Can closed-off management in communities alleviate the psychological anxiety and stress caused by the COVID-19 pandemic?

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Abstract
Since the outbreak of the novel coronavirus (COVID-19) pandemic, the number of individuals infected with the COVID-19 has been increasing worldwide, posed a substantial threat to mental health. Therefore, discovering the means for blocking the transmission path of COVID-19 and improving mental health is of great significance. Based on a survey on the life of urban and rural residents in China (in 2020), the study applied the least squares method to analyse the effect of closed-off management on the psychological anxiety and psychological stress caused by the COVID-19 pandemic. Furthermore, the bootstrap decomposition method was used to test for the mediating effects of satisfaction with and confidence in pandemic prevention. The study found that closed-off management in communities exerted a negative effect on psychological anxiety and stress caused by the COVID-19 pandemic. Additionally, satisfaction with and confidence in pandemic prevention played a mediating role on the psychological anxiety and stress caused by the COVID-19 pandemic. Therefore, closed-off management in communities will not only prevent the spread of the COVID-19, but also improve satisfaction with and confidence in pandemic prevention and control. Furthermore, it will alleviate the psychological anxiety and stress caused by the COVID-19 pandemic.
Public health emergencies primarily pertain to major communicable diseases. The term refers to an epidemic of major communicable disease that occurs suddenly and spreads rapidly, causing serious damage to human health. From Ebola to the Middle East respiratory syndrome to the global outbreak of the COVID-19 (COVID-19) in early 2020, public health emergencies have threatened the world repeatedly. In particular, COVID-19 not only continues to spread among countries in a ‘migratory bird mode’ but also becomes a ‘once-in-a-century pandemic’ faced by the entire human society. For governments from different countries, dealing with major public health emergencies is a test of their management ability and policy tool application, which is also an urgent task faced by countries worldwide. A review of the public governance practice of dealing with COVID-19 in China, as well as the measures for pandemic prevention and control implemented by the Chinese government are evidently effective and have received worldwide recognition. Within only 2 months, the spread COVID-19 was essentially controlled.

However, on a global scale, COVID-19 continues to spread. According to the data released by the World Health Organization (WHO), the worldwide cumulative number of confirmed cases has reached 19.28 million, while the cumulative death toll has reached 4.13 million as of 25 July 2021. The uncertainty and risk of the international community continue to increase due to the COVID-19 pandemic. A few of the impacts of the pandemic are the serious recession facing the global economy, increased number of unemployment and serious threat to human health. Therefore, exploring the implementation effect of public policy tools on addressing major public health emergencies is of substantial practical significance.

In terms of public policy tools, China was the first country to implement closed-off management in communities, which proved to be an effective public policy for preventing the spread of COVID-19. This has become a general policy tool for all countries in the fight against the pandemic. Wuhan was the first city in the world to announce its lockdown, with Italy then following its example. As an impact of the pandemic, closed-off management became a normal way of life, testing national governance capacity and introducing a minimum space wherein human beings maintain the basic development needs during this pandemic. Studies have shown that distancing measures based on reducing community activities have great potential to prevent the spread of COVID-19 and contribute to the reduction of the total cases. However, the existing studies did not verify the effect of implementing community closed-off management, which is an important policy tool. Moreover, studies considering policy tools as a controlling factor that influences mental health are scarce.

Nonetheless, scholars realized that public health emergencies significantly impact mental health. Further, such emergencies can cause problems, such as insecurity, confusion and emotional isolation, which may transform into psycho-emotional responses, such as pain, mental illness or unhealthy behaviours. A continued report on the pandemic stated that public health emergencies may also result in anxiety or distress, which can easily lead to mental health disorders. Previous studies have shown that COVID-19 can cause a series of psychological problems, such as anxiety and depression symptoms, self-reported stress and sleep disorders, which are more prevalent in vulnerable groups. At the onset of the COVID-19 outbreak, a survey in China found that more than half of the respondents rated the impact of COVID-19 on mental health as moderate to severe, whereas approximately one-third of the respondents reported moderate to severe psychological anxiety. The primary manifestations of which were obsessive-compulsive disorder, distant relationship, fear and anxiety, and other psychological problems.

The above-mentioned studies illustrate that COVID-19, as a public health emergency, significantly impacts public mental health, which was the inspiration behind the current study. The study presents a research perspective...
on the impacts of community closed-off management on psychological anxiety and stress caused by the COVID-19 pandemic. Furthermore, the study aims to verify the effect of implementing community closed-off management as a policy tool and expand research in this field. Although many scholars called for the need to consider the relationship between community lockdown and mental health, studies that directly assess the impact of community closed-off management on psychological anxiety and stress caused by the COVID-19 pandemic are scarce.

For example, Waite argued that social isolation is significantly related to physical and mental health and proposed that social distancing and perceived social isolation are positively related to low levels of self-rated health. In other words, social isolation and close-offs due to the spread of COVID-19 have exacerbated anxiety and frustration among individuals worldwide. Thus ignoring the impact of the pandemic on these aspects will aggravate mental health issues that may emerge during closed-off community management. Furthermore, many scholars have suggested that isolation and close-off will not necessarily negatively impact mental health in the future. However, providing effective psychological intervention and counselling to the public is necessary during public health emergencies. Against the background of closed-off community management, focusing on the mental health of people who are at a high risk of anxiety and uncertainty is extremely important.

Besides the direct influence of closed-off community management on mental health, it may also indirectly exert a mediating effect on psychological anxiety and stress by influencing satisfaction with and confidence in pandemic prevention and control. Theoretically, closed-off management in the community pertains to the application of policy tools that enable the government to mitigate the spread of the pandemic. However, the mental health problems caused by the COVID-19 pandemic can easily lead to psychological disorders, such as anxiety, psychological tension, depression, and panic. In this regard, through closed-off management in communities, governments can maximize its governance capacity and regulation function to effectively reduce the spread of COVID-19 and promote the maintenance of an optimistic attitude among residents in the fight against the pandemic to improve perceived health and mental health.

Satisfaction with and confidence in pandemic prevention and control is not only a subjective evaluation of the effectiveness of the relevant prevention and control measures in response to the pandemic but also a component of the psychological state. From the perspective of academic research, a significant positive correlation has been observed between life satisfaction and mental health. Confidence is the degree of trust in the predicted evolution of a behaviour and corresponding outcomes and is a reaction to several behavioural processes. Additionally, satisfaction with and confidence in pandemic prevention and control measures denote external perceptions and emotional responses to the development of and changes accompanying COVID-19 and are an objective evaluation of such measures from the level of subjective consciousness. Individuals that project high degrees of satisfaction and confidence frequently display a better mental health condition, which can alleviate mental health problems, such as anxiety and depression caused by the pandemic. Therefore, the present study infers that satisfaction with and confidence in pandemic prevention and control may be an intermediary mechanism of closed-off management, influencing psychological anxiety and stress.

Based on the previous analysis, the present study aims to empirically analyse the effectiveness of closed-off community management implementation as a policy tool using the 2020 survey on the mental health of Chinese residents in the pandemic. Therefore, this study contributes to the literature in two ways. First, the study examines the influence of the policy tool on psychological health, such as anxiety and emotional problems caused by COVID-19. Second, the results show that satisfaction with and confidence in pandemic prevention and control and the internal mechanism of the influence of community closed-off management on mental health. The result will provide a new perspective for exploring and investigating the effectiveness of policy tool implementation, considering the impact of the pandemic and point to a reference to formulate measures to alleviate the mental health problems caused by the COVID-19 pandemic.
2 | RESEARCH METHODS

2.1 | Data sources

The study employed the survey data on the living needs of Chinese urban and rural residents. The Chinese Society for Urban Studies Urban Governance Specialized Committee conducted the survey in 2020, co-sponsored by the Thepaper.cn Research Institute. Beijing GeoHey Information Technology Co., Ltd. provided technical support. As the fight against the COVID-19 pandemic continues, China adopted strategies for the lockdown of cities, residential areas, buildings, villages and roads, while the supply chain of daily life and services in urban and rural areas changed rapidly. The main objectives of the survey were to accurately determine the practical difficulties faced by residents in work and daily life, obtain information on the mental health condition of residents, provide support to local policymakers in responding to demands in a timely manner, adjust and improve relevant policies, and ensure the order of daily life. The survey was mainly conducted in the form of an online questionnaire with a total of 1568 respondents. According to the intents and needs of the current study, several samples with missing data were omitted. Consequently, a total of 1439 samples were used.

2.2 | Variable selection

2.2.1 | Dependent variables

The dependent variables are psychological anxiety and stress. The corresponding questions for psychological anxiety and stress in the questionnaire are 'Thus far, did you feel anxious during the pandemic?' and 'Thus far, did you feel any psychological stress during the pandemic?' Responses were rated using a three-point scale (3 = very anxious/stressed, 2 = slightly anxious/stressed, but can be adjusted in time, and 1 = not anxious/stressed). The higher the score, the more is the anxiety or stress.

2.2.2 | Independent variable

The independent variable is the closed-off management in communities posed by the following question: 'Did your community (village) adopt closed-off management?' The operation of closed-off management is turned into a virtual variable. Further a response of 'the community (village) adopted closed-off management' takes a value of 1, while 'the community (village) did not adopt closed-off management' takes a value of 0.

2.2.3 | Mediating variables

The study considered the degree of satisfaction with and confidence in pandemic prevention and control as the mediating variable, posing the following question is posed: ‘Are you satisfied with the pandemic prevention work in your community (village)?’ Responses are considered continuous variables and rated using a four-point scale (4 = very satisfied, 3 = basically satisfied, 2 = unsatisfied and 1 = very unsatisfied. For confidence, the following question is posed: ‘Thus far, are you confident about the measures for pandemic prevention and control?’ Responses are also considered continuous variables and rated on a three-point scale (3 = confident, 2 = average and 1 = no confidence).
2.2.4 | Control variables

The control variables are mainly personal and community-level feature variables. Personal feature variables include age (continuous variable), gender (virtual variable: 0 = female, 1 = male), household registration (virtual variable: 0 = rural, 1 = urban), level of education (virtual variable: 0 = high school, 1 = university, 2 = post-graduate), job type (classification variable: 0 = farmer, 1 = worker, 2 = government offices and public institutions), income level (virtual variable: 0 = less than 5000 per month, 1 = more than 5000 per month), and times spent per day on news about COVID-19 (virtual variable: less than 1 h = 0, 2–4 h = 1, 4–6 h = 2, 6–8 h = 3, >8 h = 4). Community-level feature variables include positive cases of COVID-19 in the community (virtual variable: 0 = no infected patient, 1 = yes), daily disinfection measures in community (virtual variable: 0 = no, 1 = yes), and disclosure of information about the pandemic to residents (virtual variable: 0 = no, 1 = yes). Table 1 provides a detailed description of the variables.

2.3 | Statistical analysis

STATA 15.0 was employed to analyse the impact of closed-off community management on psychological anxiety and stress. First, descriptive statistical analysis was used to describe the distribution of data for the dependent, independent and mediating variables. Second, bivariate correlation analysis was utilized to assess the relationship between closed-off community management and mental health. Third, the least squares method was employed to analyse the relationship between closed-off community management and mental health. Finally, the bias-corrected nonparametric percentile bootstrap method tested for the mediating effect. Based on the original data (N = 1493), 500 bootstrap samples were extracted through repeated random sampling. The generated and saved mediating effect estimates were sorted to derive the confidence interval of the mediating effect.

3 | RESULT ANALYSIS

3.1 | Bivariate relationships among key variables

Bivariate correlation analysis was performed to verify the association among key variables (Table 2). In Panel A, closed-off community management (β = −0.054, p < 0.001), degree of satisfaction with pandemic prevention and control (β = −0.183, p < 0.001), and degree of confidence in pandemic prevention and control (β = −0.297, p < 0.001) are significantly related to psychological anxiety. Moreover, closed-off management in the community is positively correlated with satisfaction with (β = 0.307, p < 0.001) and confidence in (β = 0.104, p < 0.001) pandemic prevention and control. Finally, the degree of satisfaction with pandemic prevention and control is positively correlated with the degree of confidence in pandemic prevention and control (β = 0.299, p < 0.001). On the one hand, Panel B demonstrates that closed-off management in the community (β = −0.068, p < 0.001), degree of satisfaction with pandemic prevention and control (β = −0.151, p < 0.001), and degree of confidence in pandemic prevention and control (β = −0.278, p < 0.001) are significantly related to psychological stress. On the other hand, closed-off management in the community is positively correlated with the degree of satisfaction with and confidence in pandemic prevention and control, whereas the degree of satisfaction with pandemic prevention and control is positively correlated with the degree of confidence in pandemic prevention and control.
3.2 | Influence of closed-off community management on psychological anxiety and stress

The study used least squares analysis to investigate the relationship between closed-off community management and psychological anxiety and stress. Table 3 provides the regression results. In Panel A Model 1, closed-off community management exerted a negative effect on psychological anxiety without the addition of control variables. Compared with communities without closed-off management, this measure alleviated psychological anxiety among residents. Given that other variables may influence the regression results, Models 2 and 3 added personal and community-level feature variables, respectively. The study found that closed-off community management continues to exert a negative effect on psychological anxiety. In Panel B, no control variables were added to Model 4, which indicated that closed-off community management exerted a negative effect on psychological stress. Compared with communities without closed-off management, this measure alleviated psychological stress. Furthermore, personal variables...
and community-level feature variables were added to Models 5 and 6, respectively. The study found that closed-off community management continues to exert a negative effect on psychological stress. Other control variables also exhibited significant influences on psychological anxiety and stress. Compared with residents aged 30 and below, residents over 50 are less likely to experience psychological anxiety and stress. Residents who work in government offices and public institutions exhibited low levels of psychological anxiety and stress compared with the residents who work as farmers. Additionally, compared with residents in communities without positive cases of COVID-19, those with positive cases in the community experienced more anxiety and stress. Notably, no significant relationship was observed between gender, level of education, job type, household registration, income level and psychological anxiety. Simultaneously, daily disinfection measures in the community and closed-off community management exerted no significant effect on psychological anxiety.

### 3.3 Test and comparison of the mediating effects

According to a previous research hypothesis, the mediating effects were tested and compared in two steps, namely, testing the influence of closed-off community management on satisfaction with and confidence in pandemic prevention and using the bootstrap mediating effect decomposition method to verify whether closed-off community management indirectly influences mental health through satisfaction with and confidence in pandemic prevention. Table 4 presents the regression results.

Models 1 and 2 indicated that closed-off management exerted a significant positive effect on satisfaction with and confidence in pandemic prevention and control compared with open communities. In other words, closed-off community management improved residents’ satisfaction with pandemic prevention and confidence in the success of pandemic prevention in the future. In Models 3 and 4, the study found that closed-off community management has a negative effect on anxiety. Concurrently, satisfaction with and confidence in pandemic prevention and control exerted a significant negative effect on anxiety. In other words, the higher the residents’ satisfaction with and confidence in pandemic prevention and control, the lower the occurrence of anxiety. Models 5 and 6 indicated the
negative effect of closed-off community management on psychological stress. Additionally, a significant negative effect of satisfaction with and confidence in pandemic prevention and control on psychological stress was observed; that is, the higher the satisfaction with and confidence in pandemic prevention and control of residents, the lower is the occurrence of psychological stress.

Moreover, the proportion of the mediating effect of pandemic prevention satisfaction with and confidence in terms of the total effect was calculated. Table 5 provides the result. In Panel A, the results of Path 1 indicate that the direct influence of closed-off management on psychological anxiety accounts for approximately 58.21%, whereas

| Variables                              | Panel A: psychological anxiety | Panel B: psychological stress |
|----------------------------------------|-------------------------------|-------------------------------|
|                                        | (1)  | (2)  | (3)  | (4)  | (5)  | (6)  |
| Closed-off community management        | -0.085** | -0.076* | -0.068* | -0.118*** | -0.116*** | -0.100** |
| Reference group (30 years old and below) |     |     |     |     |     |     |
| 31–50 years old                       | -0.031 | -0.029 | -0.031 | -0.041 |     |     |
| Over 50 years old                     | -0.206*** | -0.219*** | -0.157** | -0.180*** |     |     |
| Gender                                 | -0.0697** | -0.045 | -0.078** | -0.058* |     |     |
| Reference group (high school and below) |     |     |     |     |     |     |
| University                             | -0.038 | -0.023 | -0.087** | -0.074 |     |     |
| Post-graduate                          | -0.009 | -0.004 | -0.066 | -0.052 |     |     |
| Reference group (farmers)              |     |     |     |     |     |     |
| Worker                                 | -0.116* | -0.092 | -0.141** | -0.117* |     |     |
| Civil servant                          | -0.112** | -0.095** | -0.135*** | -0.115** |     |     |
| Income                                 | 0.04  | 0.033 | 0.106*** | 0.102** |     |     |
| Household register                     | 0.012 | 0.003 | 0.001 | -0.018 |     |     |
| Positive cases in the community        | 0.238*** |     | 0.226*** |     |     |     |
| Daily sanitation of the community      | -0.033 | (0.032) | -0.021 |     |     |     |
| Disclosure of information about the pandemic | -0.088*** | (0.029) | -0.031 |     |     |     |
| Constant                               | 0.995*** | 1.140*** | 1.147*** | 1.004*** | 1.190*** | 1.161*** |
| Observations                           | 1530  | 1530  | 1439  | 1530  | 1530  | 1439  |

*Significant at the 1% level; **significant at the 5% level; ***significant at the 10% level.
TABLE 4  Influence of closed-off community management on satisfaction with and confidence in pandemic prevention

| Variables                          | Degree of satisfaction with pandemic prevention and control (1) | Degree of confidence in pandemic prevention and control (2) | Psychological anxiety (3) | Psychological stress (4) | Psychological anxiety (5) | Psychological stress (6) |
|-----------------------------------|---------------------------------------------------------------|-----------------------------------------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| Closed-off community management   | 0.126** (0.050)                                               | 0.588*** (0.060)                                           | −0.039** (0.020)           | −0.011* (0.006)          | −0.070** (0.035)          | −0.046*** (0.018)        |
| Degree of satisfaction with pandemic prevention and control |                   |                                                            |                           |                          |                           |                          |
| Degree of confidence in pandemic prevention and control |                   |                                                            | −0.223*** (0.021)        | −0.236*** (0.024)        |                           |
| Other variables                   | Yes                                                           | Yes                                                       | Yes                       | Yes                      | Yes                       | Yes                      |
| Constant                          | 2.150*** (0.086)                                              | 2.796*** (0.104)                                            | 1.627*** (0.083)           | 1.411*** (0.087)         | 1.668*** (0.093)          | 1.416*** (0.098)         |
| Observations                      | 1439                                                          | 1439                                                      | 1439                      | 1439                     | 1439                      | 1439                     |

*Significant at the 1% level; **significant at the 5% level; ***significant at the 10% level.

TABLE 5  Test and comparison of the mediating effects

|                      | Direct effect | Indirect effect | Total effect | Proportion of direct effect | Proportion of indirect effect |
|----------------------|---------------|-----------------|--------------|-----------------------------|------------------------------|
| Panel A: Anxiety     |               |                 |              |                             |                              |
| Path 1: Satisfaction | −0.039        | −0.028          | −0.067       | 58.21%                      | 41.79%                       |
| Path 2: Confidence   | −0.011        | −0.056          | −0.067       | 16.41%                      | 83.59%                       |
| Panel B: Stress      |               |                 |              |                             |                              |
| Path 1: Satisfaction | −0.07         | −0.030          | −0.100       | 66.67%                      | 33.33%                       |
| Path 2: Confidence   | −0.046        | −0.053          | −0.100       | 47.00%                      | 53.00%                       |

41.79% of the influence on anxiety is achieved through the degree of satisfaction with pandemic prevention and control. The results in Path 2 reveal that the direct influence of closed-off community management on psychological anxiety accounts for approximately 16.41%, whereas 83.59% of the influence on anxiety is achieved through the degree of confidence in pandemic prevention and control.

In Panel B, the results of Path 1 show that the direct influence of closed-off community management on stress accounts for approximately 66.67%, whereas 33.33% of the influence on stress is achieved through the satisfaction of pandemic prevention and control. Conversely, the results in Path 2 indicate that the direct influence of closed-off community management on stress accounts for approximately 47.00%, whereas 53.00% of the influence on anxiety is achieved through the degree of confidence in pandemic prevention and control. Additionally, regardless of the results in Panel A or B, comparing the mediating effect of satisfaction and confidence reveals that confidence has a greater mediating effect.
Evidently, COVID-19 became a worldwide pandemic, severely impacting daily life and health. To prevent the spread of COVID-19 and ensure the safety of residents, China adopted a closed-off management measure in communities. Based on the survey of the living needs of Chinese urban and rural residents conducted in 2020, the study analysed the relationship between closed-off management in communities and residents’ mental health. Additionally, it examined whether satisfaction with and confidence in pandemic prevention exerted a mediating effect on the relationship between closed-off management and residents’ psychological anxiety and stress.

The study found that closed-off management in communities demonstrated not only a buffer effect on residents’ psychological anxiety but also had a significant negative effect on residents’ psychological stress. Simultaneously, closed-off management in communities improved residents’ satisfaction with and confidence in pandemic prevention and control. Satisfaction and confidence exhibited a complete mediating effect on the relationship between community closed-off management and residents’ psychological anxiety and stress. This study not only enriched the relevant research on the COVID-19 but also provided reference for alleviating the psychological anxiety and stress of residents under the threat of the COVID-19. Psychological anxiety and stress are important indicators for measuring the mental health of residents. Therefore, the findings also provide a reference for formulating strategies for protecting the mental health of residents.

The study indicated that closed-off management in communities was significantly correlated with psychological anxiety and stress among Chinese adults. In other words, closed-off management in communities can alleviate the psychological anxiety and stress of Chinese residents. As is widely known, the main route of transmission of the COVID-19 is respiratory droplets and contact, whereas aerosol and faecal–mouth transmission and other routes remain to be further investigated. Epidemiological investigations revealed that the majority of cases can be traced to close contact with confirmed cases. In the process of China’s response to the COVID-19 pandemic, closed-off management was one of the main policies implemented. Closure-type policy tools were designed to create direct social distance to prevent the further spread of COVID-19. This form of policy tools includes forced quarantine, home quarantine, closure of schools, and suspension of shopping malls. As for the residents, China adopted closed-off management that aimed to restrict mobility. In dealing with public health emergencies, the effectiveness of closed-off management has been verified. Therefore, if communities were to adopt closed-off management, then the measure will effectively block the transmission path of the COVID-19 and alleviate the psychological anxiety and stress experienced by residents.

The study found that satisfaction with and confidence in pandemic prevention and control exerted a mediating effect between closed-off community management and psychological anxiety and stress. In the early days of the COVID-19 outbreak, China implemented closed-off management and gridding management. Considering that closed-off management may influence the daily life needs of residents, China designated community workers in communities to provide residents with daily necessities and solve their problems. Therefore, the effective implementation of the closed-off management model in communities has intercepted the transmission chain of the COVID-19, decreased the possibility of residents being exposed to the COVID-19, and significantly improved residents’ satisfaction with and confidence of the residents in pandemic prevention and control. Many studies demonstrated that satisfaction with and confidence in pandemic prevention and control exerted a negative effect on risk perception; that is, the higher the satisfaction with and confidence in pandemic prevention and control, the lower the risk assessment. Moreover, satisfaction and confidence positively and negatively influenced positive and negative emotions, respectively. In other words, the higher the degree of satisfaction with and confidence in pandemic prevention and control, the higher the score of positive emotions and the lower the score of negative emotions. Positive emotions alleviate inner anxiety and stress and improve mental health.

In fact, the public’s satisfaction with and confidence in pandemic prevention and control are a form of psychological recognition and evaluation regarding the operation and behaviour of the government between expectation and cognition. The psychological imbalance caused by the uncertainty of the situation and unpredictability of the
future lead to the inability of individuals to cope with the predicament, thus a psychological crisis emerges. In public emergencies, satisfaction with and confidence in pandemic prevention and control are mainly derived from the public’s recognition and evaluation of the government’s management of public emergency risks and measures while addressing public emergencies. When the public agrees with the government’s measures for emergency management, confidence in dealing with the predicament will be improved, thus reducing psychological imbalance. Conversely, the lack of satisfaction with and confidence in pandemic prevention and control will aggravate public anxiety and unease, which can lead to negative events, such as looting of materials, rumours and public panic, which impact social harmony and stability. Therefore, the lack of satisfaction with and confidence in pandemic prevention and control is regarded as an important cause of psychological crisis or panic.

Additionally, high levels of satisfaction with and confidence in pandemic prevention and control, to a certain extent, indicate that individuals are familiar with the pandemic, which enhances the sense of certainty regarding pandemic risk, such that individuals will be less likely to experience anxiety. Controllable risks can prompt individuals to invest time and effort, take proactive measures to prevent and control the spread of the virus, and improve the sense of efficacy in dealing with the pandemic. In this manner, the negative impact of the pandemic on their psychology is alleviated. One’s perception of the severity of the pandemic will increase the possibility of anxiety, whereas one’s estimation of the severity of the pandemic may directly cause fear and increase worries in relation to oneself, others and the surrounding world. These scenarios thus aggravate anxiety and increase the possibility of anxiety.

Evidently, the study has several limitations. This study uses cross-sectional data from 2020, which cannot be used to identify the causal relationship between closed-off community management and psychological anxiety or stress. Additionally, the mediating variables are satisfaction with and confidence in pandemic prevention and control and the interaction between them. This study regards both variables as a juxtaposed relationship and overlooks the use of multiple mediating effects for analysis. However, although the study did not employ the multiple mediation model for analysis, the bootstrap research method was utilized to calculate the proportion of each mediating effect. Accordingly, the study determined which mediating effect requires more attention to alleviate the psychological anxiety of residents.

5 | CONCLUSION

Because experts hold limited knowledge about COVID-19, identifying and determining the risk of the pandemic are difficult, thus translating to fear, anxiety, and stress. How, then, should the psychological anxiety and stress caused by COVID-19 be alleviated? This aspect is a practical problem that urgently requires a solution. During the early stage of the COVID-19 outbreak, the study noted that closed-off management in the community, as a policy tool that China used for addressing the spread of the COVID-19, can not only directly alleviate psychological anxiety and stress but also improve the satisfaction with and confidence of the residents in pandemic prevention and control. Therefore, in pandemic prevention and control, adopting closed-off management in the community and implementing restrictions on population mobility may block the transmission path COVID-19, thus reducing the exposure of the residents to the risk of contracting COVID-19. In addition, objectively and scientifically reporting epidemic-related information, increasing familiarity with COVID-19, enhancing sense of control, and reducing the perception of the severity of the epidemic are necessary steps for alleviating or preventing anxiety among Chinese residents.

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CONFLICT OF INTEREST
The authors declare that they have no competing interests.
ETHICS STATEMENT

The study was exempt from human subjects' approval (non-identifiable data; not human subjects).

AUTHOR CONTRIBUTIONS

Yiwei Liu designed the study and conducted the primary statistical analysis. Yiwei Liu and Deshui Zhou contributed to the writing. All authors contributed to the revisions.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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