Exploration of Modernization Path of Village Public Health Governance

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Abstract
Rural public health governance is an important part of modernization of public health governance in China and a key link in the advancement of national governance system and modernization. In order to prevent the epidemic from spreading to rural areas, rural areas have adopted flashy and hard-core epidemic prevention measures, which have had an immediate effect, but at the same time, they have exposed their own weaknesses and shortcomings in governance. Comparative analysis was conducted on the influencing factors, measures and subjects of epidemic prevention in urban and rural areas, and in-depth analysis was conducted on each influencing factor and subjects of epidemic prevention, so as to evaluate the fairness of each subject's behavior and lay a solid foundation for winning the battle against epidemic prevention. The comparative study method was used to compare and analyze rural epidemic prevention and urban epidemic prevention, and on this basis, the improvement trend of rural epidemic prevention and control path was put forward.

Keywords
Comparative Analysis; Urban and Rural Epidemic Prevention; Governance of Weak Points; Path Exploration.

1. Introduction
The COVID-19 outbreak is a major public health emergency with the widest range of infections, the fastest speed of transmission and the greatest difficulty in prevention and control since the founding of the People's Republic of China. In order to better understand the characteristics and shortcomings of rural grass-roots epidemic prevention, it is necessary to analyze the normalization and modernization of epidemic prevention and control, and to use comparative research method to compare rural epidemic prevention and control with urban epidemic prevention, so as to explore the modernization path of rural epidemic prevention and control on this basis.

At present, many domestic scholars have done research on public health governance under the epidemic. First, from the perspective of community governance, community is the last mile of epidemic prevention and control. Due to the characteristics of community mobility and mass [1], the importance of community in epidemic prevention and control is self-evident. In the post-epidemic era, community grid governance has been put on the agenda [2], Wang Hongjiang, Shen Junlong, 2022; Li Lingxi, Cui Yujie, 2022) Whether the normalization process of public health governance can be promoted mainly depends on whether the "heterogeneous" composition of community members can be changed and whether the community can be consolidated to form a community community [3]. In addition, under the current belief of a world community with a shared future, Only by solving the three problems of weak cohesion of prevention and control, shortage of public resources, and difficulty in rescuing special groups
can the normalization process be better promoted. (Lei Qiong, 2020) Rural areas are weak areas for epidemic prevention and control, and the epidemic has a great impact on the return of migrant workers to work and farmers to carry out agricultural production, so it is particularly important to promote the normalization process of epidemic prevention in rural areas. The "1+2+3+4+5+N" emergency management mode should be established to promote the realization of community-based management of epidemic prevention[4]. (hui-zhi zhang, 2022) In the second place, from an economic perspective, our country present stage is in a growth phase shift, throes of structural adjustment and preliminary stimulus digestion phase superposition of "3 period" [5], can be based on incomplete information dynamic game model analysis of local government during the period of the outbreak of judgment and public goods to provide ability, The GTAP model can also be used to quantitatively study the Chinese economy[6]. Chen Bo, Du Wencui, 2022; Wang Jianfeng, Wang Weili, 2022) Economic digital transformation must be carried out in order to restore the economy, including industrial digitalization and digital industrialization. A "financial crisis management mechanism" should be established to transform the stimulative growth of the economy into healthy growth[7], (Li Fuyi, Wang Shaohui, et al. 2021) among which "sharing economy", "online education", "working from home" and so on are the main representatives[8]. (wen-hui zhang, 2022), the third, from the modern perspective, after the outbreak of party construction in modern times to lead "multiple work" governance paradigm, large data + technology of precise management, network management and services, as well as the combination of normal and emergency integrated management system is promoting the modernization of urban and rural community governance of optimal solution [9]. (Che Jixuan, Chen Zhilin, 2022) proposed that national governance in the era of big data is to realize inter-departmental joint prevention and control by means of "data speaking, data decision-making, data management and data innovation"[10]. Let the national public health crisis change from "decentralized management to actual management, in-process management to pre-prevention, experiential management to data prediction, authoritative decision-making to data decision-making"[11]. Zhan Chenglin, Lu LAN, 2021; Ding W Y, 2021) The main role of township governments should be given full play in epidemic prevention and control, and an information-based epidemic prevention and control network system should be built[12]. (Huang Lei, 2020)

In short, the academic community has pointed out the shortcomings and paths of public health governance under the epidemic from the theoretical and practical aspects, but few people have conducted special research on the modernization of rural governance under the background of epidemic prevention. With the development of economy and the current state of rural equal attention, based on the current rural social development objective reality to introduce new crown pneumonia outbreak, the uncertain factors, prevention of epidemic prevention at the grass-roots level and city characteristics, board and how to epidemic prevention and control as the breakthrough point, to vigorously promote rural public health management normalization and modernization.

2. Comparative Analysis of Epidemic Prevention Practices in Urban and Rural Areas

2.1. Analysis of Influencing Factors for Epidemic Prevention in Urban and Rural Areas

Epidemic prevention features include the city and the countryside residents aging degree, level of education, epidemic prevention, response speed, residential density, personnel dispersion degree, economic development situation, the cost of living, the degree of informatization degree, the transportation is convenient, epidemic prevention consciousness, medical and health conditions, people, things, money, etc., some scholars will also feature is summarized as "four
high low"[13]. Generally speaking, the epidemic prevention characteristics of urban and rural areas are opposite, which indicates that the government should take into account their different characteristics when formulating epidemic prevention and control policies and measures in urban and rural areas, so as to take the most appropriate epidemic prevention measures. Although the characteristics of urban and rural epidemic prevention are opposite, they do not represent complete advantages. We need to use dialectics to view this opposite. For example, although the dispersing of villagers' residences affects the speed of epidemic prevention and is not conducive to epidemic prevention publicity, it is also not conducive to the spread of the virus and thus prevents the large-scale spread of the disease. The second is that the majority of rural residents own land, so even during the worst of the epidemic, they can provide for their own daily life, such as poultry and vegetables.

2.2. Comparative Analysis of Epidemic Prevention Measures in Urban and Rural Areas

Due to the different characteristics of epidemic prevention between urban and rural areas, according to the documents of the National Health Commission, the epidemic prevention measures should be divided into the following aspects for comparative analysis. From the perspective of organization, epidemic prevention in cities is mainly achieved through five-level response, including community workers, party members and cadres, volunteers, mass activists, and ordinary residents. The urban Center for Health and Disease Control, the health commission, and the epidemic prevention and control headquarters are given orders to uniformly manage communities. In rural areas, the epidemic prevention system mainly relies on grassroots cadres such as township government personnel, village committees and villagers volunteers. From control, mainly to the in and out of the city high-speed mouth temperature, returning to the community to register, household register personnel information, each community is responsible for a region, while the country controls on village set nucleic acid detection levels, uniform WaiCunRen member shall be prohibited from entering or prevent village staff to go out, because of the rural villagers’ familiarity between higher, It can also better identify the entry of people from other villages, and add a safeguard for epidemic prevention and control. [14]. In terms of epidemic prevention publicity, urban publicity is more organized, including community banners and community owners’ group publicity, while in rural areas, due to dispersed residents, the main propaganda method is loudspeaker broadcasting, which is also one of the most direct and effective ways in rural epidemic prevention.

2.3. Comparative Analysis of Epidemic Prevention Subjects in Urban and Rural Areas

Urban epidemic prevention requires the participation of various subjects, including governments at all levels, enterprises, communities and other social organizations. With the Party government as the command center and the health Commission, CDC and other medical personnel as the central force, we will bring into play the synergistic role of multiple entities such as communities, enterprises and individuals. Most scholars focus on from the Angle of disease resistance organization system or from a certain resistance to disease subject research analysis, such as from the perspective of medical personnel or party members such as the main body behavior analysis of the epidemic prevention and control work, the overall lack of or no to the township and village cadres, village health medical staff, volunteers, etc as the main representative rural epidemic prevention and control of the main body of comprehensive research[15]. The battle field of rural anti-epidemic is not the single fight of one subject, but the solidarity and cooperation of multiple subjects. As grassroots national public officials who are most closely connected with rural people, township cadres should not only take charge of organization, leadership, mobilization, inspection and other work, but also directly take charge of epidemic prevention and control work in a natural village, community, street and other areas.
according to the needs of epidemic prevention and control, or even directly descend to the grassroots level. Directly participated in the duty, quarantine and allocation of epidemic prevention materials at the quarantine checkpoint, and rushed to the forefront of the fight against the epidemic. During the epidemic period, township police stations should reasonably allocate police and work in shifts. Traffic police set bayonets in relevant sections, carefully check the passing vehicles, measure the body temperature of the passing occupants, and record the data. Village officials and community workers have been at the forefront of the fight against the epidemic in rural areas. Village cadres and community workers should make statistics and registration of local people entering and leaving the village, record their trips and take their temperatures, strictly restrict migrants from entering the village at will, compile epidemic statistics, check the situation of local migrant workers, especially those returning from middle and high-risk areas, and be ready to report the epidemic at any time. The epidemic also fully reflects the professional strength of rural health care workers, and rural doctors have played an important role in household screening and testing. In the battle against the epidemic in rural areas, in addition to township cadres, village cadres and community workers, many volunteers and voluntary organizations have emerged, including Party members and college students.

3. Analysis of Rural Epidemic Prevention Weaknesses from the Perspective of Rural Governance

3.1. The Aging Trend in Rural Areas is Gradually Increasing

First of all, the two important indicators of aging are the increase of the proportion of elderly population and the continuous rise of the average age. The average life expectancy of residents has increased from 77.0 years in 2018 to 77.3 years in the latest forecast. Compared with cities, due to the slow economic development in rural areas, most young people choose to go to cities to work for a better life. As a result, the aging population in rural areas continues to soar, and the aging degree in more developed areas becomes more obvious, which also increases the difficulty of epidemic prevention and control. Elderly people with other medical conditions are among the most vulnerable to COVID-19, the document said, adding that about 65 percent of severe COVID-19 patients are older than 60 years old, and another 65 percent of those classified as severe have not been vaccinated. In addition, the recent prevalence of Omicron variant has increased the mortality rate of elderly patients who have not been vaccinated or who have not been fully vaccinated. In some foreign countries and regions, the number of deaths and severe cases has exceeded the highest level in history[16]. From the countryside and cities relative rural aging degree is higher, the epidemic control itself is difficult to some old people and consciousness is weak, especially in the countryside, not to be vaccinated against new crown old man also is in the majority, so the epidemic prevention and control work of the aged in the country, we should first of all, the centers for disease control and prevention and the local health organization, rural doctors, and so on work together, We should do our best to make sure that the elderly are fully exposed to vaccines and nucleic acids, and the state should build wards and isolation places suitable for the elderly in rural areas to prevent the cluster of elderly epidemics.

3.2. It is Difficult for Villagers to Disperse Epidemic Prevention

Compared with cities, the villagers living scattered villages because more people less land, namely rural unlike urban neighborhood close to get along with relatively scattered, but live to epidemic prevention and control measures put in place, the village two committees organized group flexible use of the horn, radio, mobile vehicle, the epidemic prevention and control points for attention and require continuous conveying to the village, behind the house to remind the villagers of strengthen epidemic prevention. The villagers said that the "big speaker" could be
heard clearly and understood. Seeing and hearing the propaganda of the "big speaker", they really realized the importance of the government's attention and epidemic prevention and control[17]. Such as Anhui village cadres radio propaganda ground epidemic prevention audio network hot transmission. The emergency "loudspeaker" of 3417 Tiao village in Guangdong Province gives voice to the force. Qinghai adopts the method of recording and broadcasting in Tibetan and Chinese at different times, rolling every day to publicize the epidemic prevention regulations and authoritative information; In Hunan, emergency broadcasting is linked to the loudspeaker system in 1,100 villages in the province, delivering the government's decision making and deployment, as well as scientific knowledge of epidemic prevention and control, to the fields without interruption.

3.3. Rural Awareness of Epidemic Prevention is Weak

Compared with cities, rural villagers have a lower sense of coordination, and the "personalization" is more serious. Once cases occur in urban communities, they will be isolated as a whole. However, due to the vast area and sparse population, some villagers do not comply with the epidemic prevention regulations of the village, because they think that they are far away from the control. Most villagers hold the idea of "don't care others tile frost" will not choose to cooperate with the township government, village cadres and so on. Due to its inherent characteristics, villages have a close relationship with neighbors and belong to a society of acquaintances. Despite repeated orders to ban gatherings, gatherings and dinners during the epidemic, many villagers still relaxed their vigilance against the novel coronavirus and continued to participate in gathering activities due to human relations. In daily life, most villagers only focus on their own land, so they don't care about the life safety of other villagers and ignore the epidemic prevention system, which reflects that many villagers still have the concept of fluke and ignorance, and do not really realize the serious consequences brought by the COVID-19 epidemic.

3.4. Rural Living Conditions are Poor

At present, compared with cities, the relatively backward living environment and public health conditions in rural areas provide a hotbed for the breeding and transmission of viruses, so it is urgent to solve the problems existing in rural health. Our research on rural residential environmental sanitation can be carried out from three aspects: municipal administration, water conservancy and food. First of all, the municipal construction in rural areas is much worse than that in urban areas. For example, road planning is poor, pipeline distribution is disorderly, and household garbage disposal is difficult. Many villages do not have special sanitation workers responsible for cleaning, and villagers have the habit of "sweeping the snow in front of the door by themselves", so that rural roads "garbage is basically blown by the wind"[18]. Secondly, the construction of water conservancy facilities in rural areas is insufficient. Some villages are not supplied with tap water, so they still follow the characteristics of Wells and cellars. Moreover, villagers discharge domestic sewage at will, and most villages lack professional sewage treatment equipment, causing environmental pollution. Secondly, although the "toilet revolution" has been carried out in the current rural revitalization, it is observed that there are still many problems in the actual progress of this work. Some village governments have not yet built private dry toilets for every household. In some places, public toilets are only open on the days when superiors come to inspect them because no one has cleaned them. Finally, in terms of diet, many villagers still believe that "if you eat dirty, you will not get sick" as the truth. Even during the epidemic, they still keep unhealthy cooking habits. Because the outbreak is closely related to wild bats, they do not realize how many viruses harmful to human beings are carried by wild animals. Therefore, to complete the epidemic prevention work in rural areas, the key point of paying attention to individual dietary behavior
and hygiene habits should be vigorously publicized. In general, the COVID-19 epidemic has highlighted the "shortcomings" in rural living environment and public health.

3.5. **Public Health Conditions are Poor Financial Constraints Lack of Materials**

Poor medical and health care in rural areas makes it more difficult to prevent and control the epidemic. According to the National Bureau of Statistics, by the end of 2020, China had 9,101,000 beds in medical and health institutions, including 7,131,000 in urban hospitals and 1.649 million in rural primary medical and health institutions. In 2020, 183.52 million people were admitted to hospitals and 37.07 million people were admitted to primary medical and health institutions [19]. Secondly, the modernization level of cities has attracted more skilled personnel, which can improve the medical level of medical institutions. The number of health technicians per 1,000 people in cities is more than twice that in rural areas. Finally, compared with cities, cities have higher health costs due to their higher medical level and perfect medical facilities, while the per capita health costs in rural areas are less than half of those in cities. From contrast illustrates three medical resources in urban and rural areas, whether medical expenditure, or technical personnel, equipped with country than the city still has a large gap while setting up the rural medical and health care under the support of national policy already had a big improvement, but slow growth in rural public health investment, low level of medical problems still exist.

4. **Exploring Feasible Approaches for Rural Epidemic Prevention and Control**

New crown pneumonia outbreak to the modernization of rural governance has brought new challenges, including the emergency prevention and control of the rural organizations at the grass-roots level ability, organization ability, the prevention and control of rural residents awareness, participation and even the entire living environment, public health conditions, such as medical resources link problems exposed, an urgent need to promote rural epidemic prevention management modernization.

4.1. **Party Building Guides Epidemic Prevention**

To give full play to the leading role of Party building is to give full play to the strength of township party members, and mobilize Party members from all over the country to set an example and actively participate in the epidemic prevention and control campaign. Give play to the FUNCTION of community PARTY organization unified command, unified coordination, unified dispatch, improve the political station of community governance, and give play to the leading demonstration effect of Party members. Do a good job in the ideological work of the masses, the Party's line, principles, policies implemented at the grassroots level, implemented in the community front line. Any person infected with the novel coronavirus who refuses to be quarantined, suspected infected persons and close contacts under quarantine disobey management, fabricates and spreads rumors in the process of epidemic prevention and control, seriously disturbs the order in public places, and fabricates facts to slander medical workers will be punished according to law. Community Party construction workers should actively guide community residents to learn legal knowledge, widely popularize scientific protection knowledge, guide community residents to respect science, eliminate panic, do not spread rumors, do not believe rumors and do not engage in feudal superstition activities, and strictly do a good job of health and prevention and control work. Build a tight defense line of mass prevention and mass governance, vigorously promote rural modernization construction under the leadership of the Party organization, extensively mobilize villagers to participate in rural governance, and strengthen the subject consciousness of villagers.
4.2. Improve the Degree of Rural Information Data

To improve modernization, the first step is to improve information technology. For example, the two committees of the village can make full use of telephone and WeChat to send videos, epidemic prevention knowledge and the latest epidemic situation to migrant workers, and mobilize the whole people to participate in the prevention and control of the epidemic. To provide professional training for community information management personnel, so that they can skillfully use the information system and equipment, timely make information judgment on the health status of residents, so as to achieve remote control management. It is necessary to improve the collection of information data of community residents, especially the registration and recording of population information, vehicle information, business information, property information and close relatives’ information of community residents, and timely grasp the trend of community residents within the scope of laws and regulations, so as to facilitate the study and judgment of epidemic prevention and control. At the same time, staff are regularly organized to publicize the latest epidemic prevention policies and explain the latest developments at home, so that the public can obtain epidemic information and related policies in time, and ensure that all households know the common sense of epidemic prevention and control, and everyone knows the personal protection measures [20].

4.3. Improve the Speed of Emergency Response in Rural Areas

We will improve the responsibility mechanism to protect people’s lives. The responsibility management mechanism of “criss-crossing, joint prevention and control” was adopted, and the hierarchical management mechanism of “community (village) secretary -- grid worker -- corridor head -- parent” was constructed vertically to ensure that the responsibility for epidemic prevention was implemented among people. The joint prevention and control mechanism of “neighborhood committee, property management, community hospital, public security” and other departments should be established horizontally, formulate specific emergency or emergency treatment plans, formulate specific prevention and control work processes, improve the standardization level of community bayonet defense, clarify the division of responsibilities, and effectively promote community epidemic prevention. We should firmly establish the ideological principle of "people-centered", actively care for residents who are sick or living in difficulties, provide material resources and spiritual support to members, guide residents to help and trust each other, and make the community a spiritual home for residents in epidemic prevention and control.

4.4. Self-governance + Rule of Virtue + Rule of Law for Epidemic Prevention

In the document, The State Council proposed that rural governance should move toward the direction of "three governance integration", that is, the combination of autonomy, rule by law and rule by virtue, and the extensive participation of the masses. The rule of virtue means that the villagers take the initiative to regulate themselves by relying on their own self-discipline and the strength of individual psychology. The rule of law means that the government uses coercive means to force villagers to obey laws and regulations. Only virtue and only the rule of law is not feasible, this is because if only virtue, while using the flexible method can better solve the contradiction between the residents, but from the point of work, small rural compared with urban rural life range between members are more familiar with, work is more nepotism has some them from being eroded, namely work harder. The change of grassroots governance resources in urban and rural areas and the variation of social moral conditions need to innovate and strengthen the way of governance by virtue, which can make up for the deficiencies of autonomy and rule of law, and improve the efficiency of autonomy and rule of law [21]. But THERE IS STILL A NEED for supporting measures and auxiliary forces, local governments need to establish fund households and other specialized institutions, and moral governance involves
a very wide range of social groups, including grass-roots party and government cadres, volunteers and so on.

4.5. **We Will Expand Epidemic Prevention in Rural Areas**

To promote the modernization of epidemic prevention in rural areas, rural areas and villagers are indispensable. We need to expand channels for villagers to participate in epidemic prevention and control, and develop and strengthen mass prevention and control. "Idle people" and "capable people" who are "trapped in the countryside" due to the epidemic can be organized and mobilized to play their strengths and actively participate in the epidemic prevention and control. For example, students who cannot go back to school due to the epidemic should be organized to form a team of temporary volunteers, who can be trained to perform disinfection and disinfection work in the village, and disseminate knowledge of epidemic prevention and control to villagers, especially the elderly. Secondly due to the low level rural epidemic prevention, response speed is slow, the role of the village doctor is particularly important to rural doctors as important members of the contingent of rural grassroots medical and medical professional degree is the highest a batch of people, or at the early stage of the disease development stage in the spread of the norm, rural doctors should stick to jobs, to guide the villagers attaches great importance to the epidemic dynamic [22]. However, rural doctors are faced with a sudden increase in workload and pressure, and rural public health resources are relatively backward, so it is necessary to help village committees and township governments. In addition to the rural members mentioned above, there is a key demographic that we often overlook: rural women. Since the outbreak of the epidemic, we can see a variety of "mulan" into the battle against the epidemic, a large number of female volunteers poured into the front line of the fight against the epidemic, which really reflects that women are not able to outdo men, and the "left-behind" women in rural areas should also be mobilized to join the volunteer team to carry out eradication, nucleic acid detection, counseling and other work [23].

5. **Conclusion**

Based on the analysis of different epidemic prevention response characteristics from urban and rural dimensions, it can be seen that the positive epidemic prevention response in cities and the negative disorder in rural areas actually reflect the tear of social development differences, the attention of the government and the weak awareness of rural areas. Despite the comparative analysis of the influencing factors, measures and subjects of urban and rural epidemic prevention, there is still a lack of in-depth analysis of the influencing factors and subjects of epidemic prevention, so as to evaluate the fairness of each subject's behavior and lay a solid foundation for winning the battle against epidemic prevention. Although the epidemic has been controlled to a certain extent and the number of deaths has been greatly reduced, the following epidemic prevention work should be transformed from emergency response to modernization and regular epidemic prevention, and rural epidemic prevention and control should be better promoted by organizing and mobilizing rural epidemic prevention subjects and expanding the publicity of rural epidemic prevention.

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