Research on Sports Public Service Mode in Resource-sharing Community in the Era of Internet

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Abstract

The advent of the era of Internet promotes China’s urbanization process and the development of market economy and under the call of the national fitness, the community sports has gradually become the focus of the development and construction of sports in China. Community sports public facilities are the basic guarantee for the continuous development of sports undertakings and also of vital importance to the construction of the harmonious society. However, with the rapid development of network information technology, new requirements have been put forward for community sports resources. The current construction of community sports public facilities is backward, so it is difficult to meet the requirements of the era of Internet. It’s urgent of sports department in China to realize resource sharing and promote the development of community sports public services. In this paper, the community sports of resource-sharing in the era of Internet is deeply analyzed, and effective sports resources in schools are integrated with community sports to enrich the community sports resources. Public service model of the community sports of sports resource-sharing is built, organizational structure of the service system is detailed and the work functions of various organizations are defined. Based on these, the comprehensive evaluation model of the public service pattern of new community sports is built to further improve the public service level of community sports and promote its sustainable development.

Keywords: Resource-sharing, Community sports, Public service, Evaluation.

1. RESEARCH BACKGROUND

1.1 Literature review

In the process of development and construction of community sports in China, sports facilities are the material platform for people to participate in physical exercises, as well as the important factors to promote the sustainable development of community sports in china. For a long time, since the community construction in China seriously lags behind and the construction of community sports facilities is backward, which seriously hinder the development of the overall community sports, the communities cannot provide more perfect public services to the public. The results of the market research conducted by the General Administration of Sport of China in 2015 show that the lack of facilities in the sports venues is one of the main factors that affect the active participation of our social masses in sports (Xie, 2013). Thus, it’s significant to solve the scarcity of community sports facilities in China for the development of urban communities and community sports and the construction of harmonious communities and society. In addition, as of October 27, 2016, there were 1,500,732 sports venues of various types and sizes, which include 780,533 sports venues in the field of education, accounting for 73% of national sports venues in total. According to educational system in China, all schools and universities carry out the two-day off-school teaching system every week, and plus summer and winter holidays, the average off-school days reach about a hundred days, which makes the utilization of the sports facilities in schools and universities lower. But during the on-school days, the sports facilities in schools are not enough (Zou, 2014). What’s worse, sports facilities and venues in many schools are old and outdated with limited varieties and small size, which cannot meet the requirements for the development of sports in schools in the new period. It’s critical to solve the scarcity of sports facilities in schools for the development of sports in schools. So it’s necessary to integrate the existing sports facilities and realize the sharing of sports facilities in schools with communities, which are effective ways to solve the scarcity of sports facilities in communities and improve the utilization of sports facilities in schools.
1.2 Research purpose

The scarcity of sports resources is one of main reasons that affect the sports development of communities and related schools in China. The successful experience of international developed countries shows that sports facilities sharing between communities and schools is an effective way to solve the scarcity of sports facilities in communities and schools and promote the mutual development of both sides, with the scientifically reasonable planning of structure and variety of sports resources in communities (Chen, 2014). Therefore, the study focuses on the resources-sharing of schools with communities and explore the effective model of sports resources-sharing community public services in the era of Internet to further promote the development of public sports in all aspects in China and improve all improper details. It’s necessary to allocate sports resources, promote reasonable flow of sports resources and thus lay a solid foundation for the building of a harmonious society.

2. SHARING STATUS QUO OF SPORTS RESOURCES OF COMMUNITIES WITH SCHOOLS

The paper focuses on the specific model of community public services based on the sports resources sharing between schools and communities. Therefore, the situation of schools with or without sports facilities is surveyed, together with some far-sighted investigation carried out for the research on the sports facilities of schools used for communities. At present, 21% schools used community sports facilities and 79% schools didn’t (See Table 1). In terms of relieving the scarcity of sports venues in schools, 20.7% schools replied that they used community sports facilities under the advocacy of the government, 19.6% schools replied they didn’t implement the advocacy of the government for using community sports facilities; and 59.6% schools replied that the government didn’t advocate (Li, 2012). It’s clear that the propaganda of the government is indispensable for the sharing of sports facilities in the future.

Table 1 Use of Community Sports Resources By Schools

<table>
<thead>
<tr>
<th>Community type</th>
<th>Whether to use</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct community people</td>
<td></td>
<td>35</td>
<td>205</td>
<td>240</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td></td>
<td>6.2%</td>
<td>31%</td>
<td>37.2%</td>
</tr>
<tr>
<td>Provincial capital community people</td>
<td></td>
<td>51</td>
<td>133</td>
<td>174</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td></td>
<td>7.2%</td>
<td>19%</td>
<td>26.2%</td>
</tr>
<tr>
<td>General community people</td>
<td></td>
<td>45</td>
<td>192</td>
<td>237</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td></td>
<td>7.6%</td>
<td>29%</td>
<td>36.6%</td>
</tr>
<tr>
<td>Total people</td>
<td></td>
<td>131</td>
<td>530</td>
<td>661</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td></td>
<td>21%</td>
<td>79%</td>
<td>100%</td>
</tr>
</tbody>
</table>

In terms of survey on the availability of community sports resources to schools, 11.2% communities made sports facilities available to schools, 26.2% communities once opened their sports facilities to schools but later closed, and 62.6% communities never opened their sports resources to schools (Wang L, 2012). In terms of factors restraining the communities from opening their sports resources to schools, the security is 25.6%, resources issue is 22.1% and policies and law is 19.3%. In terms of micro affecting factors, no opening order from the superior department is 31.5%, the belongings of the sports venues is 29.6% and old and outdated sports facilities is 18.3%, which indicate that the opening of community sports resources to schools belong to the behaviors between organizations (Wu, 2013) as shown in Table 2.
Table 2: Main Factors Affecting Community Opening To Schools

<table>
<thead>
<tr>
<th>Influence Factor</th>
<th>Community</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety factor</td>
<td>328</td>
<td>36.7%</td>
</tr>
<tr>
<td>Resource factor</td>
<td>274</td>
<td>23.4%</td>
</tr>
<tr>
<td>Government policy factors</td>
<td>163</td>
<td>18.5%</td>
</tr>
<tr>
<td>Government management factors</td>
<td>292</td>
<td>21.4%</td>
</tr>
<tr>
<td>Total</td>
<td>1057</td>
<td>100%</td>
</tr>
</tbody>
</table>

3. BUILDING OF PUBLIC SERVICE MODE OF COMMUNITY SPORTS RESOURCES SHARING IN THE ERA OF INTERNET

3.1 Theoretical basis

The paper introduces institutional move theory, public product theory, trading cost theory and property right theory as the bases of arguments, and based on these theories, a theoretical system of sports public service is built to solve the problems in sharing of sports facilities between urban communities and schools (Wang, 2015). The reasons for selecting institutional move theory, public product theory and trading cost theory as theoretical basis of sports resources sharing mainly lie in the following aspects:

(1) Chinese economic system reform has been constantly deepened since the reform and opening up and basically influences the allocating mode of social resources, therefore, it’s necessary to consider the influence of system factor in studying the sports facilities sharing between communities and schools; (2) The nature of sports facilities in schools and urban communities decides who would allocate them, which decides the subject of sports facilities sharing service while public product theory provides the paths and necessary skills of analyzing the nature of sports facilities; (3) Who would provide sports facilities sharing service mainly depends on the size of “trading cost” (Liu, 2016). If the trading cost of services provided in the organization is too higher, the services shall be provided by external organizations and the trading cost theory is introduced for analyzing the internal and external efficiency of providing services; (4) For a long time, the property rights of sports facilities in schools and communities isn’t clear, which results in the co-existence of abundant and poor sports facilities and thus the property right theory provides a path of analyzing the property nature of sports facilities in schools and urban communities as well as a theoretical basis for sports facilities sharing between communities and schools. The main theoretical framework is shown in figure 1.

![Figure 1. Theoretical framework of sports resource sharing](image-url)

3.2 Principle of sports resources sharing mode between communities and schools

The model of community sports resources sharing should conform to the following construction principle: breaking up the section separation of government management system, maximize the optimization and sharing of sports facilities in communities and schools and build multi-department cooperative and coordinative management pattern with communities as the centers (Zhao and Sun, 2012). The pattern is aimed at the micro
level, but needs the system innovation to solve some policy vacancies in organizational building, for instance, building a brand-new organizational framework to implement the sharing. Many regional governments in China pay much more attention to the economic construction but seriously ignore the sports rights and interests of the social masses, which would finally lead to the loss of management responsibility of governments for the community sports. According to management model of Lincoln Park, USA and its urban leisure committee, as well as open management model carried out in sports venues of Japanese related schools and universities, and in effective combination with the current situation of China, we conclude that we should fully strengthen the management and intervention of government organizations and formulate the sharing model for sports management organizations that is suitable for Chinese situation (Luo and Liu, 2016). Sharing management committees shall be organized under the leadership of municipal governments to manage and coordinate sports activities in communities. Such departments as police offices, health bureaus, educational bureaus, price bureaus and urban management departments should be included into the structure of the organization for building sharing model.

3.3 Framework for sharing service mode of sports resources in communities and schools

The management system of the organization should be implemented under the active guidance and leadership of government, and the primary task of sharing model management structure should take the government as the main subjects to build the overall model in detail while the organization should be the sports executor of government bodies in grass-root communities (Wang, 2008). Therefore, the main departments for building the sharing resources service management model should include such core systems as bureau of education--community educational administration department, sports bureau--- sports administration department, street management of the community, civil affairs bureau--- community government management organization and bureau of finance; such functional systems as police office, health bureau, industry and commerce bureau, price bureau, tax bureau and bureau of culture, all of which are the professional departments to realize sharing with their respective professionalism. The specific operating system (executing level) consists of street management, school, and sports bureau, which form the sharing administration committee with local government leaders as directors to directly take charge of daily sharing affairs of the sharing administration committee and leaders of schools and other departments as deputy directors (Zhu, 2010). The whole sharing administration committee won’t take charge of paying salaries, which shall be assumed by the original units, with the specific work contents written in the annual examination for the review of the superior departments. The sharing administration committee is provided with business committee, which is the business department of the sharing administration committee, guides the resources sharing of the community and consists of sports teachers of schools and community sports instructors. So, sports teachers of schools may solve the scarcity of community sports instructors, and serve as one of community members. Their working nature and characteristics decide that they not only accumulate rich sports theories and practical experience but also develop abundant experience and abilities to carry out sports competitions and organize sports events. Thus, it’s necessary to give full play to sports teachers in schools for exerting their guidance and management skills. Any sound organization must have oversight committee, which is made up of community residents, who may evaluate according to sharing services, and is only responsible for the superior management organization of the management committee, that’s, local government, and head of the oversight committee should be selected by local community residents and school staff. The details are shown in Figure 2.
4. COMPREHENSIVE EVALUATION MODEL OF COMMUNITY SPORTS PUBLIC SERVICES OF SPORTS RESOURCE SHARING IN THE ERA OF INTERNET

4.1 Significance of evaluating comprehensive model framework

In recent years, the mass sports in China sees a good prospect and forms the corresponding silica gel model, which effectively promotes the development and improvement of community sports in China as a whole and lays a solid foundation for the development of communities with Chinese characteristics and national fitness (Wang, 2017). Community sports is developed mainly for improving the physical quality of masses, who should be the main subjects of orderly participating the related sports activities after systematic organization and thus realize the basic targets of realizing fitness. Therefore, the comprehensive evaluation model of community sports public services of sports resource sharing in the era of Internet may be built to get a thorough understanding of problems in current community sports service system, find out the causes for the weak links, and further helpful references for the adjustment and innovation of service system to promote the development of community sports, raise public service level and create harmonious, civilized and friendly community atmosphere and environment.

5. INTEGRATED MODEL OF FUZZY EVALUATION

Complex events usually involve more factors, which have different levels and different degrees of ambiguity. But from an overall point of view, the structure of events often manifests itself in more hierarchical characteristics. Therefore, the factors should be evaluated one by one at different levels (Tian, 2017). Fuzzy evaluation method may have a comprehensive evaluation of events which are affected by many different factors, and it is a commonly used effective evaluation method. In this paper, community sports public services are evaluated with factors or indicators in different aspects. So, it’s necessary to evaluate the subjects according to different factors instead of analyzing one factor alone. According to a plenty of literature review and references, an integrated model of fuzzy evaluation for community sports public services is established in combination with the actual situation studied in the paper.

Set R=(r₁,r₂,r₃,...,rₙ) as the indicator subset
Set W=(w₁,w₂,w₃,...,wₘ) as the evaluation subset

The importance of each indicator is not the same, so is its impact (Bian, 2016). Therefore, the evaluation results will be different. All kinds of evaluation cannot be fully affirmed or negated, and the comprehensive evaluation should be a relatively vague subset: Q = (q₁, q₂, q₃, ..., qₘ) ⊂ θ(W)

Where, {qₖ(k=1,2,...,m)} stands for the membership of K evaluation. The results of the comprehensive evaluation are inextricably linked with the weights of the individual indicators. The different weights are the fuzzy subset D in each subset of the indicator.

In accordance with the actual situation, we should first establish a fuzzy transition from R to D, and if each indicator is evaluated separately e(r₁), then it can be regarded as a fuzzy expression of B to D:

\[ e: R \rightarrow \theta(W) \]

\[ r₁ \rightarrow e(r₁) \subseteq \theta(R) \]

Therefore, we may deduce a fuzzy transition limit from R to D, which may be regarded as a mathematical model of the comprehensive evaluation of Q obtained by weight D.

So the above analysis makes it clear that the construction of the comprehensive mathematical model of fuzzy evaluation can be evaluated according to the following four steps:

(1) Building indicator set: R=(r₁,r₂,r₃,...,rₙ)
(2) Getting evaluation set: W=(w₁,w₂,w₃,...,wₘ)
(3) Individual factor evaluation: e: R → \theta(W)r₁ → e(r₁) ⊆ \theta(R)
The rapid development of network technology promotes the progress of all social industries and in the era of the Internet, the community sports public service model has also changed greatly, which mainly results from the timely sharing of resources. The paper analyzes the development pattern of combining community sports resources and community sports undertakings based on the resources sharing, discusses the brand sports service mode, specifies the work functions of all departments of community sports undertakings and describes the impact produced by the rapid development of network technology.

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Thus, the obtained results are the evaluation results of community sports public services as a whole and finally based on the principle of maximum membership, the rank that corresponds with largest value is the comprehensive evaluation results as well as the rank of community sports public services.

6. CONCLUSIONS

Fuzzy comprehensive evaluation. According to the mathematical model of fuzzy comprehensive evaluation, the evaluation results of the indicators can be obtained with the vector D. Among different evaluation indicators multiplication, evaluation matrix C, which effectively combines the impact produced by all the factors while retaining all the important information that separate factors evaluate.
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