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## The Path towards Community Health Promotion Model Driven by Integration of Sports and Medicine in the Era Post COVID-19 Pandemic

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### Abstract

We aimed to discuss the opportunities and challenges of health promotion in communities in the era of post COVID-19 pandemic by adopting the method of literature review and then propose the development path. In the era of Post COVID-19 pandemic, the value and role of community health promotion are further highlighted. However, the integration of sports and medicine (ISM) in China is still in the exploratory stage, the concept of "TCM Preventive Treatment" is not widely accepted, and the relevant laws and policies are absent and the number of relevant talents is quite few. In order to deepen community services of the ISM and promote the joint development, joint treatment and sharing of health management, it is necessary to formulate laws and policies which can be implemented in primary departments, build an intelligent community service platform for the ISM featuring big data, mobilize social forces to be involved and train the ISM talents serving community.

**Keywords:** post COVID-19 pandemic era; the integration of sports and medicine; Community; Healthy China

With the progress of urbanization, the city is the place where people mainly live and work. The community is the "cell" of the city and the common place for people to live. The health of the city and the community determines the health of the residents. During the COVID-19 pandemic, communities have accumulated a lot of experience and summarized lessons in maintaining the health of community residents, which provides a lot of ideas and methods for effective governance of community in the future (Safiabadi Tali et al., 2021). This is not only conducive to improving the construction of healthy cities, but also conducive to achieving the grand goal of Healthy China. According to the eighth version of the Pilot COVID-



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19 Diagnosis and Treatment Protocol released by the National Health Commission of China, people with chronic underlying diseases have a poor prognosis among confirmed cases. Epidemiological data on COVID-19 released by the Chinese Center for Disease Control and Prevention show that a large number of confirmed cases accompanied with hypertension, diabetes and cardiovascular diseases, and the mortality rate of COVID-19 patients with chronic diseases is significantly higher than the overall mortality rate (Yang et al., 2020). Promoting the "the integration of sport and medicine (ISM)" in the community has important strategic significance for promoting the goal of "strengthening health and medical integration and non-medical health intervention" proposed in "Healthy China" policy, as well as improving the health level of residents and enhancing their happiness (Fang et al., 2020). It is also an urgent need for China's public health to give full play to the role of the ISM in the prevention and rehabilitation of chronic diseases and to enhance the immunity of patients with chronic diseases domestically.

### **Status-quo of the ISM in the era of post COVID-19 pandemic**

#### **1. Making the concept of TCM Preventive Treatment known by more people**

After the outbreak of COVID-19, videos of patients in makeshift hospitals doing square dancing, baduanjin, tai chi and wuqinxi went viral on the internet. The physical exercise improving the patient's immunity and relieving their anxiety, together with the herbal drink treatment help patients recover quite fast (Xu et al., 2021). COVID-19 pandemic takes a heavy toll on Chinese people and the world, but it also provides a good chance for reflection on the correct understanding of the ISM. At present, the concepts of "the exercise is an excellent doctor" and "the best doctor administers preventive treatment" have been promoted in the health care system in China, and have primarily received much attention from the sports and medical staffs (Pu et al., 2020). Moreover, China established the first research center of the ISM. The Sports Medicine Research Institute of General Administration of Sport of China, Heilongjiang Sports Bureau and Beijing Sport University are vigorously promoting the concept of "sports is an excellent doctor".

#### **2. Absence of relevant policies and laws**

The continuously improving organization management system and relevant policies and laws guarantee the development of the ISM in China. The occurrence of the COVID-19 pandemic pushed the government to reflect on ways of guiding, supporting and guaranteeing the development of the ISM. During the epidemic, Wuhan makeshift hospital helped patients



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overcome diseases and recover health through the integration of Traditional Chinese and Western medicine methods such as teaching patients to exercise tai chi and Baduanjin, which was an evidence of promoting the ISM, and also promoting the cooperation between sports and medical departments to some extent (Ni et al., 2020). Although the Chinese government has supported the ISM in some relevant policies, the supportive policies or laws dedicated to this area are still absent.

3. The number of compound talents for the ISM is far from enough

The characteristics of the ISM means that the relevant talents need to have the compound qualifications in both "sports and medicine". However, the current mode of talent training only focuses on the skill training in either sports or medical field and pays little attention to cross-field training. Moreover, as two departments operating relatively independently for a long time, the physical and medical fields have different work scopes and tasks. As a result, sports professionals know nothing about medicine and vice versa. The reason for the status quo may be that they do not receive any relevant training during their study in colleges or universities. The outbreak of the COVID-19 will drive the training of compound talents in the ISM in Chinese universities, and promote the communication and learning between the sports and medical staffs.

### **The ISM provides a new direction for community health promotion**

The ISM means the organic combination of sports modes and methods with modern medical concepts and technologies, and integration of the scientific integration of sports elements into every link of medical treatment. In 2016, The State Council promulgated the outline of the "Healthy China 2030" Plan, emphasizing the need to strengthen the integration of the ISM and non-medical health intervention, with the aim of promoting the formation of the disease management and health service model of the ISM, and encouraging the positive role of scientific fitness for population in health promotion, chronic disease prevention and rehabilitation (Fang et al., 2020). In order to strengthen the prevention and treatment of chronic diseases, reduce the burden of disease and increase the healthy life expectancy of the population, China's Long-term Plan for the Prevention and Treatment of Chronic Diseases (2017-2025) also makes the ISM as an important approach to the prevention and treatment of chronic diseases. However, the ISM is still in the theoretical exploration stage, the path is not clear, and there is no scientifically feasible development model of the ISM for reference or to follow in China. Therefore, in order to cope with the accelerated aging society in China



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and effectively curb the high incidence of chronic diseases, it is urgent and imperative to build a chronic disease intervention mode of the ISM and explore feasible effective measures and reasonable plans by strengthening the integration of sports and medicine (Thornton et al., 2016).

Medical centers have a strong medical force and know more about patients with chronic diseases and sub-health groups, but they do not have the qualification to administer exercise prescriptions. Physical education teachers in universities with rich knowledge of exercise prescriptions are not qualified as doctors. Theoretically speaking, the advantages of medical centers and sports institutions should be integrated, and a multi-subject health promotion model of "medical centers + sports institutions + community" based on the ISM with the community as the core is proposed (Humphries et al., 2021). We aim to describe organization structure, operation mechanism and implementation flow charts of the model in detail, in order to identify a feasible path for the ISM, explore a set of replicable and extensible model of community management, and explore a new path for the ISM and non-medical health intervention.

1. The proposal of the community health promotion model of the ISM

The multi-subject health promotion model takes the community residents as the core, the community as the basic environment, and the improving the residents' life style and promoting the residents' physical health as the purpose. It effectively integrates the high-quality resources of medical centers, sports institutions and community to meet the community residents' needs for health to the greatest extent. The health promotion model of multi-subject community is necessary for the high incidence of chronic diseases in China and the limitations of existing intervention models.

2. Operation mechanism of the community health promotion model of the ISM

If the model of "medical centers + sports institutions + community" is about to operate in a lasting way and all aspects can be mobilized, a scientific and feasible internal operation mechanism of the ISM must be established.

2.1 Collaboration platform supported by community health promotion committees

Community health promotion committee shall be appointed by local governments (Hou et al., 2012). Staff in the committee come from sports administration, health administration and the community. Tasks of the committee is to make regional planning to develop community of the ISM, set up the bridge of communication between the local medical centers, sports research institutions and the community, function as the coordinator



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18 August, 2021

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and supervisors of medical centers, sports research institutions and the community, and guarantee the smooth advancement of the ISM in the community.

2.2 A team of experts for cross-training of the ISM supported by medical centers and sports institutions

Through interdisciplinary knowledge and skills training, the ISM cross-training intend to train community health staff to prescribe exercise prescriptions, to train social sports instructors who can guide the different types of patients with chronic disease to exercise so as to improve the service level of primary community staff in prevention and control of chronic diseases, health promotion, and to meet the demands of the residents to get healthy education and the realistic requirement of scientific fitness guidance.

2.3 Community intervention force with "linkage of the three societies" as the core operation

The community is the basic unit of the ISM, so it plays the role of mobilizing the existing resources and strength of the community to the maximum extent. To promote the community residents chronic disease prevention and the improvement of health, community committees, community centers and social sports instructors are important resource of the community (Mansfield et al., 2018; Vaughan et al., 2020). They should actively cooperate, make sure of their own resources and give full play to the advantages of their own expertise in order to engage multiple subjects community. In order to give full play to the role of "linkage of the three societies", the community committee organizes regular meetings to discuss the problems and countermeasures in the process of promoting and implementing the ISM in the community.

2.4 Peer support groups administrated by community residents

Relationships are key elements of socialization so healthy behaviors can be promoted through social interaction. Peer support is an important form of social support (Documet et al., 2019). Peer support in this model means that people with the same or similar age, living environment and disease type can share information, emotion and experience together for the common goal, and participate in community ISM intervention activities.

3. The path towards the community ISM health promotion model

3.1 Policies and laws shall be implemented in primary centers

The ISM has the interdisciplinary quality, and has differences in resources, interests, responsibilities, etc, and it requires all-directional, three-dimensional, multi-angle and multi-field integration. In light of the reality, it is necessary for the government to



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strengthen legal layout and design, promulgate law related to “Health China” as soon as possible, clarify the responsibilities and obligations of sports and health industry, describe in detail the legal liability in treatment process, and improve the supervision and evaluation mechanism build a healthy community environment in order to protect the ISM industry in China.

### 3.2 Establish the ISMC intelligent service platform based on big data

The Outline of "Healthy China" 2030 Plan proposes to integrate big data into the whole process of health care, and develop smart health care services for the convenience and benefit of the people (Fang et al., 2020). According to comprehensive evaluation of accurate information from platform, sports experts utilized both exercise prescription database and their own professional knowledge to provide personalized exercise prescription, and to track, review and adjust, achieve the grid and professional full-service by ISM prescription. It is proposed the use of mobile internet, internet of things and other modern information technology to break through the data barriers in community medical examination and diagnosis and physical monitoring, which can realize the "Internet + health management", incorporate the function of data recording and storage of personal life behaviors. All these realize the personalized and precise integration of personal health information (Mooney & Pejaver, 2018). Residents can keep track of their own health data changes through the mobile terminal, and obtain online health guidance such as diet regulation, exercise health care, drug taking, emotional and daily life, etc (Arakawa et al., 2018).

### 3.3 Mobilize different social forces to promote ISM

It is proposed to mobilize the participation of different social forces and establish long-term cooperation mechanism of different stakeholders which are conducive to the integration of community health service resources, improving resource utilization, realizing multi-party win-win situation and speeding up the development process of community health service. By mobilizing the participation of different social forces such as universities, social organizations and professionals in the field of health, it provides sports nutrition, scientific fitness and sports rehabilitation services for the elderly, sports enthusiasts and other groups in the community which realizes the win-win cooperation of different stakeholders and finally promotes the ISM in the community.



The 14<sup>th</sup> National and International Conference  
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18 August, 2021

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### 3.4 Cultivate compound talents who serve community ISM

Compound talents who understand both sports and medical care are practitioners of the ISM, and operators of the optimization and upgrading of health service quality. It is necessary to give full play to the advantages of sports and medical colleges or universities, and occupy the high ground of cultivating compound talents of "ISM". The sports system should improve the training quality of social sports instructors and add the training content and credit hours of medical care knowledge. Colleges of physical education should reform talent training system and train sports talents who know medical and health care knowledge. Medical system should train medical personnel in prescribing exercise prescriptions. Scientific fitness knowledge and skills should be added in medical college personnel training, so as to train new medical personnel who understand the exercise prescription. Colleges or universities that have the conditions can set up major of ISM on a pilot basis to cultivate professional talents of exercise prescription. Only by cultivating compound health talents who can sink to the primary community that the new health service mode of the ISM can be truly implemented (Tucker et al., 2018; Vaughan et al., 2020).

### Conclusion

In the context of the rapid promotion of Health China policy, ISM has become an important issue that cannot be ignored in the field of sports and traditional Chinese medicine in the reform of the health management and service model of the whole population in an all-round and full cycle manner. The ISM has sufficient scientific basis and realistic needs, and it is an important way to integrate national fitness into Health China policy. In the era of Post COVID-19 pandemic, efforts to promote the construction of community health care integration health promotion model will not only play an important role in the promotion of national fitness and the realization of the long-term goal of Health China policy, but also help to provide a continuous and systematic source of power for the modernization of health management.

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The 14<sup>th</sup> National and International Conference  
"Global Goals, Local Actions: Looking Back and Moving Forward 2021"  
18 August, 2021

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The 14<sup>th</sup> National and International Conference  
"Global Goals, Local Actions: Looking Back and Moving Forward 2021"  
18 August, 2021

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