

SUPPLY-SIDE REFORM MEASURES OF PUBLIC SPORTS SERVICE FROM THE PERSPECTIVE OF PUBLIC HEALTH PROMOTION



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REFORMA DA OFERTA DE SERVIÇOS ESPORTIVOS PÚBLICOS DO PONTO DE VISTA DA PROMOÇÃO DA SAÚDE PÚBLICA

REFORMA DE LA OFERTA DE SERVICIOS DEPORTIVOS PÚBLICOS DESDE LA PERSPECTIVA DE LA PROMOCIÓN DE LA SALUD PÚBLICA

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ABSTRACT

With the rapid development of public health construction, the supply of public sports services and the demand of residents at this stage are gradually divergent. In order to solve the contradiction between the supply and demand of public sports services, this study, from the perspective of public health, combined with the current situation of demand for public sports services, used the fuzzy analytic hierarchy process to build the supply-side optimization model of public sports services, and to verify it. The results show that the weight of the model optimization index from high to low is service level > resource conditions > public degree > service content > location and type of facilities; the fuzzy comprehensive evaluation result of the model is 85 points, which shows that the index of the optimization model has good applicability. The supply-side optimization model constructed in this study is evaluated by community residents and experts in related fields, so the evaluation results are closer to the residents' demand and have high practical value. The results of this study have reference significance for the supply-side reform of public sports services, and fundamentally ensure the close relationship between the supply-side reform measures and the actual demand of residents.

Keywords: Public health; sports service; supply side; reform measures.

RESUMO

Com o rápido desenvolvimento da construção da saúde pública, a oferta de serviços desportivos públicos e a procura por parte da população, nesta fase, são gradualmente divergentes. A fim de resolver a contradição entre a oferta e a demanda por serviços esportivos públicos, este estudo, sob a perspectiva da saúde pública, combinado com a atual situação da demanda por serviços esportivos públicos por parte da população, utilizou o processo hierárquico analítico difuso para construir o modelo de otimização da oferta de serviços esportivos públicos, e para verificar esse modelo. Os resultados mostram que o peso do índice de otimização do modelo de alto a baixo é o nível de serviço > condições de recursos > Grau público > conteúdo de serviço > localização e tipo de instalações. O resultado de avaliação abrangente difusa do modelo é 85 pontos, o que mostra que o índice do modelo de otimização tem boa aplicabilidade. O modelo de otimização da oferta construído neste estudo é avaliado por residentes da comunidade e especialistas em campos relacionados, de modo que os resultados da avaliação estão mais perto da demanda da população e têm alto valor prático. Os resultados deste estudo têm um significado de referência para a reforma da oferta dos serviços desportivos públicos e garantem fundamentalmente a estreita relação entre as medidas de reforma da oferta e a procura real por parte da população.

Descritores: Saúde pública, serviço desportivo, oferta; medidas de reforma.

RESUMEN

Con el rápido desarrollo de la implementación de la salud pública, la oferta de servicios deportivos públicos y la demanda de la población en esta etapa son gradualmente divergentes. Para resolver la contradicción entre la oferta y la demanda de servicios deportivos públicos, se realizó este estudio, desde la perspectiva de la salud pública, combinado con la situación actual de la demanda de servicios deportivos públicos. Para el mismo, se utilizó el proceso de jerarquía analítica difusa para construir el modelo de optimización de la oferta de los servicios deportivos públicos y verificarlo. Los resultados muestran que el peso del índice de optimización del modelo de mayor a menor es el nivel de servicio > las condiciones de los recursos > el grado público > el contenido del servicio > la ubicación y el tipo de instalaciones. El resultado de la evaluación integral difusa del modelo es de 85 puntos, lo que muestra que el índice del modelo de optimización tiene una buena aplicabilidad. El modelo de optimización del lado de la oferta construido en este estudio fue evaluado por habitantes de la comunidad y expertos en campos relacionados, por lo que los resultados de



la evaluación están más cerca de la demanda de los residentes y tienen un alto valor práctico. Los resultados de este estudio tienen un significado de referencia para la reforma de la oferta de los servicios deportivos públicos y garantizan fundamentalmente la estrecha relación entre las medidas de reforma de la oferta y la demanda real de los habitantes.

Descriptores: Salud pública; servicios deportivos; lado de la oferta; medidas de reforma.

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INTRODUCTION

For a long time, sports and education, science and technology, culture and health are the five major public service undertakings in China. With the increase of public health concern, improving the quality of public sports service has become the focus of the construction of grass-roots public sports service. Using descriptive qualitative and phenomenological methods, Sutanto and his team explored the impact of public sports, leisure places and facilities construction on healthy environment, and found that the existence of sports and leisure places can effectively reduce the crime rate and create a positive community environment.¹ Tsuji et al. studied the relationship between community level sports participation and elderly depression through two-level multi-level Poisson regression analysis. The results showed that there was a certain situational prevention relationship between community sports group participation and elderly depression symptoms.² Wang et al. analyzed the current situation of sports consumption demand of consumers³ to solve the sports consumption demand of consumers. From these studies, we can see that strengthening the construction of public sports service is not only to improve the overall level of public service, but also has important significance for improving the quality of social environment.

Cockcroft e proposed to involve the public and patients in the research of sports medicine, and discussed the positive role of PPI in sports medicine and health services. It was found that PPI helps to ensure the relevance and appropriateness of the research and improve the recruitment and retention of participants.⁴ Janet m et al. used the linear mixed model to repeatedly measure and cluster children's participation in sports activities and mental health, aiming to explore the longitudinal relationship between some characteristics of Dutch children's participation in sports activities and mental health. The results showed that children who actively participated in sports had less internalization problems and better prosocial behavior.⁵ Through randomized grouping experiment and multiple linear regression model, Clinton Mcharg et al. Tested the effectiveness and acceptability of health intervention measures of youth sports clubs, and found that support strategies need to be developed to avoid obstacles to health interventions.⁶ Dodds et al. conducted a physical exercise support activity experiment on children with medical complexity, and explored the relationship between support duration and children's healthy life quality. The results showed that supportive physical exercise enhanced the medical complexity of parents' HRQL report.⁷ Iversen et al. conducted a qualitative exploratory case study on the public management of private non-profit sports facilities, and analyzed the consequences of implementing PM in private non-profit sports facilities based on the new public governance (NPG). The results showed that it was difficult to improve the level of cooperation among local actors by tightening measures⁸ using the method of sequential regression analysis, Deelen et al. Investigated the influence of sports environment, self-determination motivation and goal level, and the interaction between motivation and goal in different sports environments on exercise frequency, and proposed that professionals in sports and health fields should consider the motivations, goals and needs of different target groups.

To sum up, a large number of studies at home and abroad show that strengthening the construction of public sports and related activities is conducive to improving the health level of social environment and the mental health of residents. Therefore, this study will analyze the contradiction between supply and demand of public sports construction from the perspective of public health promotion, so as to study the supply side reform measures.

Validation of the optimization model of sports service supply side from the perspective of public health promotion

From the perspective of public health promotion, this study constructs the optimization model of sports service supply side. This model is to optimize the supply side of sports services from the analysis of residents' satisfaction with the demand of public sports services, so as to achieve targeted and effective supply. When evaluating the indicators of the optimization model, the expert opinions of Delphi evaluation are shown in Figure 1, including 210 community residents, accounting for 84%; 20 grass-roots staff, accounting for 8%; 10 researchers of public sports, accounting for 4%; 5 government personnel and 5 responsible persons of cooperative enterprises, accounting for 2%. Since the survey of community residents is conducted by means of questionnaire survey, a total of 210 questionnaires were distributed, 203 questionnaires were returned, 197 valid questionnaires, and the effective rate of the questionnaire was 94%.

Table 1 shows the results of weight distribution of public sports service supply side optimization model. According to the statistical results in Table 1, it can be found that in the five supply side optimization measures, the weight distribution from high to low is service level > resource conditions > public degree > service content > site and facility type. Specifically, the weights of the first four items are between 0.200 and 0.250, which indicates that the residents have greater demand for these four items, and it is more conducive to achieve effective supply by tilting the supply of public sports services in these four aspects. Experts believe that the weight distribution of places and facilities only accounts for 0.090, and the weight of sports fitness square is 0.530, which is because the sports fitness square is more comprehensive and has higher practical value.²

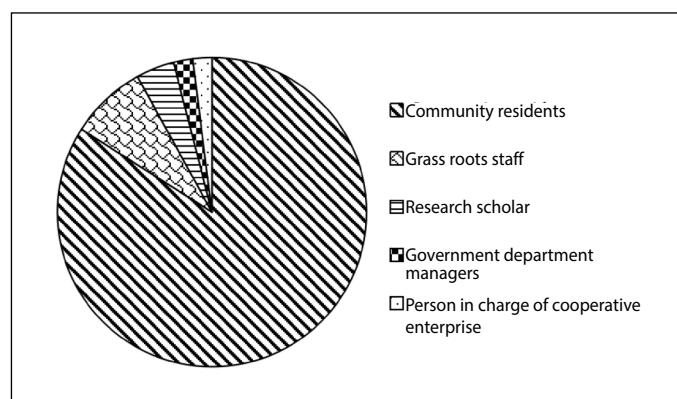


Figure 1. Data structure of M University questionnaire survey.

According to the statistical results of weight distribution in Table 1, the optimization model was scored. 10 grassroots staff and 10 researchers of public sports service participated in the score. Table 2 shows the calculation results of fuzzy judgment matrix of public sports service supply side optimization model. As shown in formula (5), taking the results in Table 2 as the membership matrix of the model index, combined with the weight vector in Table 1, the final fuzzy evaluation score of the model is 85 points. Therefore, the supply side optimization model constructed in this study has good effect and practical significance.

Table 1. Results of weight distribution of sports service supply side optimization model.

Primary indicators	Weight of primary index	Secondary indicators	Secondary index weight
A	0.245	A1	0.760
		A2	0.240
B	0.215	B1	0.245
		B2	0.230
		B3	0.170
		B4	0.355
C	0.090	C1	0.530
		C2	0.110
		C3	0.360
D	0.200	D1	0.321
		D2	0.253
		D3	0.426
E	0.250	E1	0.236
		E2	0.389
		E3	0.375

Table 2. Calculation results of fuzzy judgment matrix of supply side optimization model.

Index	Results of fuzzy comprehensive evaluation
A	[0.075 0.475 0.275 0.125 0.050]
B	[0.200 0.450 0.200 0.150 0]
C	[0.175 0.400 0.250 0.150 0.025]
D	[0.325 0.350 0.250 0.075 0]
E	[0.125 0.500 0.225 0.125 0.025]

According to the weight results of the model, in the current public sports service construction, not only to improve the quality level of venues and facilities construction, but also to improve the degree of specialization of staff. Public sports service should improve the degree of specialization from two aspects, namely, the degree of sports specialization and the degree of service specialization. In addition, in the information age, the public stadium needs to keep pace with the times to ensure the WiFi resource allocation in the venue. On the other hand, one of the contradictions between supply and demand of public sports services is equalization, and experts' opinions pay more attention to the

distance between public sports services and their residences. Therefore, it is necessary to take the community as the unit to allocate sports service resources, so as to ensure the balance of resource allocation between urban center and suburb as much as possible, and to ensure the equalization of resource distribution between urban and rural areas. The public degree of public sports service reflects the profit space of the service. The result of weight distribution reflects that the current society has a higher acceptance of government operation services, and the requirements for the quality of public welfare services are also rising. In addition, experts also pay attention to the type and quality of service content. The weight of sports event type is 0.426, and the weight of site partition layout is 0.321. Therefore, in the supply side reform of public sports services; we can carry out multi-dimensional and multi-dimensional supply mode development, optimize the supply level and supply structure.⁷

CONCLUSIONS

At present, the topic of public health has already set off a nationwide upsurge. The construction of public sports venues and facilities is enough to meet the needs of the masses in a short period of time. In order to ensure the balanced development of public sports service construction, we need to consider the needs of residents in an all-round way. This study uses the fuzzy analytic hierarchy process to construct the supply side optimization model of public sports services, and verifies the validity and applicability of the model. The results show that the weight distribution of the model indicators from high to low is service level > resource conditions > degree of publicity > service content > type of facilities, and the proportion of the first four items is between 0.200 and 0.250. Specifically, "building community sports service unit", "adjusting the government enterprise operation ratio of public sports service", "planning community public fitness square", "increasing the supply type of daily exercise items" and "conducting regular service demand survey and summary" are the key to improve the satisfaction of residents' demand and the focus of supply side reform. In addition, the fuzzy score of the optimization model of public sports service supply side is 85, which shows that the model constructed in this study has good applicability. The supply side optimization model constructed in this study provides ideas for the multi-dimensional and diversified supply of public sports services, and also provides a reference for the supply side reform at the grass-roots level.

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