

Analysis of the Coupled Linkage Effect of Health Education and Preventive Healthcare in Community Public Health in Dalian

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Abstract: Community public health services are at the forefront of safeguarding people's health. Health education and preventive healthcare are important components within them. Only by effectively integrating these two aspects can the level of community public health services be improved and the development of Healthy Dalian be promoted. Based on the research and analysis of community public health work in Dalian and referring to its practical experience, this article theoretically explores the significance and internal connections of combining health education and preventive healthcare, points out the problems and reasons faced during their mutual promotion process, elaborates on the value of their integration, and proposes corresponding countermeasures and suggestions in order to provide reference and guidance for improving the quality of community public health services in Dalian, thereby achieving a good interactive situation of "education promoting prevention and prevention strengthening education".

Keywords: Dalian community; Public health; Health education; Preventive healthcare; Coupling and linkage

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1. Introduction

Under the continuous implementation of the Healthy China strategy, the role of community public health services has become increasingly prominent. Their main task has shifted from treating diseases to promoting health. As a key city in the northeastern region, Dalian has continuously deepened the reform of the public health system and strengthened the construction of grassroots medical service institutions over the past few years, gradually improving the health education and preventive medicine service network. Health education is the process of disseminating health knowledge and advocating healthy lifestyles; preventive healthcare is the process of early detection of diseases, timely treatment, and effective prevention and control. The two are not separate but rather complementary and mutually reinforcing. Therefore, it is necessary to analyze and study the coupling and linkage mechanism between the two, solve the linkage problems, and improve the linkage methods. This has very important practical guiding significance for consolidating the community public health defense line in Dalian, improving the health level of citizens, and building a healthy Dalian.

2. The core connotation and internal logic of the coupling and linkage of health education and preventive healthcare in community public health in Dalian

2.1. The essence of coupling and linkage

Coupling and interaction refer to the mutually influencing and integrating relationship between two or more systems, resulting in a mutually reinforcing and positive interactive relationship. In the public health service system of Dalian communities, the coupling and interaction between health education and preventive healthcare is to combine the promotion of health knowledge with the prevention and treatment of diseases, using health education as the guidance to lay a good ideological foundation for preventive healthcare work; relying on preventive healthcare, the effect of health education can be implemented, thereby forming a chain-like relationship of “education and publicity–behavioral change–disease prevention and control–health improvement”. This is not a simple superimposition, but a high degree of unity in terms of purpose, content, subject, and process between the two, which not only conforms to the basic principles of health promotion, but is also suitable for the specific circumstances of public health services in Dalian communities, especially necessary for cities with a serious aging problem and high incidence of chronic diseases.

2.2. The inherent logic of coupling and linkage

The coupling and interaction between the two have an inherent logical relationship of “demand-oriented–two-way support–collaborative empowerment”, which lies in meeting the increasingly diverse and individualized health needs of residents in Dalian communities, including the demand for health knowledge and the actual need for disease prevention and health management. The complementary relationship between health education and preventive healthcare also aligns with this demand. On one hand, health education provides ideological support and behavioral guidance for preventive healthcare, by disseminating disease prevention and control knowledge and changing unhealthy lifestyles to encourage residents to actively participate in preventive healthcare services and thereby reduce the probability of illness; on the other hand, preventive healthcare provides a practical application platform and factual basis for health education, promptly identifying potential health problems of residents in aspects such as physical examinations and chronic disease tracking management and accordingly formulating corresponding teaching content, avoiding health education from becoming a mere formality ^[1]. Moreover, the cooperation of the two can also integrate community public health resources, eliminate information isolation phenomena, improve work efficiency, and transform community public health work from “passive response” to “active initiative”, from “single projects” to “all-round services”, helping the construction of a healthy Dalian to advance continuously.

3. The current practice and existing challenges of the coupled and interactive linkage of health education and preventive healthcare in community public health in Dalian

3.1. The current state of coupled and interlinked practices

In recent years, Dalian has continuously strengthened the construction of community public health service systems, actively explored new mechanisms for integrating health education and preventive healthcare, and achieved certain results. In terms of organizational structure, most community health centers have established independent departments for health education and preventive healthcare, with dedicated staff, forming a “special personnel responsible, joint participation” working mechanism. In terms of work content, corresponding health education activities are carried out based on the actual needs of the residents in the jurisdiction, including key health education on chronic disease prevention, infectious disease control, and elderly health care, and combined with the implementation of health check-ups, chronic disease follow-ups, vaccination, and other preventive measures to promote the combination of health concepts and behaviors. In terms of methods and approaches, the previous single publicity model has been broken, and the health education coverage has been expanded by using various forms such as the national health information platform, online communities, offline lectures,

and consultation guidance. At the same time, preventive healthcare services have been promoted to enter the community to improve the convenience of services. In addition, Dalian has strengthened the collaboration and cooperation between the two through pilot projects of medical and health integration and the creation of national chronic disease comprehensive prevention and control demonstration zones, enabling the public to enjoy comprehensive and lifelong health management services ^[2].

3.2. The current predicament of coupled linkage

Although the coupling and linkage of community health education and preventive healthcare in Dalian have improved to some extent, there are still many problems hindering their good cooperation. The linkage mechanism is not yet perfect; both sides act independently, lacking regular communication and interaction. The lack of seamless work coordination has led to the separation of health knowledge dissemination and preventive healthcare application. In some community health service centers, overly detailed division of labor has also affected the full utilization of the synergy. The service content is not targeted enough. Health education mostly consists of general knowledge and lacks specific content suitable for the physical conditions and lifestyles of Dalian community residents, making it difficult to resonate and resulting in poor conversion of the effect into actual preventive healthcare behaviors. The coordination of service forces is inadequate. There is a lack of effective cooperation among all relevant parties, unclear responsibilities, and front-line medical staff are under great pressure. The motivation to carry out health education is not strong ^[3]. The information technology support is weak. The data of some community health information management systems cannot be interconnected, making it impossible to accurately grasp people's actual needs in a timely and accurate manner. Moreover, some people do not understand or are unwilling to participate in these activities, let alone cooperate actively. All these seriously limit the effectiveness of the coupling and linkage.

4. The practical value of the coupled and interactive linkage of health education and preventive healthcare in community public health in Dalian

4.1. Improve residents' health literacy and reduce the incidence of diseases

The two complement each other, enabling the integration of health knowledge dissemination and disease prevention and control. This allows the public to establish a correct health concept, understand scientific disease prevention and control knowledge as well as health management methods, change some unhealthy behavioral habits, and actively participate in preventive health care services. Through targeted health education work, the public will attach importance to their own physical health conditions and actively participate in activities such as physical examinations, screening, and chronic disease follow-ups, achieving early detection, early intervention, and early control of diseases, thereby reducing the incidence of infectious diseases and chronic diseases, improving people's health levels and quality of life, which is in line with the overall requirements of Dalian City for comprehensive management of chronic diseases and improving the overall health of the population ^[4].

4.2. Optimize the community public health service system and enhance service efficiency

Combining health education with preventive healthcare can eliminate the barriers in community public health services, integrate resources, simplify procedures, and enhance work efficiency and service quality. Through collaboration, waste can be prevented, and health education resources and preventive healthcare resources can be allocated reasonably, promoting the transformation of community public health services from "each acting independently" to "integration", from "emphasizing treatment" to "emphasizing prevention", which is conducive to building a complete community public health service system, improving the overall level of community public health services, and laying a solid popular foundation for the development of Healthy Dalian. In addition, this joint approach can also reduce patients' back-and-forth travel, increase patients' enthusiasm for seeking medical treatment and health management, and make patients more

satisfied with our community public health services.

4.3. Help to build a healthy Dalian and promote the modernization of public health governance

The construction of Healthy Dalian aims to enhance the health literacy of all citizens and establish a complete public health service system. Conducting effective health education and preventive healthcare is an important part of community public health services, which can promote the deep-rooted adoption of healthy concepts by people, achieving “everyone caring about health and everyone participating in health”. At the same time, it can also summarize some practices of grassroots public health work, form a good cooperation mechanism, and transform the public health management model from the original “passive defense” to the current “active prevention”, improving the accuracy and effectiveness of public health management work, which will play a positive role in building Healthy Dalian and contribute to the modernization process of China’s public health governance system. In addition, the linkage model can also promote the combination of patriotic health campaigns and community public health services, creating a livable living environment ^[5].

5. The optimized path for the coupling and linkage of health education and preventive healthcare in community public health in Dalian

5.1. Establish a sound coupling and linkage mechanism, and strengthen collaborative support

A sound mechanism is the prerequisite for the effective interaction between the two. A regular coordination and communication system should be established within the community health service center. The tasks and responsibilities of the health education and preventive healthcare departments should be clearly defined to facilitate good coordination and connection in terms of work plans, content arrangements, and procedures between the two. Ensure that “all aspects are coordinated, all forces participate, and all links are implemented”. Learn from the practice of the Zhijian service model in Xigang District of Dalian City, combine health education with daily diagnosis, treatment, and services, and change the previous situation of each party acting independently. Reward and punishment measures should also be implemented. The cooperation between the two should be included as part of the evaluation of community public health services, and corresponding standards should be formulated to mobilize everyone’s enthusiasm and ensure that the cooperation work is truly carried out. In addition, policy support should be strengthened, and more funds should be invested in community public health services to provide necessary personnel, material, financial, and other guarantees for the cooperation between the two, and reduce the pressure on front-line medical staff.

5.2. Optimize service content, enhance adaptability and specificity

Based on the health conditions and demand characteristics of the residents in Dalian communities, the content of health education and preventive healthcare has been optimized and adjusted to ensure effective alignment. In terms of health education, instead of using a universal knowledge dissemination approach, it is based on the severe aging problem and frequent occurrence of chronic diseases in Dalian communities. It focuses on conducting targeted publicity and education on aspects such as elderly health management, chronic disease prevention, and infectious disease prevention. It also formulates simple, clear, and highly practical health information based on the local people’s lifestyles to enhance the effectiveness and appeal of health education. In preventive healthcare, based on the problems identified through physical examinations, personalized guidance and suggestions are provided for various groups of people in a timely manner. Health education is integrated throughout the entire process of preventive healthcare, and corresponding health guidance is given during physical examinations, chronic disease follow-ups, and vaccinations, achieving “prevention with publicity and education with prevention”. Drawing on the practice of integrating physical fitness and health care in Xiamen’s Siming District, the content of scientific physical exercise and balanced diet is combined with preventive healthcare projects such as weight control and prevention of chronic diseases, making the services more comprehensive.

5.3. Strengthen the coordination among the main entities and establish a multi-dimensional linkage pattern

Abolish the single-entity service model and establish a cooperation mechanism involving multiple parties such as community health centers, community residents' committees, social organizations, and residents. Clearly define the responsibilities of each party. The community health center mainly undertakes the tasks of conducting health education and preventive healthcare, providing professional guidance and implementing specific measures; the community residents' committee is responsible for mobilizing and organizing residents to participate in related activities, establishing communication platforms, providing venues and necessary support for various tasks; at the same time, social organizations play a role in filling the shortage of professional personnel, making contributions in carrying out diversified forms of health education and preventive healthcare. Establish an institutionalized working model for multi-department cooperation, conduct regular information sharing and coordination and cooperation, make unified arrangements for coordinated work, and achieve a favorable situation of "joint efforts and mutual benefits". In addition, increase the training of grassroots medical staff, improve their ability and level in health education and preventive healthcare, encourage them to actively participate in these two tasks, promote the concentration of high-quality medical and health resources to the grassroots level, and improve the service quality at the grassroots level.

5.4. Strengthen information support and enhance the accuracy of coordination and linkage

Based on the Dalian Universal Health Information Platform, it promotes the interconnection of data related to health education and preventive healthcare, eliminates the phenomenon of information isolation, and achieves integrated management of residents' health information, health education archives, and preventive healthcare service archives. By leveraging information technology means, it accurately grasps the health needs of the public. On this basis, it provides personalized health education content and preventive healthcare guidance suggestions to different groups of people, improving the effectiveness and accuracy of service quality. Referencing the Dalian Intelligent Monitoring and Early Warning Model for Infectious Diseases, it uses big data technology to conduct real-time monitoring of the health conditions of residents within the jurisdiction, promptly identify abnormal situations, and prepare for subsequent preventive healthcare intervention measures and improvement of health education plans. In addition, a network service platform has been launched. Through WeChat group chats and online video courses, regular health education activities are conducted while releasing information related to preventive healthcare services. This facilitates the public's timely access to the necessary assistance and support, enabling a combination of offline and online services and extending the service scope.

5.5. Strengthen publicity and guidance, and enhance residents' participation

Conduct publicity in various forms to enhance residents' awareness and participation in community health education and preventive healthcare services. Abandon the traditional single form of publicity and adopt popular methods that are appealing to the public to carry out publicity activities based on the actual situation of Dalian communities. Make everyone understand the complementary significance of the two, and recognize the positive effects of health education and preventive healthcare on personal health. Increase the publicity of typical cases, telling stories of residents who have recovered their health after participating in health education and preventive healthcare services. This will stimulate more people's enthusiasm. At the same time, establish a sound information feedback channel to obtain residents' suggestions and opinions on service projects and service methods in the first instance and make improvements and enhancements, so as to better serve the people and make them more satisfied and willing to participate. Create a favorable atmosphere where "everyone participates, and everyone benefits".

6. Conclusion

Health education and preventive healthcare complement each other and promote each other, playing a significant role in enhancing people's health quality, improving the community public health service system, and perfecting "Healthy Dalian". However, at present, the cooperation between the two in Dalian communities is still not well-developed. There are deficiencies in institutional construction, a lack of content matching, a need for improvement in the coordination among entities, and a need to strengthen the application of information technology. By improving the cooperation mechanism between the two, enriching service projects, strengthening collaboration among all parties, enhancing information technology levels, and increasing publicity efforts, it is possible to promote a better integration of the two to jointly exert their effects and thereby achieve the desired results and strengthen the public health defense line in Dalian communities, improve residents' health conditions, and contribute to the development of "Healthy Dalian". In the future, it is necessary to continuously seek suitable cooperation methods based on the actual situation of public health work in Dalian communities and improve and optimize the plans to enable the community public health service level to reach new heights.

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