceptions of the national fitness system based on satisfaction-related indicators, one-way analysis of variance (ANOVA) was conducted across different age groups. The results are presented in Table 1.

Table 1: Comparison of Satisfaction-Related Public Perceptions of The National Fitness System Across Different Age Groups

	F	P	Effect size	LSD	Homogeneity of variance test
Ds (Total)	8.578	.000	.968	1>2,1>3,1>4,2>3	Normal
Ds (Management)	10.465	.000	.989	1>2,1>3,1>4	Normal
Ds (Supply)	7.820	.000	.946	1>2,1>3,1>4,2>3	Normal
Ds (Guarantee)	7.416	.001	.938	1>3,1>4, 2>3,2>4	Normal
Ds (Culture)	6.728	.001	.906	1>3,1>4, 2>3,2>4	Normal

*P<0.05, **P<0.01, ***P<0.001;1=<18,2=18-44,3=45-59,4=>60

2.2) Demographic Differences in Satisfaction-Related Public Perceptions across Educational Levels

To examine differences in satisfaction-related public perceptions of the national fitness system across educational levels, a one-way analysis of variance (ANOVA) was conducted. The results are presented in Table 2.

Table 2: Comparison of Satisfaction-Related Public Perceptions of The National Fitness System Across Educational Levels

	F	P	Effect size	LSD	Homogeneity of variance test
Ds (Total)	8.037	.000	.957	2>1, 2>3	Normal
Ds (Management)	4.167	.016	.735	2>1, 2>3	Normal
Ds (Supply)	10.246	.000	.987	2>1, 2>3, 3>1	Normal
Ds (Guarantee)	6.956	.001	.926	2>1, 2>3	Normal
Ds (Culture)	6.596	.001	.911	2>1, 2>3	Normal

*P<0.05, **P<0.01, ***P<0.001, 1=High School,2=Undergraduate,3=Postgraduate

As shown in Table 2, statistically significant differences in satisfaction-related public perceptions were observed across different educational levels ($p < .05$). Respondents with a bachelor's degree reported the highest level of positive perception, whereas those with a high school education or below reported the lowest level. This finding suggests that educational attainment plays an important role in shaping public evaluations of the national fitness system.

2.3) Demographic Differences in Satisfaction-Related Public Perceptions across Residential Backgrounds

To examine differences in satisfaction-related public perceptions of the national fitness system across residential backgrounds, an independent-samples t-test was conducted. The results are presented in Table 3.

Table 3: Comparison of Satisfaction-Related Public Perceptions of The National Fitness System Across Residential Backgrounds

	F	P	Effect size	LSD	Homogeneity of variance test
Ds (Total)	8.476	.000	.962	2>1, 2>3	Normal
Ds (Management)	7.898	.000	.945	2>1, 2>3	Normal
Ds (Supply)	7.658	.000	.933	2>1, 2>3	Normal
Ds (Guarantee)	9.251	.000	.977	2>1, 2>3, 3>1	Normal
Ds (Culture)	10.923	.000	.991	2>1, 2>3, 3>1	Normal

*P<0.05, **P<0.01, ***P<0.001, 1=Urban,2=Rual,3=Urban-Rural Fringe

As shown in Table 3, statistically significant differences in satisfaction-related public perceptions were found between respondents from urban and rural areas ($p < .05$). Rural residents reported higher levels of positive perception compared to urban residents. This result highlights the influence of residential context on public evaluation of the national fitness system and has important implications for urban–rural equity in national fitness governance.

Conclusion

This study examined public satisfaction with the national fitness system in China and explored demographic differences in public perceptions based on satisfaction-related indicators under the Healthy China strategy. The findings indicate that the overall level of public satisfaction with the national fitness system is moderate to relatively high, suggesting that existing policies and service provisions have achieved a generally positive evaluation from the public. Nevertheless, the results also imply that there remains considerable room for further improvement in enhancing service quality, accessibility, and responsiveness to public needs.

In addition, the analysis revealed significant demographic differences in satisfaction-related public perceptions. Age, educational level, and residential background were found to play important roles in shaping how individuals perceive and evaluate the national fitness system. Younger respondents and those with higher educational attainment tended to report more positive perceptions, while middle-aged groups and urban residents exhibited comparatively lower levels of satisfaction-related perception. These differences highlight the uneven experiences of public fitness services across population groups and suggest that a uniform policy approach may not adequately address diverse social needs.

Overall, the results underscore the importance of incorporating public satisfaction and perception-based indicators into the evaluation of national fitness policies. By understanding how different demographic groups perceive the national fitness system, policymakers can

better assess policy effectiveness and identify gaps in service provision. This study contributes empirical evidence to support more people-centered, equitable, and targeted approaches to national fitness governance, thereby advancing the implementation of the Healthy China strategy.

Discussion

The findings of this study indicate that public satisfaction with the national fitness system in China is at a moderate to relatively high level. From a public service satisfaction and governance evaluation perspective, this suggests that the current institutional framework has achieved a basic alignment between service provision and citizen expectations (Bouckaert & Van de Walle, 2003; Van de Walle & Bouckaert, 2007). At the same time, national fitness development under the Healthy China strategy has benefited from sustained government investment, policy coordination, and institutional support (Pei, 2003; Dong, 2005; General Administration of Sport of China, 2021; State Council of the People's Republic of China, 2016). However, the fact that satisfaction remains moderate rather than high indicates that service expansion alone may not fully address issues related to perceived quality, accessibility, and responsiveness. In governance theory, satisfaction reflects not only objective service supply but also citizens' subjective evaluations of fairness and policy performance (Bouckaert & Van de Walle, 2003).

The observed demographic differences further reinforce the theoretical assumption that public evaluations are shaped by social positioning and access conditions. Younger and more educated respondents reported more positive perceptions, which may be linked to higher health literacy, greater adaptability to public fitness programs, and stronger policy awareness (Shi, Mo, & Sun, 2012; Lin, 2018). These findings are consistent with previous research indicating that socio-demographic characteristics significantly influence participation behavior and satisfaction in national fitness initiatives (Ma & Wu, 2016). From a theoretical standpoint, such variation reflects differences in expectations and perceived benefits across social groups, highlighting that public satisfaction is socially structured rather than uniformly distributed.

Residential disparities provide further insight into governance equity under the Healthy China strategy. Although urban areas typically possess more developed fitness infrastructure, urban residents reported lower levels of positive perception. This finding echoes research on regional disparities and governance performance in national fitness development (Chen et al., 2025). It suggests that infrastructure density alone does not guarantee higher satisfaction; instead, factors such as service congestion, competition for facilities, and elevated expectations may influence evaluative judgments. The Healthy China 2030 Planning Outline emphasizes equitable access and coordinated urban–rural development (State Council of the People's Republic of China, 2016), and the present findings indicate that equity should be assessed not only in terms of resource allocation but also in terms of perceived service experience.

Overall, these results demonstrate that public satisfaction with the national fitness system is shaped by governance structure, socio-demographic characteristics, and contextual conditions. Incorporating satisfaction-related perception indicators into policy evaluation mechanisms can enhance evidence-based governance and strengthen people-centered development (Van de Walle & Bouckaert, 2007; Xi, 2021). By systematically monitoring differences across age, education, and residential groups, policymakers can refine differentiated service strategies and improve the responsiveness and legitimacy of national fitness governance. In this regard, public satisfaction should be institutionalized as a core

performance indicator within the implementation framework of the Healthy China strategy (General Administration of Sport of China, 2021).

Suggestion

Suggestions for Research

1. Policymakers and practitioners should incorporate public satisfaction and perception-based indicators into the routine evaluation of the national fitness system in order to improve service quality, accessibility, and responsiveness to public needs.

2. Targeted fitness programs and service delivery strategies should be developed to address the specific needs of different demographic groups, particularly middle-aged populations and urban residents, who reported relatively lower levels of satisfaction-related perception.

Suggestions for Future Research

1. Future studies should adopt mixed-methods approaches, combining quantitative surveys with qualitative interviews, to gain deeper insights into the underlying reasons for public satisfaction and dissatisfaction with the national fitness system.

2. Longitudinal research designs are recommended to examine changes in public satisfaction and perceptions over time and to assess the long-term effects of national fitness policies under the Healthy China strategy.

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