

ORIGINAL RESEARCH ARTICLE

A Study on the Roles of Online Social Tools for the Prevention and Control of Covid-19

Pandemic: The case of WeChat

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Keywords: Covid-19, online social tools, grassroots governance, intervention and control, Wechat, Pandemic, social media and health

ABSTRACT

Background:

In recent years, especially during the Covid-19 pandemic period, online social tools have been widely used involving the fields including medical treatment, education, healthcare, governance, etc. What kind of functions do online social tools play for the prevention and control of the pandemic?

Objectives:

The main purposes of this article are to explore further the roles of online social tools, taking a most popular APP in Asia, that is Wechat, as an example, and to clarify the relevance of different social tools in different countries.

Methods:

By deep participatory observation and using the method of case study, the authors conducted in-depth interviews with 5 community workers, 2 volunteers, and 3 Party member liaisons in Yuejiyuan Community, China. Data collection methods included semi-structured interviews, content analysis.

Results:

The study identifies that online social tools play an important role in the prevention and control of the Covid-19 pandemic, which can be summarized as information dissemination and guidance, psychological counseling, emotional resonance and support, convenience and benefit to citizens. Additionally, this study reveals the powerful community governance by local and the central governments.

Main Contribution to Evidence-Based Practice:

The article puts together recent evidence from recent fieldwork on the Roles of Online Social tool for Community Governance in the Prevention and Control of Covid-19 Pandemic to support clinical decision-making and evidence-based practice. It is helpful to give effective suggestions for policy formulation and provide practical paths for anti-epidemic practice.

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What do we already know about this topic?

It has become a research hotspot in recent years by putting the role of online social tools in the context of pandemic prevention and control. Researchers probe the advantages of online social tools from different aspects, specifically in areas such as education, healthcare. The other research hotspot is the research on specific types of online social tools. There is related research on WeChat, Weibo in China. There is also related research on Twitter.

What is the main contribution to Evidence-Based Practice from this article?

This article is an update on recent evidence on the subject. Through in-depth interviews and participatory observation, a large amount of first-hand data was collected. The latest evidence from recent field work on the roles of Wechat in community governance in the prevention and control of the Covid-19 pandemic was compiled to support follow-up recommendations for Evidence-Based practice.

What are the implications towards theory, practice, or policy?

The article contributes to a better understanding of the role and value of online social tools in the field of pandemic prevention and control. Additionally, evidence is collected through empirical research to provide a basis for government decision-making and pandemic prevention practice.

Authors' Contributions Statement: Cui, Su and Wang conceptualized and drafted the article.

The rapid development of online social tools has been widely used in various fields, including education, health care, etc. Most research on the role of online social tools starts from the perspective of network social needs. It has been claimed that online social tools extend interpersonal communication in social life (Bao, Shi, & Zhang, 2009), and can help ease the pressure of interpersonal communication (Qiao, 2012). José Antonio García del Castillo claims that online social tools play an important role in preventing diseases and promoting the health of infectious diseases, especially in sexual health, physical image, especially dietary habits and overweight, as well as areas such as smoking and alcohol dependence (Castillo, et al 2020). Due to the needs of pandemic prevention and control, online social tools play to their advantages and become a relevant dimension in the prevention and control of the Covid-19 pandemic.

Literature Review

The topic has become a research hotspot in recent years due to the role of online social tools in the context of pandemic prevention and control. Researchers probe the advantages of online social tools from different aspects. In the area of education, the use of online social tools for teaching can make up for the shortcomings of traditional teaching models, break the limitations of time and space, and deal with difficulties such as limited resources during the period of pandemic (Li, L.Y., & Li, S., 2021). In the healthcare

sector, some researchers believe that social media have an amazing speed of transmission, coverage and penetration, and they also play a big role in disseminating information during the prevention and control of COVID-19 (Ahmad & Murad, 2020). In the mental health field other authors (Shah S G S, Nogueras D et al, 2020), claim that online social tools illustrate ways to cope with lockdown associated loneliness in the pandemic, and provide the tools to strengthen the most vulnerable's bonds with loved ones and society, while reducing loneliness by reason of social distancing and lockdowns during the COVID-19 crisis.

As far as studies on the particular types of online social tools, there are some inspiring findings. Twitter has been widely used in clinical practice; social media analysis tools have strong analytical capabilities and can more effectively evaluate sexual health interventions. (Torrentea, Martí, & Escarrabill, 2012). New social media tools such as Weibo, QQ, and WeChat have quickly seized the opportunity of public opinion dissemination, gain user trust in the shortest time, and lead the situation to develop in a positive direction (Dong & Chen, 2013). Some researchers have studied a specific network social tool to analyze its operating mechanism and explore its role. Authors Li Xinxiao and others demonstrated that WeChat, as a public platform, provides remote services for teachers and students in Shanghai universities during the period of pandemic prevention and control in China, popularizing pandemic prevention knowledge, and

conducting online education (Li, X.X., & Liu, H., 2021). From the comparison between general online social tools and particular types of online social tools, we can determine a more encouraging and more conducive analysis from the latter. So, this study focuses on the concerns of Wechat as the most popular online social tool in China. WeChat, as a mainstream social media tool, has a large number of users which can be accounted to 1.283 billion internationally by the end of March/2022.

Case Introduction

The sudden outbreak of the Covid-19 Pandemic has brought an additional difficulty of social research, specifically for conducting large-scale data collection. The community, as the smallest governance unit and the most active place of life, contributes a lot to the intervention and control of the Covid-19 Pandemic worldwide. In this study, the Yuejiyuan community is the field research site. Yuejiyuan Community is a community located in Jiefang District, Jiaozuo City, Henan Province, covering 1.2 square kilometers, with 2739 households and 8517 residents. Affected by the Covid-19 Pandemic, the community also implemented closed management strategy like many other local communities in China. Thus, the mobility of the residents was limited. The authors participated in the voluntary work of pandemic prevention and control in the community in July 2021, meanwhile conducted observation and interviews to collect research data and understanding on the use of Wechat.

Sampling and Participants

Through snowball sampling, the authors identified 15 research participants in the community. After explanation of the study purpose, a total of 10 subjects were willing to be interviewed, among whom 5 were community workers, 2 local party members and 3 volunteers.

Concurrently, we also used the research paradigm of network ethnography to sort out some news, videos and notifications forwarded or pushed by community WeChat groups or by participant's Wechat moments, aiming at a more comprehensive understanding of the role of online social tools under the Covid-19 Pandemic prevention and control.

Table 1 Basic Information of Community Respondents

Number	Code	Identity
01	A1	Community Worker
02	B2	Community Worker
03	C3	Community Worker
04	D4	Community Worker
05	E5	Community Worker
06	F6	Party Member Liaison
07	G7	Party Member Liaison
08	H8	Anti-pandemic Volunteers
09	I9	Anti-pandemic Volunteers
10	J10	Anti-pandemic Volunteers

Brief Introduction of Data Analysis

After collection of the first-hand data, we selected the funnel model to process and analyze the data and adopted the grounded theory as the research strategy. Firstly, interviews data was screened, and then the interviews data was conceptualized by open coding. Then, through the spindle coding, the conceptualized interview data was classified. Finally, selective coding was carried out to realize the theme structure of qualitative data and explore the roles of WeChat in community governance during the Covid-19 Pandemic.

Information Orientation and Dissemination

As an important source for the WeChat platform, the official account of local government provides users and residents with a powerful information push service. Yuejiyuan community as located in the Liberated Area. As the official account of the Liberated Area, the Window of Liberated Area issues a large number of anti-pandemic articles during the epidemic, such as the involving of the pandemic, the official responses to special events, the treatment of emergency plans, and the reports of anti-pandemic incidents. In addition, when a resident thinks that a pandemic prevention article has the value of distribution, or can arouse resonance, the article is spread out by forwarding and commenting. This can be seen in the field diary of July 3, 2021: 'In the WeChat group, people are forwarding the official account pushing on pandemic updates every day. The community's pandemic prevention measures are released the first time on the Window of

Liberated Area.'

Because Wechat groups are established according to the mutual interests, business relationship, blood lineage and geographical relations etc, the members of the group are stable. In the fieldwork site, it has been found that the discussion of the WeChat group concentrated on the prevention of the Covid-19 Pandemic in the community, and community residents pay more attention to the impact of the Covid-19 Pandemic on themselves. In the discussion developed in community groups, the final foothold was in the governance of the community, including community governance policy, access to personnel information, pandemic situation, etc. 'Our pandemic prevention needs to hear the voices and needs of the mass,' it is said by C3: 'We have a WeChat group for community residents where we discuss real issues facing the community and our control strategies in the Covid-19 pandemic.' Additionally, community workers established a work group for pandemic prevention and control to push pandemic-related notifications and work arrangements. This point can be verified in the interview content of D4: 'Our community has built several groups, there are large groups of residents in the community, there are volunteer work communication groups, there are party members liaison group and community staff group. So, the ordinary policy release, data statistics and reporting was accomplished through online Wechat groups. 'The conjunction of information dissemination through official account is the speedy spread of disinformation or rumors. In fighting with the disinformation and rumors, the local community workers develop a quick respond mechanism. Just like D4 said in the interview, 'during the Covid-19 Pandemic, there are a huge amount of rumors which can affect the residents mindset. So, whenever there is information sharing in the group, we will verify it by tracing the source of it and report to superior management department for the authenticity of the information. If it is authentic, it can be spread. If it is false, the source of the information will be blocked and the disinformation will be cleared. In this way, we can reduce the panic of community residents.' This mechanism prevented residents from spreading any false information concerning the pandemic prevention measures.

Emotional Resonance and Support

After nearly one month's fieldwork, it was found that even in the same community, face-to-face

communication was relatively difficult. As a consequence of lockdown or compulsory quarantine, which could happen whenever there was a new confirmed case in the local area, the residents were prone to experience negative emotions, which were posted through Wechat. Those negative public opinions were not conducive to the pandemic prevention and control. Meanwhile, the residents maintained contact with other individuals outside the community, not only maintaining emotional connection but also alleviating uneasiness through Wechat. Therefore, full attention to the positive role in emotional governance was given, and the striving to create a good environment for public opinion are crucial as also argued by other authors (Tang, & Wang,2019).

As interviewee E5 said, 'Our official account has posted some positive energy videos and the employees transferred them to Wechat Groups and the populace, in order to spread positive energy online and alleviate negative emotions. 'All those endeavors were aiming at helping to encourage morale, enhance confidence and better adapt and prepare to post-pandemic life. There was also a considerable number of reports on volunteer work, aiming to encourage the public to participate in the voluntary work of the Covid-19 Pandemic prevention and control, and enhance the public's social responsibility and sense of belonging. Through the interaction on WeChat, people could find their way to solve their confusion, learn from the advanced experience of others, interact effectively with others, produce emotional resonance, support each other emotionally, and find better solutions in communication.

Psychological Counseling

'During the period, everyone was more anxious. Some people complained in the group or did not cooperate with work. (F6). 'To cope with this challenge, the community committee organized psychological consultants and college students as assistants to form volunteer teams for the first time, and also to establish psychological support. WeChat group which could perform psychological counseling online to anyone who needed it. Psychological consultancy supplied one-to-one counseling services to the members of the group and post effective psychological advice to the group.' Apart from the professional advice, there were spontaneous and nonprofessional form of psychological support. The strong sense of intimate

relationship among members was the key factor to successful support. Through video chat, voice bar and texting services, which are offered through Wechat, relatives and friends can comfort each other and maintain close contacting. Local residents can obtain reliefs and alleviate the psychological discomfort state mainly by these two approaches.

Convenience and Benefit to the Local People

For the sake of reducing the spread risk of the pandemic, the passage of residents was controlled through travel code and health code which could reveal the owner's daily activity routine and the possibility of contagion at the entrance of the community. ' Our community has launched a one-code pass. Through the scanning function of WeChat, the travel code and health code are combined, so that it is particularly convenient for residents to check in and out', A1 said. The combination and upgrading of the QR code bring great convenience to the local people. Furthermore, the local people can deal with various businesses with remaining indoors through the Wechat official account. For example, in the service function of the Medical Security Bureau of the Liberated Areas, there is a hyperlink to the Wisdom Society, which offers five kinds of insurance and fund services. All could be processed online. Including the booking of nucleic acid test and the filing of travel activity, a number of control activities could be handled by different options and procedures released by Wechat.

Discussion

WeChat, as a favorite and powerful online social media tool, has endowed four roles which were: 1) information, orientation and dissemination; 2) emotional resonance; 3) psychological counseling; and 4) convenience and benefit to the populace. It is exceedingly useful for timely updating Covid-19 Pandemic trends in the administration area and carrying out the most suitable Covid-19 Pandemic prevention arrangements according to the changing condition. In this sense, Wechat was essential to the local governance, to the maintenance of social order and social control during Covid-19 Pandemic.

Despite the fundamental roles that Wechat played, some disadvantages also need to be mentioned. Because of the real-name certification requirement of Wechat, there were some violations against people's

privacy. Additionally, with the powerful and vigorous censorship of Wechat (similar to that of twitter, Google and Youtube), the daily activities and speech online developed by the residents were also under strict supervision. It has become obvious that Wechat, as all key online social tools used around the world during this period, can become a compelling instrument of control which may pose threats to human rights.

In spite of all successful aspects, during the fieldwork undertaken for nearly a month, the authors of this study found certain issues which deserve some concerns. Firstly, the Wechat is not friendly to the elderly population. It is quite challenging for the aging people to use Wechat to obtain the necessary services. Secondly, the function of WeChat is limited. Nowadays, nucleic acid reservations and vaccine vaccination can be achieved through WeChat, but there are still some deficiencies in the registration of return home information and pandemic risk warnings. In many places, the registration of return information relies on WPS files and WeChat dialog boxes.

In the future, WeChat functions should be further optimized, the return home information registration function and a pandemic risk automatic information push function should be established. It is even possible to establish a national unified nucleic acid reservation and vaccine vaccination platform to break regional differences and achieve national information and function sharing. In addition, the psychological counseling function of WeChat can only be realized through WeChat groups and circles of friends, and its psychological counseling effects and scope are limited. This can be improved by establishing online psychological counseling services.

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