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Barriers and Facilitators of Physical Activity Participation for Health Promotion in Underserved Communities

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Abstract: ***Currently, China is promoting the equalization of public fitness services, requiring all institutions to build a higher-level and safer public fitness service system to ensure that all residents can equally enjoy the benefits of physical health. However, during the promotion process of public fitness, many obstacles have been encountered. For example, in underdeveloped areas, communities, old residential areas, and rural communities, there are generally problems of low participation rate of residents in physical activities and large differences in health levels. This has become a prominent shortcoming in the construction of Healthy China. This paper explores the obstacles to physical activity participation of residents in underdeveloped community areas, discusses different problems on the supply side and the demand side, builds an optimized service system, forms an effective guarantee mechanism, and combines practical cases from multiple regions across the country. It systematically analyzes the specific factors of current obstacles to physical activity participation in community areas, forms targeted optimization paths. The research suggests that the obstacles to physical activity participation in underdeveloped communities stem from dual restrictions on both the supply and demand sides. The supply side has structural problems such as resource allocation gaps, insufficient project adaptability, and low accessibility; the demand side has internal constraints such as weak health cognition, insufficient participation motivation, and low health literacy. Building an optimized public health and health guarantee system requires adhering to supply-side reform and demand-side empowerment, promoting the collaboration of multiple entities, constructing a precise and adaptable service structure, and improving the level of residents' physical activity participation. The research results can help improve the public fitness service system in underdeveloped community areas, narrow the health gap between different groups, and continuously promote the construction of Healthy China, providing certain references and inspirations for different types of regions.***

Keywords: Underdeveloped community; Resident participation; Physical activity; Participation obstacles.

1. INTRODUCTION

As China's social and economic development enters a new stage, the demand of the people for a healthy lifestyle is continuously increasing. Sports health has become an important part of the public health system construction. More than 200 community sports health centers have been established as pilot projects across the country, and a multi-party participation intervention model has been explored, which also provides important support for improving residents' health levels [1]. However, in underdeveloped communities, the problem of insufficient physical activity participation among residents is still relatively prominent. Most residents do not reach the healthy standard of 150 minutes of moderate-intensity exercise per week, and insufficient physical activity participation has become an important risk factor affecting residents' health [2]. This study conducts a systematic analysis from both supply and demand sides to explore the constraints on community residents' participation in physical health activities, making up for the lack of attention to underdeveloped regions in existing research, and enriching the research perspective on the equalization of public fitness services. The research results can also provide certain references for relevant departments to optimize resource allocation and design targeted participation projects, thereby breaking the dilemma of insufficient community sports participation and promoting the equalization of public fitness services.

2. SUPPLY-SIDE OBSTACLES TO COMMUNITY PHYSICAL ACTIVITY PARTICIPATION

The "Opinions on Building a Higher-Level Public Fitness Service System" clearly states that "resources should be allocated in a coordinated manner based on population factors, and more support should be given to underdeveloped regions and weak links." However, currently, there is a lack of adequate services in China, and

there are structural gaps in the allocation of public health resources in communities. There is still a significant gap from the standards required by the policy [3]. For example, there is a relatively typical problem of uneven resource distribution between urban and rural areas, insufficient coverage of facilities in old residential areas, and the lack of effective maintenance and renewal of some facilities. This configuration gap is specifically manifested in four aspects:

First, there is a mismatch between the supply and demand for venue and facility maintenance. Embedded sports spaces are generally lacking, and old residential areas face a severe supply gap. Most old communities can only set up some fitness equipment on the unused corners of roads in a scattered manner, and the traditional fitness equipment is more, while there is insufficient coverage of ball courts and multi-functional sports spaces, and the proportion of age-friendly facilities is insufficient. It cannot meet the exercise needs of special groups such as the elderly and the disabled, and due to the limitation of the area of the venue, the fitness equipment in many old residential areas is relatively basic, and the diversified exercise needs of the public cannot be met. The accessibility of most spaces is insufficient, and the service radius of sports facilities is inadequate [4]. Some old residential areas lack inter-community lighting facilities, making it impossible for office workers and students to use them.

Second, there are significant regional differences in funding investment. Most underdeveloped regions have insufficient funds for fitness equipment each year, and the budget for public sports finance in some counties is insufficient. The lack of funds leads to a lack of dedicated personnel for maintenance of many venues, short project operation cycles, lack of support from specialized talents, and the main source of funds is the single supply by the government. The participation of social capital is insufficient, the incentive mechanism for community participation is missing, which affects the participation rate of residents in fitness and sports activities. Most communities only use methods such as posting notices on bulletin boards and pushing messages through WeChat groups to promote exercise service information. Elderly people and some people with inconvenient access to information cannot learn about professional services, affecting the coverage of health services [5].

Third, there is a lack of a structured talent team. Most communities lack dedicated sports instructors. The professional capabilities of existing community sports staff are also insufficient. Some staff do not have qualifications in sports-related fields, the salary and benefits of community sports professionals are low, the career development path is not smooth, and the staff turnover rate is high. They cannot provide stable, continuous, and scientific exercise guidance for residents.

Fourth, the existing sports guidance content is highly homogeneous. Most sports guidance only provides services such as square dancing and fitness exercises for healthy people, lacking professional exercise prescriptions, rehabilitation guidance for chronic diseases, and exercise ability assessment. Moreover, the existing guidance does not adapt to the needs of different regions and has insufficient sustainability of the operation model. The supply of projects is mainly in the form of short-term purchase by the government, lacking long-term social participation, ultimately leading to the failure of the project and waste of initial resources. [6]

3. DEMAND-SIDE OBSTACLES TO COMMUNITY PHYSICAL ACTIVITY PARTICIPATION DUE TO INSUFFICIENT SERVICES

Many community residents have a relatively low level of awareness of physical health. Constrained by traditional concepts, many residents believe that being healthy means having no illness, and lack the awareness of using physical activities to prevent chronic diseases. Some residents state that they are in good health and have already been very tired from work, and do not need additional physical activities. This concept suppresses the intrinsic motivation of residents to actively participate in physical activities [7]. Especially in some underdeveloped rural areas, residents generally equate physical activities with manual labor and lack the concept of scientific exercise, which exacerbates their incorrect health habits and affects their willingness to participate in physical activities. Students and employed individuals, due to lack of time for exercise, often have their own exercise activities squeezed out. The middle-aged and young groups are affected by the dual pressures of work and family, and it is difficult to find fragmented free time to support regular exercise needs [8]. The elderly group, influenced by traditional living habits, also lack the awareness of active exercise, and their daily activities mainly consist of household chores and walking, lacking systematic physical exercise behaviors. Some residents avoid activities due to concerns about injuries. Some middle-aged and elderly residents, after experiencing soreness or minor injuries after exercise, completely give up all physical exercises, being overly worried about risks. This further limits residents' active participation in physical activities.

4. FACILITATING FACTORS FOR PROMOTING PHYSICAL ACTIVITY PARTICIPATION IN UNDER-SERVED COMMUNITIES

Although the promotion of physical activities in under-served communities faces multiple obstacles, under the influence of various facilitating factors, more grassroots communities are now engaging in physical activities, providing convenience for the public.

Firstly, the orientation of policies and the allocation of resources have provided institutional support for the improvement of sports services in various communities. The state has issued a number of policy recommendations, clearly stating that public resources for fitness should be prioritized for underdeveloped regions and rural grassroots communities. Localities have increased public sports fiscal investment. The resource allocation under the policy orientation has effectively narrowed the hardware gap between regions. During the pilot process, various departments such as sports, health, and civil affairs have clarified their responsibilities and established a certain special fund guarantee mechanism, promoting the implementation of sports intervention services. This also provides policy basis for the supply of multiple systems and cross-departmental collaboration.

Secondly, the demand for physical activities among community residents is showing a rapid upward trend, which provides a broad popular foundation for the implementation of sports intervention projects. With the increase in per capita disposable income, the health literacy of the national population has improved, and more residents are willing to participate in free or low-cost sports activities organized by the community. From the change in demand structure, the elderly, young people, and teenagers all have different degrees of demand for sports health. Most residents believe that the existing sports programs are too monotonous and hope that the community can provide more diversified activity contents. This differentiated demand structure provides a direction for the development of sports health projects and helps to increase the participation enthusiasm of the public in the projects.

Finally, the multi-subject structure formed by grassroots autonomy and community participation is an important support for promoting physical activities in communities. Currently, under the support of the grid system, the governance capacity of grassroots communities in our country has continued to improve, which also provides an organizational basis and internal driving force for the implementation of sports health services. Most underdeveloped regions have established resident consultation systems, and the number of community social organizations is also constantly increasing. The grassroots autonomy capacity has significantly enhanced, and more citizens hope to increase grassroots sports projects through community consultation. This bottom-up designed project can better increase the participation rate of residents. The improvement of residents' awareness and the enhancement of community autonomy capacity can provide organizational basis for promoting sports health projects in communities and promote the long-term sustainable development of sports participation.

5. OPTIMIZATION PATH FOR IMPROVING PHYSICAL ACTIVITY PARTICIPATION IN UNDER-SERVED COMMUNITIES

5.1 Establishing a Diversified Supply Mechanism

Service-deficient communities in various regions should establish a diversified supply system led by the government, involving market participation and social collaboration. The responsibilities of departments such as sports, health, and civil affairs in the participation of people in sports and fitness activities should be clearly defined. For instance, the sports department is responsible for coordinating sports facilities and planning events; the health department is responsible for integrating interventions into the chronic disease management system of the public; and the civil affairs department is responsible for coordinating community resources and connecting with people's livelihood needs. Through this diversified supply mechanism, multiple entities can participate collaboratively in the services. The specific operational methods can be achieved through government procurement of services and PPP cooperation models. Professional sports institutions can be introduced to organize social participation in the process of serving community residents, and the community sports health services can be professionally developed [4]. This reduces administrative costs while improving the efficiency of serving the public and enhancing public satisfaction [9]. The government and communities should also encourage retired medical staff, physical education teachers, and athletes to join the volunteer service team, serving a wider range of people. In terms of resource matching, different regions should tailor strategies based on the different needs of underdeveloped communities, rural communities, and ethnic minority concentrated areas. Public sports resources should be prioritized for allocation to under-served communities to promote the growth of per capita

sports undertakings in underdeveloped areas. Regarding the problem of insufficient space in old residential areas, the government should make full use of idle spaces, basements, rooftops, etc., to build small sports venues and improve accessibility facilities. In the existing community environment, accessible ramps and handrails should be improved to meet the sports needs of the elderly and people with disabilities. A sports health service special fund should be established to promote the development of sports and health undertakings in underdeveloped areas. In addition, the participation of physical activity in under-served communities also requires the establishment of a cross-departmental collaborative mechanism to form regular collaboration between the sports department and the health department and other departments in the community. Sports guidance clinics should be set up in the community to help groups with needs understand various exercise prescriptions and incorporate these prescriptions into the existing routine management systems for hypertension, diabetes, and chronic diseases in the community, improving the outcomes of chronic disease management and increasing the participation rate of residents in physical activities. A sports education integration and family-school-community collaborative mechanism for promoting youth sports should be established to ensure professional implementation and promote community participation in various services. The collaborative responsibilities of each entity in facility sharing, talent cultivation, and project design should be clearly defined, breaking down departmental barriers and improving the overall and collaborative nature of health sports services.

5.2 Strengthening Stratified and Categorized Exercise Intervention

Exercise intervention is the core for enhancing residents' participation in physical activities. Only through adequate exercise intervention can the demand for physical activities among the public be mobilized, and the problems of homogeneity in community exercise programs and mismatch between supply and demand be solved.

Firstly, each community should implement stratified intervention for the entire population. Based on the characteristics of different groups, differentiated intervention programs should be set up. For example, communities can provide services such as fall prevention training, chronic disease exercise intervention, and balance ability training for the elderly to reduce the incidence of falls among the elderly; design fragmented exercise guidance for the youth group to help young people relieve work pressure, learn work breaks exercises, and adapt to the fragmented characteristics of young people's fitness time; provide related services such as physical ability improvement, vision prevention, and spinal health training for teenagers, closely integrating exercise intervention with the growth needs of young people, and also provide barrier-free exercise guidance and adaptive physical training for disabled people. For mobile populations, design fun sports events and neighborhood sports competitions to help mobile residents quickly integrate into the community [10].

Secondly, each community should provide diversified methods for mobilizing demands. Provide differentiated exercise intervention programs for different groups with different demands. For example, aerobic exercises can form walking groups, square dance groups, and jogging groups, encouraging the participation of the entire population. For groups with muscle loss in the elderly and sub-health in middle-aged people, they can participate in elastic band training, self-weight training, and light equipment training. Through interesting activities to promote the increase of residents' demands. Each community should also form a regular assessment mechanism to comprehensively understand the balance of supply and demand in various areas, service supply rate, residents' participation rate, and residents' health effects. From multiple perspectives evaluate indicators such as the quantity, type, and norms of existing physical activity services, and from the demand side evaluate the participation rate, satisfaction, physical fitness improvement rate, and chronic disease control effect of residents. Integrate residents' exercise records, physical fitness monitoring data, and strengthen the constraint effect of assessment.

6. CONCLUSION

This paper conducts a systematic study on the barriers to physical activity participation in under-served communities and the promotion paths. The core conclusion can be summarized as follows: The essence of the participation dilemma in physical activities in under-served communities is the dual constraints from both the supply and demand sides. To solve this dilemma, a coordinated advancement of supply-side reform and demand-side empowerment is necessary. The three obstacles existing on the supply side, namely the structural gap in resource allocation, the insufficient adaptability of exercise intervention programs, and the low accessibility of health promotion services, constitute the external constraints for residents' participation in physical activities. Among them, the mismatch between venue facilities supply and demand, regional differences in funding investment, and the structural shortage of the talent team are the most prominent manifestations. The three constraints on the demand side, namely weak health cognition, insufficient participation motivation, and low

health literacy, constitute the internal obstacles for residents' participation in physical activities. A single supply-side resource investment or demand-side publicity and mobilization is difficult to fundamentally solve this dilemma.

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