

Healthy Communities Evaluation Research

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Abstract

Since the outbreak of the COVID-19, the concept of health has been deeply rooted in the hearts of the people, among which a healthy community is a place closely related to residents. This paper sorts out, refines, categorizes, and summarizes the research on healthy communities at home and abroad through literature research methods, and innovatively proposes a healthy community evaluation system including five dimensions of healthy living, natural environment, social environment, housing conditions, and resilient communities.

Keywords

Healthy communities; Indicator system.

1. INTRODUCTION

Since December 2019, the COVID-19 has continued to spread, affecting more than 200 countries and regions on five continents, including the United States, Brazil, Russia, the United Kingdom, Spain, etc., with more than 100 million people infected. [1] In the short 20 years of this century, there have been three severe epidemics of SARS, MERS and COVID-19. The speed of their spread and the frequency of outbreaks are jaw-dropping. The epidemic caused the concept of healthy communities to reappear in the vision of planners and the public, and the whole society has realized that human health is the foundation of social civilization and progress [2].

The introduction of the British Public Health Act in 1848 gave birth to modern urban planning. The protection of public health, welfare and safety has been the goal of the plan since its origin. Although the public sector's awareness and intervention of urban health gave birth to urban planning, with the gradual formation and improvement of the discipline of urban planning, urban planning ideas, methods and technical means that put "health" in the first place are increasingly lacking. [3] Therefore, the plan should go back to the original intention of solving residents' health demands. In 1978, the International Primary Health Care Conference held in Alma-Ata, the Soviet Union, issued the "Almaty Declaration", which defined health as "a state of complete physical and mental health, not just the absence of disease." And declared that health is a basic human right. [4] In 1984, the Toronto Health Agency, the Canadian Public Health Association (CPHA) and the Canadian Ministry of Health and Welfare jointly initiated an international conference on the theme of "Beyond health care". At this conference, two health promotion organizations were born. Key ideas: the concept of "healthy public policy" and the concept of "healthy city". [5] A healthy community is the epitome of a healthy city [6], a "cell engineering" of a healthy city at the community level [7], and a place that has the closest connection with the public.

In March 2014, the Central Committee of the Communist Party of China and the State Council issued the "National New Urbanization Plan (2014-2020)". The plan in the new era pays more attention to improving the quality of life of residents and building healthy communities. The "plan for growth" of the traditional industrialization era "It will be unsustainable [8]. The report

of the 19th National Congress of the Communist Party of China in 2017 clearly put forward the implementation of a healthy China strategy, raising health to the height of the national strategy. "Co-construction and sharing, health for all" is the strategic theme of building a healthy China. [9] In June 2020, General Secretary Xi hosted a symposium of experts and scholars and emphasized that it is necessary to promote the integration of health into all policies, and the concept of life-cycle health management throughout the entire process of urban planning, construction, and management. [2] From the definition of social ecology to the definition of biomedicine, health is closely related to the living conditions of people in the urban environment. [10] Therefore, building a healthy community is an important starting point for solving the overall and long-term problems related to people's health. [2]

The many factors that determine the overall health of residents can be divided into five main categories: genetics, socioeconomic status, natural environment, behavioral patterns, and medical care [11]. In these categories, planners directly or indirectly affect socioeconomic status, Natural environment and behavior patterns. The built environment is the main decisive factor for a healthy community. By shaping the built environment, planning professionals can influence the socio-economic status, repair and treat the polluted natural environment, and help change the behavior of residents. Therefore, planners are creating a healthy community environment. Play an important role. However, for a long time, domestic research on healthy communities has mainly focused on the fields of medical and health [12.13], physical education [14.15], and planning disciplines began to actively pay attention to the research of healthy communities under the background of the epidemic raging around the world [16-19].

2. THE CONCEPT AND CONNOTATION OF A HEALTHY COMMUNITY

Health means having a sound physical, mental state and social adaptability, and it is the basic right of everyone. [20] With the continuous financial investment of the public health department and the disproportionate health return, people began to pay attention to the social determinants of health (SDOH). [21] These factors usually include housing, education, work, transportation, etc. They are independent of the medical and health system but can affect a person's health to a large extent and subtly. [22] Relatively poor communities usually have more crime rates, pollution, fast food restaurants, and a lot of advertising [23.24], and generally lack safe entertainment and sports venues [25]; people living in old communities face There are many health problems, such as the chance of getting asthma greatly increased [26.27]; more subtle, children living in poverty-stricken areas often do not get high-quality education [28], and thus have fewer opportunities for employment [26.27] 29.30], in the long run, it limits the mobility of the social class [31], which will eventually affect the health status [32-34]. A large number of studies above show that community facilities, services, and social environment [35] are closely related to important health indicators such as mortality, birth rate, general population health, chronic diseases, mental health, and crime rate [36]. Therefore, the neighbourhood conditions of the community can affect the health of the public to a large extent. We should fundamentally change the way of rejuvenating the community and fully integrate health into the development of the community.

The healthy community movement abroad began with the publication of the "Almaty Declaration" in 1978, which first linked economic and social development on a global scale [4]; in 1984, in Trevor Hancock (Trevor Hancock) With the help of Leonard Duhl, a conference on "Beyond health care" was held in Toronto, Canada. The conference proposed to use the city as a unit of change; later from the World Health Organization (WHO) European Health Ilona Kickbush (Ilona Kickbush) of the Promotion Agency brought the ideas of the conference to Europe and formulated the European Healthy Cities Plan [37]; in 1986, the World Health Organization (WHO) initiated the first Global Health The "Ottawa Health Promotion Charter"

was issued at the promotion conference. The charter calls on people from all walks of life to participate in community change, attaches great importance to empowering communities, and encourages people to participate more in the health promotion process of their community environment [38]; 1993, United States Hosted the International Healthy Cities and Communities Conference in California, and the Healthy Community Movement also expanded to the United States. China began to experiment with healthy cities in the early 1990s, and entered a stage of rapid development in the construction of healthy cities in the late 1990s. [39] The origin of healthy communities in my country is almost synchronized with that of healthy cities [40].

The definition of "healthy community" is flexible and varies from sector to sector. Health Resources in Action (HRiA), a non-profit public health and medical research funding organization in the United States, analyzed the websites of 153 organizations related to healthy communities around the world and summarized the definition of healthy communities: "Healthy communities are defined by different interests. Groups of stakeholders use their expertise and community characteristics to create a community that is conducive to health in both social and physical environments. The community empowers members, encourages public participation, and ensures that health is considered in all policies. Therefore, A healthy community is a community with good public security, economic stability and environment-friendly. All residents have equal opportunities to enjoy high-quality education and employment opportunities, transportation and housing options, prevention and health services, and healthy food and physical exercise opportunities." [41]

3. CONSTRUCTION OF HEALTHY COMMUNITIES INDEX SYSTEM

3.1. Healthy Lifestyle

Studies have shown that regular physical exercise can maintain a healthy weight and reduce the risk of stroke, heart disease, diabetes, depression and other diseases. [42] Therefore, carefully planned community recreation facilities (CRF) are important public assets in the community. It is essential to residents' physical exercise and health. [43] The design of communities and streets suitable for walking and cycling will increase the public's accessibility to parks and public spaces, [44] contribute to the creation of healthy communities. The acquisition of healthy food is the basis of public health, and the convenience of obtaining healthy food is closely related to good eating habits and reducing obesity and other chronic diseases. [42]

3.2. Natural Environment

Air pollution has a serious impact on public health. [45] Children, the elderly, and people with heart or lung diseases are more susceptible to air pollution. [46] Residents living in cities bear greater environmental risks, including soil, air, water, and noise pollution, and are prone to cardiovascular and cerebrovascular diseases, lung diseases, premature births and low birth rates [47]. Strong evidence shows that the accessibility of green space is closely related to the well-being and health of the public [48] The quality and quantity of streetscape greening are also related to health. [49.50]

3.3. Social Environment

Studies have shown that the quality of the social environment affects social interactions, thereby affecting physical and mental health. [51] The number of crimes affects neighborhood safety and perceived safety. If residents believe that the community environment is unsafe, people are less likely to use sidewalks or open spaces for physical exercise, which will have a negative impact on health. [42] The lack of neighborhood safety is also related to parents'

anxiety, which can be transformed into potential obstacles to children's activities. [52.53] "Closely connected" community information is more smooth and there are good community norms to prevent criminal and unhealthy behaviors, such as drunkenness, youth drinking, smoking, and littering. [53] In addition, studies have shown that residents living in residential areas with a good outdoor natural environment are three times more likely to participate in physical exercise than residents in residential areas with less natural environments, and the probability of obesity is lower. 40% lower, [55] People who regularly participate in community cultural activities are beneficial to emotional health and reduce the risk of anxiety and depression [56].

3.4. Housing Conditions

Housing quality [57] and its affordability are also related to physical and mental health. Families with a heavy housing cost (family that spends more than half of their income on housing) have reduced food expenditure by 41%, and health care Expenses have been reduced by 74%. [58] Crowded houses increase the risk of residents' mental health, food safety, and infectious diseases; [59-62] houses that are in disrepair can lead to poor housing conditions (for example, damaged equipment, exposed nails, etc.), [63] In such an environment, exposure to carbon monoxide[64], allergens[59], paint[60.65], plumbing and taps[66] will increase the chance of excessive lead, which is harmful to health; poor indoor ventilation may lead to carbon monoxide concentration Increased height will affect the development of the fetus; [60.64] Insufficient indoor lighting will promote the growth of mold, will affect the health of the respiratory system [67], and increase the incidence of cough, wheezing and asthma [68].

3.5. Resilient Community

Table 1. Evaluation Index System of Healthy Community

Objective	Evaluation index	Evaluation factor
Healthy communities evaluation	Healthy lifestyle	Slow system
		Community recreational facilities
		Healthy food system
	Natural environment	air quality
		Environmental sanitation
		noise pollution
		Greening
	Social environment	Public safety
		Family relations
		Neighborhood relations
		Public space
		Community cultural activities
	Housing conditions	Living area
		Construction quality
		Indoor sunshine
		Indoor ventilation
		Housing affordability
Resilient community	natural disaster	
	Infectious disease prevention	

In the context of the increasing complexity and unpredictability of public health emergencies, it is necessary to strengthen the public health emergency response capacity of urban and rural communities. In addition to the direct loss of life and property, public health emergencies have a long-term inward impact on the public's mental health. [42] Therefore, the construction of resilient communities is a powerful guarantee for public health. Public health emergencies may be natural disasters, such as floods and snowstorms, or infectious diseases. Therefore, the evaluation factors for resilient communities are determined to be natural disaster prevention and infectious disease prevention.

Based on the above theoretical review, combined with the open pre-survey to solicit public opinions, it is finally determined that the evaluation system of a healthy community should include five dimensions of healthy living, natural environment, social environment, housing conditions, and resilient communities, with a total of 19 evaluation factors (Table 1).

4. CONCLUSION

Based on a large number of domestic and foreign documents, this paper combs, refines, summarizes and summarizes the existing documents, and proposes a healthy community evaluation system, which aims to promote the construction of healthy communities.

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