International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan

Cui Xuyan[1], and Prakit Hongsaenyatham[2]
Faculty of Sports Science and Technology, Bangkokthonburi University, Thailand
E-mail: cuixy@gzsport.edu.cn, ORCID ID: https://orcid.org/0009-0008-1469-7917
E-mail: prakitsport@gmail.com, ORCID ID: https://orcid.org/0009-0009-2196-0258

Received 16/05/2023 Revised 19/05/2023 Accepted 21/05/2023

Abstract

Background and Aim: The development of national fitness in Guangdong Province is in a leading position in the country and has a certain typicality. Strengthening the research on the national fitness evaluation index system in Guangdong Province has an important reference for the construction of national and other provincial fitness evaluation index systems. The objectives of this research were: (1) to construct an evaluation index system for a national fitness model city in Guangdong Province; (2) to determine the weight of the evaluation index system; and (3) to formulate the development strategy of a national fitness model city.
Materials and Methods: The main research instrument of this research was expert questionnaires. Participants include experts in sports, health promotion, physical exercise, measurement, and evaluation, and the experts were selected by purposive sampling. This research was collecting relevant data and determined the first draft of indexes. Invite 5 experts to evaluate and check the draft evaluation indexes and determine the indexes. Use the Delphi method to build Evaluation Index System, check on the suitability and feasibility of the Evaluation Index System, and summarize and report the content of the Evaluation Index System. This research mainly used SPSS 22.0 for data analysis.
Results: The final developed evaluation index system for the fitness model city for Guangdong Province under the national fitness plan consisted of four first-level indicators, 14 second-level indicators, and 36 third-level indicators, and the authoritative experts were organized to conduct focus group interviews to evaluate the feasibility and applicability of the evaluation index system.
Conclusion: The results showed that the evaluation index system of fitness model cities for Guangdong Province under the national fitness plan is reasonable and feasible, which can effectively guide all cities in Guangdong Province to create fitness model cities and provide valuable references for all provinces in China.

Keywords: Evaluation Index System; Fitness Model Cities; Guangdong Province; National Fitness Plan

Introduction

The city is not only the spatial carrier of economic development but also the central field of national governance. Since the 21st century, with the rapid improvement of the Chinese city modernization level and the rapid development of the process of diversification, city governance has become an important way to Modernize Chinese national governance system and governance capacity, an important basis for Chinese economic and social modernization (Wang Ying & Tang Yun, 2020). As a new driving force for the diversified development of cities, sports have an important driving force in helping the level of city governance (Zhang Yongtao, &Wang Mingtao, 2022).

Since the first proposal of the "National Fitness Plan" in 1993, the Chinese government has developed a series of systems around the "National Fitness Plan" in the past thirty years. Especially since national fitness became China's national strategy in 2014, the series of policies introduced by the country have comprehensively promoted the rapid development of national fitness (Yu Shanxu, 2019). Among them, the "National Fitness Plan (2021-2025)" is the authoritative policy of the Chinese government's national fitness work during the "14th Five Year Plan" period, and has proposed a series of development goals. For example, the "National Fitness Plan (2021-2025)" proposes that by 2025, the public service system for national fitness will be further improved, the proportion of 38.5% regularly participating in physical exercise (State Sports General Administration, 2021). The three-level public fitness facilities are composed of cities, streets, and communities and a community 15-minute fitness circle will achieve full coverage. Every thousand people have 2.16 social sports instructors (State Sports General Administration, 2021).

In the same year, each province in China also formulated its own national fitness plan for the period 2021-2025, clarifying the development goals for national fitness in each province during the 14th Five-Year

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Plan period, and pointing out the direction for the national fitness work in each province. The People's Government of Guangdong Province (2021) issued the "Implementation Plan for National Fitness in Guangdong Province (2021-2025)" in November 2021, which clearly proposes to optimize the allocation of public service resources for national fitness by creating a national model city, district for sports and fitness.

To sum up, from 2021 through 2025, the Chinese government and Guangdong provincial government, respectively, proposed the relevant goals of creating a model city for national fitness.

As a new mode of city governance, the "selection of model cities for national fitness" is designed at the top level for the development of national fitness, and developing the evaluation index system of model cities for national fitness can scientifically guide local governments to effectively carry out national fitness work.

The scientific evaluation system is conducive to the modernization of national governance, and the key to the scientific evaluation system is the scientific evaluation index (Xiao, M., & Zhang, B., 2017). The evaluation index system of the model city of national fitness needs to cover the key elements of sports city governance. The setting of the index should comprehensively reflect the development of the national fitness work in the national fitness model city, and the indexes in different levels should maintain a strong guidance level for the actual work. This can be seen from relevant research, such as Hendriks (2014) believed that city governance is the ability of government and non-governmental departments to correctly handle city problems through the design and arrangement of institutional changes. Evangelista (2015) focused on city economic development and analyzed the development of the city innovation system. The formulation and research of sports city standards have gradually become a hot topic in the world today, which has attracted the attention of many countries and has shown a new trend of development. Matel (2016) believed that indexes such as training ground facilities and competitive sports teams are important criteria for the selection of "European Sports City".

During the preliminary visit and research process, the author learned that in many cities, national fitness managers or institutions have difficulty understanding the current evaluation indexes. The main reason for those is that the current evaluation indexes have more qualitative descriptions and fewer quantitative indexes.

The evaluation report of the Guangdong Province National Fitness Implementation Plan (2016-2020) shows that the level of national fitness in Guangdong Province ranks among the top in China. The overall level and implementation goals of Guangdong Province's national fitness program are higher than those of China's national fitness program during 2021-2025.

Therefore, this study analyzes the "Implementation Plan for National Fitness in Guangdong Province (2021-2025)", and sorts out relevant research, sports development reports, sports yearbook data, policy planning outlines, and other literature materials. Based on evaluation theory, social index theory, etc., combined with the actual situation of national fitness demonstration cities, follows the construction principles, goal orientation, and the current situation of national fitness development in various cities in Guangdong Province, the value orientation and theoretical model established for the evaluation index system of sports cities. By constructing the evaluation index system of Guangdong Province's national fitness model cities, it can not only effectively guide the creation of national fitness model cities in various cities in Guangdong Province, but also provide a useful reference for the evaluation of national fitness model cities in other provinces and countries.

Objectives

1. To construct of evaluation index system for a national fitness model city in Guangdong Province.
2. To determine the weight of the evaluation index system.
3. To formulate the development strategy of a national fitness model city.

Literature Review

1. Concept of national fitness

Relevant literature shows that the "National Fitness" was first put forward at the 1987 China Sports Development Strategy Seminar, that is, "the national fitness strategy based on youth and the competitive sports strategy based on the Olympic Games develop harmoniously in practice". This concept soon became the working language, making "national fitness" gradually used as a synonym for mass sports. It has now become an important carrier to promote the development of mass sports in

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

China. At the same time, academic research related to "national fitness" has become one of the research focuses of Chinese scholars.

The literature shows that the current academia has not yet made an authoritative definition of "national fitness", and the representative views mainly include the following two categories: The first category defines national fitness from the object and method and believes that national fitness is a physical activity or sports to enhance the physique and improve the quality of life, such as Zhao, Y., Chung, P., (2016) believed that national fitness means that all people use different means and methods to achieve the goal of fitness to strengthen their physique. National fitness refers to a kind of physical exercise, but in a broader sense, it refers to a way of life, a great power to promote people's all-around progress and development, and a unique and effective tool and means to promote social harmony, neighborhood harmony, and family harmony. National fitness has evolved and extended into mass sports with Chinese characteristics. Zhu, H., Allman, B.E., & Koelle, K., (2021) defined national fitness as national fitness refers to the educational process in which people all over the country, regardless of age, adopt all effective physical exercise methods in different ways to effectively improve the physical quality of the people, improve the functions of various organs and systems of the human body and the ability of the body to resist diseases in a purposeful, planned and organized way, so as to enhance the physique and health.

The second category: Believes that national fitness is a sports undertaking. It is a large-scale social livelihood project led by the sports administrative department and covering all citizens. The main purpose is to implement the relevant policies of the Chinese government on "national fitness", and to guide scientific movement and healthy life of the public through the construction of a public service system for national fitness, such as, Dong (2009) believes that "national fitness" is not only a word for China, it has become a cause of socialist construction and sports practice of hundreds of millions of people, and it is a hot spot of sports and a unique social phenomenon at the end of the 20th century; The meaning of "national fitness" used by people is not only the literal meaning of the national people coming to fitness but also the pronoun of "national fitness plan", "national fitness strategy", "national fitness work", etc. The national fitness as: "National fitness" means that under the leadership of the country, people can enhance their physical health and improve their quality of life through appropriate exercise; Through the demand for fitness, people can promote the economic development of the sports industry, promote the construction of socialist spiritual civilization, and realize the important means and ways of national health.

To sum up, this study believes that national fitness is led by China's sports administrative department. Through, building a public service system for all citizens to exercise, guides and guarantees all citizens to carry out scientific sports, enhances the physical fitness of the whole people, and improves the health level of the whole people.

2. Status of National Fitness Evaluation System

To understand the current situation of national fitness comprehensively, systematically, and completely, this study summarized the current situation of national fitness evaluation as follows:

Yu (2016) based on the overall strategy of a healthy China, took the government, society, market, and individuals as the main actors, and under the theoretical framework of the country, society, and market, used comparative, documentary, brainstorming and other research methods to theoretically build a comprehensive evaluation index system of national fitness with fitness environment, sports participation, and physical health as the first level indexes. The evaluation index system of public service for community national fitness should be composed of service subject, service object, service purpose, service environment, and service method. Each evaluation index affects the development of public service for community national fitness to varying degrees by giving play to their respective functions. The performance evaluation index system of public services for national fitness in Beijing from three dimensions: health investment in public services for national fitness, health implementation of public services for national fitness, and health output of public services for national fitness, and conducted empirical analysis, and proposed development countermeasures to improve the performance of public services for national fitness in Beijing. Wang, X., Li, H., & Zhou, J., (2021) made it necessary to establish an evaluation index system for the national fitness service in the new socialist countryside. The actual situation of the national fitness service in the new rural areas of Jiangxi Province

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

and through comprehensive consideration, formulated and quantified various indexes of the national fitness evaluation index system in the new rural areas of Jiangxi Province, aiming to provide a theoretical reference for the government to strengthen the evaluation of the national fitness cause in the new rural areas.

As an important part of provincial governance, building a national fitness city evaluation system is of great significance to promote the development of national fitness in China, and plays an important role in improving the theoretical system of national fitness evaluation.

Conceptual Framework

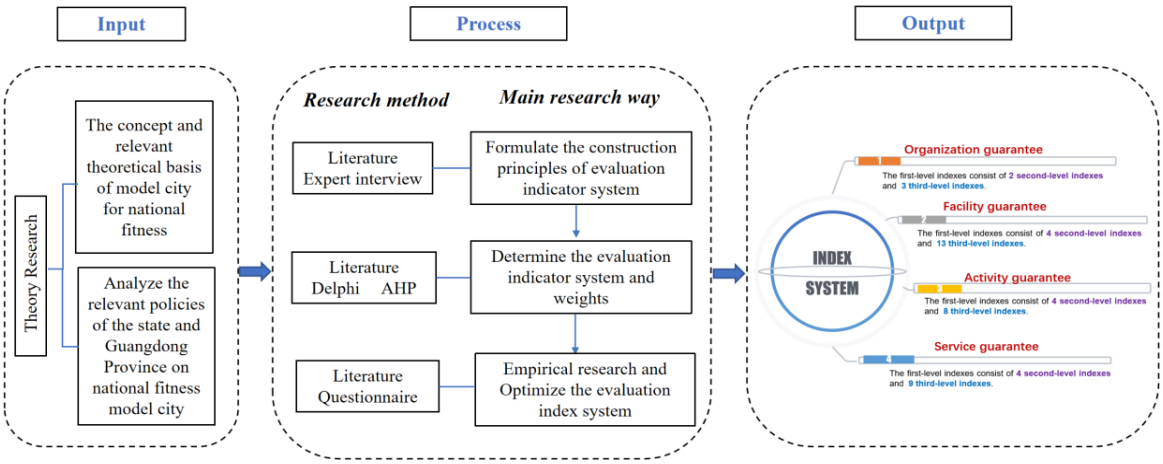

Figure 1: Conceptual Framework of Research

Methodology

This research belongs to qualitative research. The objective of this study is to construct the Evaluation Index System for National Fitness Model City. Therefore, the main research instrument of this study is the expert questionnaire which used the Delphi method to investigate the experts' opinions on the questions in the questionnaire and asked the experts to evaluate the suitability of the questionnaire. Take back the questionnaire for data analysis, sort out the data, and send it to the experts again, asking them to confirm their answers. The final step is to design the questions to be discussed in the Focus Group. In this research, experts are selected by purposive sampling, and the experts are comprised of individuals with expertise in sports, health promotion and physical exercise, measurement, and evaluation, and 3-5 experts in each field will be selected.

1. Participants' specifications and size

1.1. Criteria for selecting experts: According to the "Sports Science Research Methods" compiled by the Sports Science Research Method Writing Group (2018), the selection of Delphi experts should follow the following three criteria: (1) the number of experts should not exceed 20; (2) Having worked continuously in this field for at least 10 years; (3) The distribution of experts should be broad.

1.2 Experts selected for this study: (1) The total number of experts is 19 persons. (2) All experts have worked continuously in this field for over 10 years. And (3) According to research needs: there are three types of experts, including sports experts, health promotion and physical exercise experts, and measurement and evaluation experts. The distribution areas of experts mainly include national fitness, sports management, health promotion, physical exercise, measurement, and evaluation.

2. Research Instrument

The main research instrument of this study is expert questionnaires, mainly including:

2.1 The first questionnaire: Open-Ended Questionnaire for experts. To widely solicit the opinions of experts, the first round of questionnaires adopts the form of combining open and closed questionnaires. The main purpose is to give full play to the recovery efficiency and high reliability of closed questionnaires for statistical analysis. After each index in the questionnaire, three options of "agree to be selected", "disagree

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

to be selected" and "modify and suggest" are attached for experts to judge, and "add indexes and other comments" are set after the questionnaire, requiring experts to explain the indexes that need to be adjusted, modified, added or deleted. In this round of questionnaires, the number of "agreed to be selected" reached 2/3 (about 66.7%) of the total number of experts as the criteria for the first round of index screening.

2.2 The second questionnaire: the Rating Scale Questionnaire with five options, namely, the maximum level, the large level, the general level, the small level, and the minimum level. The screening criteria for the second round of indexes are mainly from three aspects: the coefficient of variation of indexes, the consistency test of evaluation results by experts, and the average score of each index assigned by experts. The details are as follows:

Coefficient of variation: The larger the coefficient of variation, the greater the dispersion of expert evaluation results; the smaller the coefficient of variation, the smaller the dispersion of expert evaluation results. The calculation formula is as follows:

$$S_j = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(X_{ij} - M_j)^2}$$

（S_j is the standard deviation of j index： Expert recognition）

$$M_j = \frac{1}{n}\sum_{i=1}^{n} X_{ij}$$

（M_j is the arithmetic mean of j index： Concentration of expert opinions）

$$V_j = \frac{S_j}{M_j}$$

（V_j is the coefficient of variation of j index： Coordination degree of expert opinions）

Generally, if the coefficient of variation is ≥ 0.25, the experts' opinions on this index are highly inconsistent. If the coefficient of variation is <0.25, it means that experts' opinions on this index tend to be consistent.

Coordination coefficient（W）: The value range of W is (0,1). The larger the value, the better the coordination. Generally, after 2-3 rounds of consultation and coordination, the value of W fluctuates around 0.5.

The significance test of coordination degree adopts grade consistency test (non-parametric test): when P >0.05, it indicates that the evaluation credibility of expert opinions is poor, and the evaluation results are not acceptable; When P <0.05, it means that the evaluation of expert opinions is reliable and the evaluation results are reliable.

The criteria for the second round of index screening are judged by three parameters, which are: the coefficient of variation of the index Vj <0.25; The consistency test of the expert's evaluation results was achieved, that is, P <0.01; The average score assigned by experts to the importance of indexes is more than 3.5, that is, AM ≧3.5 (reaching 70% of the total score).

2.3 The third questionnaire: was designed by the researcher for use in the Focus Group.

3. Data collection: Review literature, conduct theoretical and policy analysis, draw on relevant research results, preliminarily determine evaluation index, and design questionnaire. Select experts in relevant fields to conduct 3 rounds of expert questionnaires. Use Analytic Hierarchy Process (AHP) to determine the weight of every evaluation index. The details of 3 rounds of expert questionnaires as follows:

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

3.1 The first round of questionnaires: Experts are invited to delete or modify the initial indexes system and collect the questionnaires. The questionnaire is modified according to the experts' opinions, and the index dimension is preliminarily determined.

3.2 The second round of questionnaires: The statistical results of the first round of questionnaires are fed back to the 19 experts, and the experts are invited to score the first-level indexes to the third-level indexes.

3.3 The third round of questionnaires: Using the Rating Scale Questionnaire, 19 experts were invited to fill in the questionnaire and write reasons for the indexes of disagreement.

4. Data Analysis

This research mainly used SPSS 22.0 for data analysis.

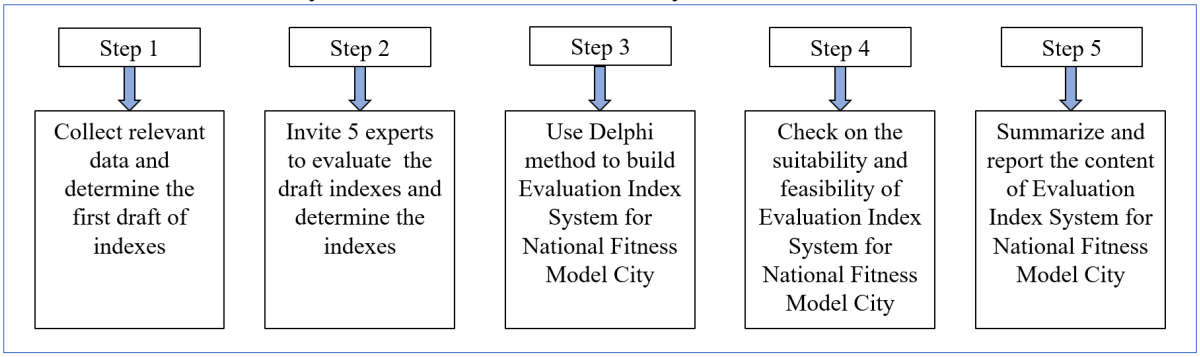

Figure 2: Research Process Framework

Results

1. Pre-selection of evaluation indexes

Through literature review, and collecting data on relevant evaluation indexes, the researcher listened to the suggestions and opinions of some sports bureaus, community sports managers, and urban residents on the evaluation indexes of the national fitness model city by means of interview and telephone communication, and then modified or adjusted the relevant indexes to form four first-level indexes according to the requirements of "generally 50% to one time more indexes than the selected indexes to form the pre-selection index set", the pilot pre-selected index set consisting of 4 first-level indexes, 18 second-level indexes, and 48 third-level indexes (see Table 1), which will be used for Delphi's first round of expert consultation.

Table 1: Pre-selection index system of Guangdong National Fitness Model City

First-level indexes	Second-level indexes	Third-level indexes
A1 Organization guarantee of national fitness	B1 Management mechanism	C1 Formulate the development plan of national fitness work
		C2 Establish a multi-department collaborative work mechanism
		C3 Implement health intervention plan for high-risk population
		C4 Regularly carry out a national fitness assessment
		C5 Annual government investment
	B2 Organization system	C6 Number of national fitness associations and individual associations
		C7 Number of spontaneous national fitness organizations
		C8 Activity Planning organization of fitness

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
	B3 Management team	C9 Professional background of national fitness management team
		C10 Work experience of national fitness management team
A2 Facilities guarantee of national fitness	B4 Basic facilities	C11 Number of public stadiums
		C12 Number of national fitness centers
		C13 Number of sports parks
		C14 Number of fitness paths
	B5 Per capita venue	C15 More than 0.3m2 outdoor sports ground per person
		C16 More than 0.1m2 indoor sports ground per person
	B6 Venues expansion	C17 Number of fitness places to be renovated in idle space
		C18Number of smart stadiums transformed from existing sports venues
		C19 Number of fitness equipment upgrading and transformation
		C20Number of fitness venues invested by social forces
	B7 Resource sharing	C21 Number of professional training venues open to the public
		C22 Number of school stadiums and gymnasiums open to the public
		C23 Number of shared fitness equipment invested in the society
	B8 Special facilities	C24 Special convenient passage for special people
		C25 Smart Fitness Facilities Operation Guide
A3 Activity guarantee of national fitness	B9 Annual sporting events	C26 Hold at least one comprehensive national fitness competition every year
		C27 Hold no less than 3 individual national fitness competitions every year
		C28 Competition reward system
	B10 Top-quality events	C29 Annual holding times of top-quality events
		C30 Annual scale of high-quality events
	B11 Characteristic activities	C31 Carry out national traditional sports activities
		C32 Carry out sports that reflect the characteristics of the city
	B12 Event publicity	C33 Publicity scope of the event
		C34 Popularity of competition events
	B13 Standard test	C35 At least once a year (national exercise standard)
		C36 Pass rate above 85% of the test

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
A4 Guidance guarantee of national fitness	B14 Digital platform	C37 Scientific fitness service platform for citizens
		C38 Citizen physical health monitoring service platform
		C39 Management department's national fitness management service platform
	B15 Conduct training	C40 Regular training for social sports instructors
		C41 Regular fitness training for community residents
	B16 Fitness instructor	C42 Number of social sports instructors
		C43Number of fitness volunteer service activities
	B17 Service organization	C44 Number of national physique monitoring stations
		C45 Number of fitness guidance service institutions
	B18 Promotion activities	C46 Carry out the scientific fitness lecture hall
		C47 Carry out sport's public welfare training activities
		C48 Carry out fitness knowledge competition

2. Use the Delphi method to screen evaluation indexes

2.1. Consultation results of the first-round questionnaire

The first round of expert consultation on the evaluation indexes of the national fitness model city is mainly to determine the index dimensions and initially improve the index system. In this round, a total of 19 questionnaires were distributed, 19 were recovered, and 19 were valid. The effective questionnaire recovery rate was 100%. From the feedback of the first round of expert consultation, the experts mainly put forward suggestions on the deletion, modification, and consolidation of indexes from the aspects of data sources, indexes' scientific, and operability.

After the first round of expert consultation, the researcher, based on the comprehensive adoption of expert opinions, also consulted relevant literature and Guangdong Province's national fitness-related policy documents and formed an evaluation index system for Guangdong Province's national fitness model city consisting of 4 first-level indexes, 14 second-level indexes, and 40 third-level indexes after comprehensively adopting expert opinions and referring to relevant documents such as Guangdong Province's national fitness policy documents (see Table 2).

Table 2: Evaluation index system of Guangdong National Fitness Model City (the first round of screening results)

First-level indexes	Second-level indexes	Third-level indexes
A1 Organization guarantee of national fitness	B1 Management mechanism	C1 Formulate the development plan of national fitness work
		C2 Establish a multi-department collaborative work mechanism
		C3 Implement health intervention plan for high-risk population
		C4 Regularly carry out a national fitness assessment
		C5 Annual government investment
	B2 Organization system	C6 Number of national fitness associations and individual associations
		C7 Number of spontaneous national fitness

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
		organizations
		C8 Activity Planning organization of fitness
A2 Facilities guarantee of national fitness	B3 Basic facilities	C9 Number of public stadiums
		C10 Number of national fitness centers
		C11 Number of sports parks
		C12 Number of fitness paths
	B4 Per capita venue	C13 More than 0.3m2 outdoor sports ground per person
		C14 More than 0.1m2 indoor sports ground per person
	B5 Resource development	C15 Number of fitness places to be renovated in idle space
		C16 Number of smart stadiums transformed from existing sports venues
		C17 Number of fitness equipment upgrading and transformation
		C18 Number of fitness venues invested by social forces
	B6 Resource sharing	C19 Number of professional training venues open to the public
		C20 Number of school stadiums and gymnasiums open to the public
		C21 Number of shared fitness equipment invested in the society
A3 Activity guarantee of national fitness	B7 Annual sporting events	C22 Hold at least one comprehensive national fitness competition every year
		C23 Hold no less than 3 individual national fitness competitions every year
		C24 Competition reward system
	B8 Characteristic projects	C25 Carry out traditional sports activities with characteristics
		C26 Carry out high-quality sports projects with city characteristics
	B9 Standard test	C27 At least once a year (national exercise standard)
		C28 Pass rate above 85% of the test
	B10 Event safety	C29 Number of event safety knowledge education activities
		C30 Number of non-governmental public relief organizations
A4 Guidance guarantee of national fitness	B11 Digital platform	C31 Scientific fitness service platform for citizens
		C32 Citizen physical health monitoring service platform
		C33 Management department's national fitness management service platform

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
	B12 Fitness instructors	C34 Number of social sports instructors
		C35 Number of fitness volunteer service activities
	B13 Service organization	C36 Number of national physique monitoring stations
		C37 Number of fitness guidance service institutions
	B14 Service promotion	C38 Carry out the scientific fitness lecture hall
		C39 Carry out sports public welfare training activities
		C40 Carry out fitness knowledge competition

2.2. Consultation results of the second-round questionnaire

In this round, a total of 19 questionnaires were distributed, 19 were recovered, and 19 were valid. The effective questionnaire recovery rate was 100%. From the feedback of the first round of expert consultation, most experts agree on the reservation or deletion of most indexes. The main purpose of the second round of expert consultation is to further improve the index system.

2.2.1 Consultation results of first-level indexes

It can be seen from Tables 3 and 4 that the arithmetic mean (AM) of the importance score of the four first-level indexes by experts is greater than 4, the coefficient of variation (CV) is less than 0.10, the consistency coefficient (W) of expert evaluation is 0.846, and the P value is less than 0.01, indicating that the four first-level indexes have been highly recognized by 19 experts.

Table 3: Statistical parameters and screening results of the First-level Index (Second round)

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
Organization guarantee of national fitness	5.0000	0.0000	0.0000	Keep
Facilities guarantee of national fitness	5.0000	0.0000	0.0000	Keep
Activity guarantee of national fitness	4.9474	0.2294	0.0464	Keep
Guidance guarantee of national fitness	4.1053	0.3153	0.0768	Keep

Table 4: Consistency Test Statistical of the First-level Index

Round	$Kendall\text{-}W$ (W)	X^2	P
Second round	0. 846	48.231	.000

2.2.2 Consultation results of second-level indexes

From Table 5 and 6, we can see that the arithmetic mean of the importance score of the 14 second-level indexes is greater than 4, the coefficient of variation of each index is less than 0.13, and the consistency coefficient of expert evaluation is 0.570. It shows that experts highly approve of all second-level indexes.

Table 5: Statistical parameters and screening results of the Second-level Index (Second round)

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
Management mechanism	4.8421	0.3746	0.0774	Keep
Organization system	4.2632	0.4524	0.1061	Keep
Basic facilities	5.0000	0.0000	0.0000	Keep
Per capita venue	4.1053	0.3153	0.0768	Keep

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
Resource development	4.8947	0.3153	0.0644	Keep
Resource sharing	5.0000	0.0000	0.0000	Keep
Annual sporting events	4.9474	0.2294	0.0464	Keep
Characteristic projects	4.2105	0.5353	0.1271	Keep
Standard test	4.8421	0.3746	0.0774	Keep
Event safety	4.0000	0.3333	0.0833	Keep
Digital platform	4.3158	0.4776	0.1107	Keep
Fitness instructors	5.0000	0.0000	0.0000	Keep
Service organization	4.7895	0.4189	0.0875	Keep
Service promotion	4.7368	0.4524	0.0955	Keep

Table 6: Consistency Test Statistical of the Second-level Index

Round	$Kendall\text{-}W$ (W)	X^2	P
Second round	0.570	140.751	.000

2.2.3 Consultation results of third-level indexes

After statistics and analysis of the data fed back by experts, it can be seen from Tables 7 and 8 that the consistency coefficient of the experts on the three-level indexes is 0.570 (W=0.570), and the P value is less than 0.01 (P=0.000), indicating that the three-level indexes are well coordinated.

It can be seen from Table 7 that the average importance score of 36 of the 40 third-level indexes is greater than 4 (AM > 4.0000), and the coefficient of variation fluctuates between 0.000-0.1839, all less than 0.25 (CV < 0.25), indicating that experts have a high recognition of more than 90% of the third-level indexes in this round of index system, and researchers have reserved the indexes with high recognition of experts.

For the four indexes with expert scores lower than 3.5 (AM < 3.5), their coefficient of variation is greater than 0.25 (CV > 0.25). In combination with the index screening criteria determined in this round of questionnaires, the researcher decided to delete the four indexes with lower scores.

Table 7: Statistical parameters and screening results of the Third-level Index (Second round)

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
Formulate the development plan of national fitness work	4.5789	0.5073	0.1108	Keep
Establish a multi-department collaborative work mechanism	4.1579	0.3746	0.0901	Keep
Implement health intervention plan for high-risk population	4.4737	0.5130	0.1147	Keep
Regularly carry out a national fitness assessment	4.0526	0.4047	0.0998	Keep
Annual government investment	3.3158	0.8852	0.2670	Delete
Number of national fitness associations	4.4211	0.5073	0.1147	Keep

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
and individual associations				
Number of spontaneous national fitness organizations	4.3684	0.4956	0.1134	Keep
Activity Planning organization of fitness	3.2632	0.8719	0.2672	Delete
Number of public stadiums	5.0000	0.0000	0.0000	Keep
Number of national fitness centers	4.9474	0.2294	0.0464	Keep
Number of sports parks	4.9474	0.2294	0.0464	Keep
Number of fitness paths	5.0000	0.0000	0.0000	Keep
More than 0.3m2 outdoor sports ground per person	4.5263	0.6118	0.1352	Keep
More than 0.1m2 indoor sports ground per person	4.6842	0.5824	0.1243	Keep
Number of fitness places to be renovated in idle space	4.8947	0.4588	0.0937	Keep
Number of smart stadiums transformed from existing sports venues	4.8947	0.3153	0.0644	Keep
Number of fitness equipment upgrading and transformation	4.4737	0.6967	0.1557	Keep
Number of fitness venues invested by social forces	4.7895	0.5353	0.1118	Keep
Number of professional training venues open to the public	4.4211	0.6925	0.1566	Keep
Number of school stadiums and gymnasiums open to the public	4.7895	0.4189	0.0875	Keep
Number of shared fitness equipment invested in the society	5.0000	0.0000	0.0000	Keep
Hold at least one comprehensive national fitness competition every year	4.7368	0.5620	0.1186	Keep
Hold no less than 3 individual national fitness competitions every year	4.1579	0.6021	0.1448	Keep
Competition reward system	3.0000	0.8165	0.2722	Delete
Carry out traditional sports activities with characteristics	4.9474	0.2294	0.0464	Keep
Carry out high-quality sports projects with city characteristics	4.9474	0.2294	0.0464	Keep
Test at least once a year (national exercise standard)	4.6842	0.5824	0.1243	Keep
The pass rate above 85% of the test	4.6842	0.4776	0.1020	Keep
Number of event safety knowledge education activities	4.2632	0.5620	0.1318	Keep
Number of non-governmental public	4.4737	0.6118	0.1367	Keep

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Index Name	Arithmetic Mean	Standard Deviation	Variability Coefficient	Screening Results
rescue organizations				
Scientific fitness service platform for citizens	4.8421	0.3746	0.0774	Keep
Citizen physical health monitoring service platform	4.3158	0.4776	0.1107	Keep
Management department's national fitness management service platform	4.1053	0.4588	0.1118	Keep
Number of social sports instructors	5.0000	0.0000	0.0000	Keep
Number of fitness volunteer service activities	4.7368	0.4524	0.0955	Keep
Number of national physique monitoring stations	4.7368	0.5620	0.1186	Keep
Number of fitness guidance service institutions	4.4211	0.6070	0.1373	Keep
Carry out the scientific fitness lecture hall	4.1579	0.7647	0.1839	Keep
Carry out sports public welfare training activities	4.3684	0.5973	0.1367	Keep
Carry out a fitness knowledge competition	3.3684	0.8951	0.2657	Delete

Table 8: Consistency Test Statistical of the Third-level Index

Round	$Kendall\text{-}W$ (W)	X^2	P
Second round	0.477	353.315	.000

2.2.4 Consultation results of the second-round questionnaire

After the second round of index screening, the index system was further improved. The coordination coefficient of the second round of indexes reached 0.504, The coordination coefficient of the first-level indexes is 0.846, The coordination coefficient of second-level indexes is 0.570, and The coordination coefficient of the third-level indexes is 0.477, It shows that the consensus of experts is good.

Experts have a high degree of evaluation on the 4 first-level indexes and 14 second-level indexes, which should be retained; Among the 40 three-level indexes, 36 indexes have high expert satisfaction, and experts are 90% satisfied with the three-level indexes. Therefore, 36 three-level indexes with high expert satisfaction will be retained, and 4 indexes with low expert satisfaction will be deleted.

On this basis, the researcher combed the index system for the second time, forming an evaluation index system of 4 first-level indexes, 14 second-level indexes, and 36 third-level indexes (see Table 9).

Table 9: Evaluation index system of Guangdong Provincial Model City for National Fitness (second round)

First-level indexes	Second-level indexes	Third-level indexes
A1 Organization guarantee of national fitness	B1Management mechanism	C1 Formulate the development plan of national fitness work
		C2 Establish a multi-department collaborative work

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
		mechanism
		C3 Implement health intervention plan for high-risk population
		C4 Regularly carry out a national fitness assessment
	B2Organization system	C5 Number of national fitness associations and individual associations
		C6 Number of spontaneous national fitness organizations
A2 Facilities guarantee of national fitness	B3 Basic facilities	C7 Number of public stadiums
		C8 Number of national fitness centers
		C9 Number of sports parks
		C10 Number of fitness paths
	B4 Per capita venue	C11 More than 0.3m2 outdoor sports ground per person
		C12 More than 0.1m2 indoor sports ground per person
	B5Resource development	C13 Number of fitness places to be renovated in idle space
		C14 Number of smart stadiums transformed from existing sports venues
		C15 Number of fitness equipment upgrading and transformation
		C16 Number of fitness venues invested by social forces
	B6 Resource sharing	C17 Number of professional training venues open to the public
		C18 Number of school stadiums and gymnasiums open to the public
		C19 Number of shared fitness equipment invested in the society
A3 Activity guarantee of national fitness	B7 Annual sporting events	C20 Holds at least one comprehensive national fitness competition every year
		C21 Hold no less than 3 individual national fitness competitions every year
	B8 Characteristic projects	C22 Carry out traditional sports activities with characteristics
		C23 Carry out high-quality sports projects with city characteristics
	B9 Standard test	C24 Test at least once a year (national exercise standard)
		C25 Pass rate above 85% of the test
	B10 Event safety	C26 Number of event safety knowledge education activities

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

First-level indexes	Second-level indexes	Third-level indexes
		C27 Number of non-governmental public rescue organizations
A4 Guidance guarantee of national fitness	B11 Digital platform	C28 Scientific fitness service platform for citizens
		C29 Citizen physical health monitoring service platform
		C30 Management department's national fitness management service platform
	B12 Fitness Instructor	C31 Number of social sports instructors
		C32 Number of fitness volunteer service activities
	B13 Service organization	C33 Number of national physique monitoring stations
		C34 Number of fitness guidance service institutions
	B14 Service promotion	C35 Carry out the scientific fitness lecture hall
		C36 Carry out sports' public welfare training activities

3. Feasibility analysis of the evaluation index system

According to the research needs, the researcher used the Focus Group to evaluate the feasibility and applicability of the evaluation index system for the national fitness model cities in Guangdong Province. This study invited 10 senior experts to conduct interviews, mainly from the following three fields: experts in the research and practice field of national fitness model cities, experts in promoting physical health and exercise, and experts in measurement and evaluation.

3.1. Rationality analysis of the index system: The results of the experts' discussion on the rationality of the index system are as follows:

The design of the evaluation index system for Guangdong Province's national fitness model cities is based on theoretical foundations, guiding principles, and other theoretical foundations. It is formulated based on the selection guidelines for national fitness model cities proposed by the General Administration of Sport of the People's Republic of China, and in accordance with the current development status and development goals of Guangdong Province's national fitness, and can more completely and comprehensively cover all aspects of the national fitness work in Guangdong Province's cities.

Taking a comprehensive view of the evaluation index system, experts believe that the index dimensions are reasonable, the index levels are clear, and the relationship between the system, subsystems, and index factors within the system can be clearly indicated. The interrelationships of indexes at all levels affect and restrict each other, forming an organic whole. The selection of indexes at all levels is well represented and can effectively reflect the current evaluation of Guangdong Province as a model city for national fitness.

3.2 Feasibility analysis of the index system: The experts' discussion on the feasibility of the index system is as follows:

Experts believe that the evaluation index system for Guangdong Province's national fitness model cities constructed in this study is based on the current situation and development goals of national fitness development in various cities in Guangdong Province during the "14th Five Year Plan" period. The design of the index system is a dynamic development process, and the connotation reflected by the index system in different periods must be different, and the weight of each index is also different.

Experts believe that the index system and index weights constructed in this study can effectively reflect the current focus and direction of national fitness work in various cities in Guangdong Province, with good feasibility and applicability. In addition, experts believe that individual indexes such as the multi-department collaborative work mechanism and the number of stadiums and gymnasiums invested in and constructed by social forces are difficult to collect data, and it is recommended to further optimize the implementation process based on the actual situation.

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

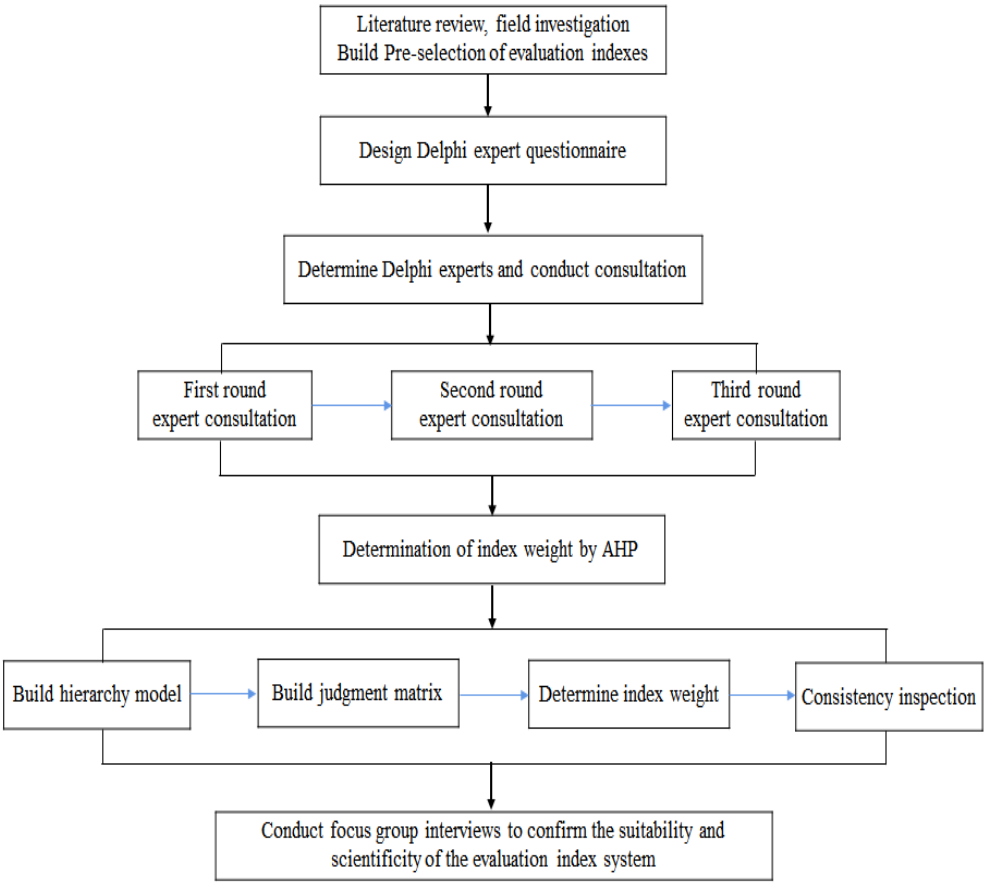

Figure 3: Research technology roadmap

Discussion

SAs the current academic community has not yet conducted research on the evaluation index system of national fitness model cities, researchers will conduct a literature discussion on the index system constructed in this study from the perspective of index construction dimensions.

1. On the Dimension Construction of the Evaluation Index System for National Fitness Model Cities

The evaluation index system for a national fitness model city constructed in this study, including organizational security dimensions, facility security dimensions, activity security dimensions, and service security dimensions, fully reflects the joint action of the government, non-governmental organizations, fitness institutions, and fitness individuals as the main actors in promoting the evaluation system for national fitness model cities.

Yu (2016) believes that there are three main actors in promoting the national fitness program, and the evaluation indexes should start from the roles and tasks undertaken by the government, society, and the market. First, the role of the government should be changed from traditional managers, operators, and then to administrators; The second is the transformation of social roles from passive participants and bearers to active actors; The third is the transformation of the market role, from a supplier of market products to a supplier of public goods.

It can be seen that the results of this study are basically consistent with the research conclusions of Yu (2016).

2. Organization guarantee for national fitness

In terms of organizational security dimensions of national fitness, this study proposes that the government should be the leading factor in achieving organizational security of national fitness through

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

improving management mechanisms and improving organizational systems.

Xiao & Liu (2022) believe that the construction of a higher level public service system for fitness for all should focus on implementing relevant national policies and regulations for fitness for all, be led by the sports administrative department, ensure the effective implementation of laws and regulations for fitness for all, optimize the institutional environment for the development of fitness for all organizations, increase the supply content of public services for fitness for all, and establish a long-term mechanism for evaluating the development of fitness for all.

From this, it can be seen that the content of the second-level indexes and third-level indexes built under the organizational security dimension of national fitness in this study is basically consistent with the research conclusions of Xiao & Liu (2022).

3. On the Guarantee of National Fitness Facilities

In terms of the dimension of national fitness facility security, this study proposes to attach importance to the development of national fitness facilities, resource sharing, and per capita sports and fitness areas based on the existing infrastructure. That is, four three-level indexes, namely, infrastructure, facility development, facility resource sharing, and per capita sports and fitness area, are used to achieve national fitness facility security. Wang & Huang (2015) proposed to make full use of various idle resources and strive to increase public sports facilities. At the same time, it is also necessary to explore diversified supply paths, with government leadership and multiple participation, implement incremental reform, and build and expand public sports facilities. Tang, W.,(2022) proposed that urban community sports facility planning should improve facility quality, optimize facility layout, and improve facility types. It can be seen that the conclusions of this study in the dimension of national fitness facility security are consistent with those of Tang, W.,(2022) and Wang & Huang (2015).

4. Guarantee of national fitness activities

In terms of the security dimension of national fitness activities, this study has constructed four aspects: organizing annual national fitness competitions, creating high-quality projects that conform to Lingnan cultural characteristics and modern city characteristics, testing city residents' physical fitness and reaching the standard, and popularizing safety knowledge and rescue organizations. The conclusion of this study is consistent with the "extensive development of national fitness activities" proposed in the report of the 19th National Congress of the Communist Party of China.

At the same time, Li (2019) believes that national fitness has changed from a relatively single-purpose, widely participated physical fitness exercise to a healthy and civilized lifestyle that benefits all people. It is necessary to widely carry out mass-based sports events and create sports brand activities with local characteristics and wide influence. It can be seen that the conclusions of this study are consistent with those of Li (2019).

5. Service guarantee for national fitness

With the continuous development of big data, the Internet of Things, and artificial intelligence technology, as well as the continuous promotion of the national strategy of national fitness, building a digital platform for national fitness to better serve the public to participate in national fitness and better monitor national physical health has become a necessary means for the scientific development of urban national fitness. In terms of the service guarantee dimension of national fitness: When designing secondary and tertiary indexes under the service guarantee dimension, this study incorporated digital platforms such as physical health management and service institutions such as physical health testing into the evaluation index system. Wang et al. (2008) believe that the fitness evaluation system and health information service platform are important components of the national fitness service system. It can be seen that the conclusions of this study are consistent with those of Wang et al. (2008). At the same time, it also meets the requirements of the policy document "Guidelines for the Construction of National Fitness Information Service Platform (Trial)" issued by the General Administration of Sport of China (2022).

Recommendations

1. Policy recommendations

Based on the above research conclusions, the policy recommendations are proposed for the national fitness management department for reference.

First, it is recommended to do a good job in top-level design. It is recommended that the sports

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

government departments of Guangdong Province take the evaluation of national fitness in various cities in Guangdong Province as the focus of the work of fitness for all in Guangdong Province and cities, and make a good plan for the evaluation of fitness for all in Guangdong Province by referring to the model city evaluation index system and index weights constructed in this study.

Second, it is recommended to strengthen the guarantee mechanism. It is recommended that the sports government departments of Guangdong Province strengthen the organization and management of the nationwide fitness work in Guangdong Province cities, establish corresponding guarantee mechanisms, and provide solid guarantees for the high-quality development of nationwide fitness model cities. In particular, grassroots sports departments need to further strengthen targeted fitness activities and guidance for key groups such as children, adolescents, women, and the elderly, providing guidance from multiple aspects such as organizational management, fitness facilities, fitness activities, and fitness services.

Third, it is recommended to strengthen the organization and implementation. It is recommended to take government departments as the leading force, collaborate with multiple departments, and participate with various social organizations and service institutions to form a joint force. Focusing on ensuring fitness facilities, activities, and services, we should continuously promote the high-quality development of national fitness work, and implement the national fitness policy in detail.

2. Practical recommendations

The construction of the evaluation index system for Guangdong Province's model cities for national fitness is of great significance to the practice of national fitness work in various cities in Guangdong Province. By evaluating the sports governance practices of model cities, we can achieve the goal of promoting construction and governance through evaluation. The following practical suggestions are proposed:

First, adjust and optimize the index system and weight in a timely manner based on actual conditions. Apply the evaluation index system constructed in this study to relevant cities in Guangdong Province, further revise, improve, and optimize the evaluation index system of Guangdong Province's model cities for national fitness based on the actual economic development and national fitness situation of each city in Guangdong Province, and adjust the weight model appropriately.

The second is to promote governance through evaluation and scientifically guide the nationwide fitness work in various cities in Guangdong province. The evaluation index system constructed in this study provides scientific guidance for cities to carry out national fitness work. Each city carries out national fitness work following the evaluation index system of this study, expands and strengthens the level of national fitness in cities, actively constructs a comprehensive work evaluation mechanism in the later stage, ensures the quality of national fitness work in its regions, and injects a unique "city card" into the development of cities.

3. Recommendations for Further Research

In the context of building a higher level of public service system for national fitness, model cities for national fitness have become a powerful measure to promote the scientific layout of the national fitness strategy and overall urban planning. By constructing an evaluation index system for model cities for national fitness in Guangdong Province, the aim is to promote the standardized development of national fitness work in cities in Guangdong Province and give full play to the participation of cities as administrative divisions in China in mass sports. The positive driving role of physical exercise and health promotion.

However, the evaluation index system of a national fitness model city still needs to be continuously optimized in continuous practice. Relevant suggestions are as follows:

First, timely adjustment of indexes and weights: Based on the continuous deepening of the national fitness work in various cities in Guangdong Province and the continuous improvement of the overall level of national fitness in various cities, the evaluation indexes and index weights need to be dynamically adjusted according to the actual situation of the national fitness work;

Second, accelerate the formulation of evaluation standards: based on existing research and based on the economic development level of different cities in Guangdong Province, scientifically analyze and carefully develop practical evaluation standards, accurately evaluate the national fitness work in various cities, accelerate the construction process of national fitness in various cities, and strive to join the ranks of national fitness model cities as soon as possible;

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

The third is to strengthen the promotion and application evaluation index system: The index system constructed in this study is based on the development status of national fitness work in various cities in Guangdong Province during the "14th Five Year Plan" period and is an index system that fits the current development status of Guangdong Province. It has good guiding significance and promotion value for the evaluation work of other provinces and cities and national fitness model cities, or national fitness model provinces and national fitness model counties, further research should attempt to promote practical testing and further development.

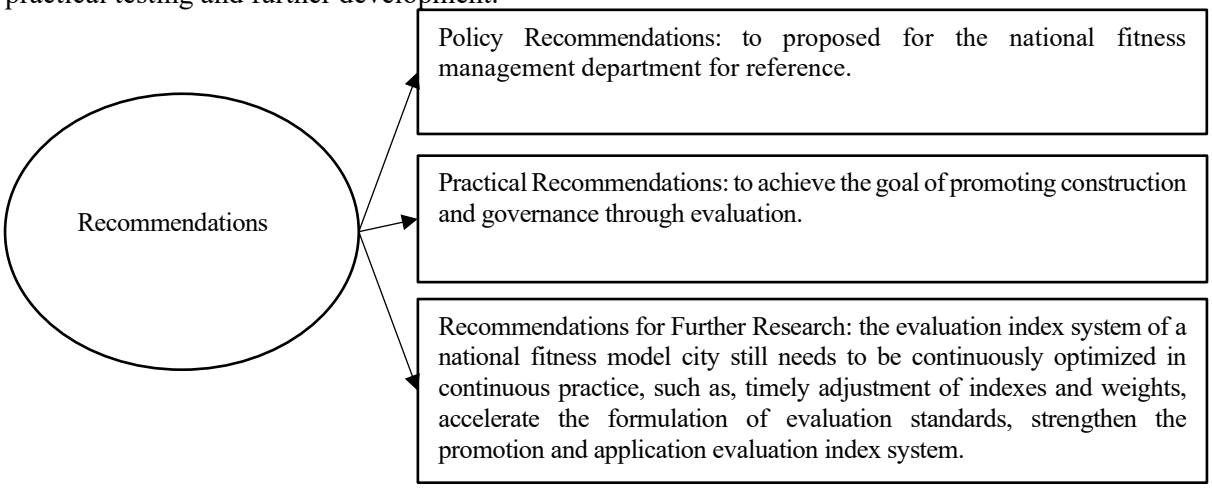

Figure 4: Recommendations of this research

References

Dong, X., (2009). Strategic choices for the development of mass sports in China in the next decade. *Journal of Physical Education*. 16 (6), 1-6.

Evangelista, R., (2015). *Technology, development, and economic crisis: the Schumpeterian legacy. Working Paper.* Birkbeck College, University of London, London, UK. Downloaded from: https://eprints.bbk.ac.uk/id/eprint/18448/

General Administration of Sport of China. (2022). *Sports minister vows to further build on Beijing 2022's legacy.* Retrieved from: https://asianews.network/sports-minister-vows-to-further-build-on-beijing-2022s-legacy/

Hendriks, S. (2014) Food Security in South Africa: Status Quo and Policy Imperatives. *Agrekon*, 53, 1-24. https://doi.org/10.1080/03031853.2014.915468

Li, Long (2019). From "sports" to "activities": a significant change in the concept of national fitness in the new era. *Journal of Beijing Sport University,* 42 (5), 13-21

Matel, Dan Constantin (2016). Madrid-European Capital of Culture and Sports. *Stadia Universitatis Vasilis Golds, Physical Education & Physical Therapy Series*, 5(2), 106-110.

State Sports General Administration, (2021). *Template for the latest Initiative Report on Sports for Development and Peace*. Retrieved from: https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2022/09/China-1-English-2022-SDP-SG-Report.pdf

Tang, W., (2022). *Research on the Planning and Design Strategy of Urban Community Sports Facilities from the Perspective of Healthy China.* Zhangjiakou: Master, Hebei Institute of Architecture and Engineering:

The People's Government of Guangdong Province (2021). *Notice of the People's Government of Guangdong Province on Issuing the Implementation Plan for National Fitness in Guangdong Province (2021-2025*). Retrieved from: http://www.gd.gov.cn/xxts/content/post_3709 711.html

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3): May-June 2023, page 153-172. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.14456/jsasr.2023.43

Wang, Q., & Huang, L., (2015). On the Supply of Public Sports Facilities and Its Guaranty Mechanism. *Journal of Wuhan Institute of Physical Education*. (9), 5-11, 25

Wang, R., Li, W., Jia, S., He, Z., & Liu, X., (2008). Research on Information Service and Health Evaluation System Based on Physical Fitness Survey and Evaluation. *Journal of Beijing Sport University,* 31 (9), 1233-1236

Wang, X., Li, H., & Zhou, J., (2021). The Study on the Evaluation System of the Implementation of the National Fitness Policy under the Health China Strategy. *International Journal of Frontiers in Sociology,* 2021, 3(8); doi: 10.25236/IJFS.2021.030815.

Wang, Y., & Tang, Y., (2020). Evaluation and recognition and urban governance - empirical evidence from the establishment of national environmental protection model cities. *Governance Research.* (5), 38-49

Xiao, K., & Liu, C., (2022). Constructing a higher level public service system for national fitness: connotation, foundation, and path. *Sports Culture Guide*. (12), 59-65

Xiao, M., & Zhang, B., (2017). Analysis and comparison of the governance evaluation index system in China and the West. *Administrative Forum,* 24 (01), 19-24

Yu, F., (2016). *Research on Policy Tools for Yiyang City to Create a Model City of Traffic Management*. Beijing: Master, Hunan University.

Yu, S.,(2019). From Advocacy to Guarantee to Strategy: The Legal Promotion and Enhancement of the National Fitness Cause in the 70 Years of New China. *Journal of Physical Education*, 26 (5), 1-8

Yu, Y.,(2016). Healthy China: Study on the Evaluation Index System of National Fitness Work. *Sports and Science,* 37 (04), 71-76.

Zhang, Y., & Wang, M., (2022). The Construction and Empirical Research of the Evaluation Index System of Chengdu as a World Famous City for Sports Competitions. *Journal of Chengdu Sport University/Chengdu Tiyu Xueyuan Xuebao*, 48 (3), 77-79.

Zhao, Y., & Chung, P., (2016). Differences in Functional Fitness Among Older Adults With and Without Risk of Falling. *Asian Nursing Research*. 10 (1), 51-55, https://doi.org/10.1016/j.anr.2015.10.007

Zhu, H., Allman, B.E., & Koelle, K., (2021). Fitness Estimation for Viral Variants in the Context of Cellular Coinfection. *Viruses. 13*(7), 1216; https://doi.org/10.3390/v13071216

Citation: Cui, X., & Hongsaenyatham, P., (2023). Developing Evaluation Index System of Fitness Model City for Guangdong Province under the National Fitness Plan. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (3), 153-172; DOI: https://doi.org/10.14456/jsasr.2023.43