The Role of WeChat in Supporting Elderly Connectivity During COVID-19 Lockdown in Guangzhou.

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Abstract. This research investigates the motivations and impacts of WeChat usage among older adults in Guangzhou during the COVID-19 pandemic lockdown. Through qualitative interviews, this study explores how older adults in Guangzhou emotionally experience WeChat use during the lockdown. Findings indicate that WeChat played a vital role during the pandemic, facilitating emotional connections, daily life needs, information access, and positive psychological development among older adults. It fostered socialization, emotional support, and resilience, challenging conventional notions of elderly social media usage and highlighting diverse technological habits. Theoretical implications emphasize WeChat's multi-functionality and the varied ways older individuals employ it. Practical implications stress the importance of social media in enhancing social participation and quality of life for older adults, especially in combating loneliness. WeChat's utility during emergencies, like epidemics, is underscored. Addressing the digital divide and ensuring equitable digital access are crucial to preventing older individuals' marginalization in the digital age. The study acknowledges limitations, including a small sample size and focus on a specific urban area. Future research directions involve expanding the sample, employing quantitative methods, enhancing sample representativeness, and examining diverse regions and demographics. Ongoing studies can capture evolving usage patterns and experiences of older adults in a changing technological and societal landscape.

1. Introduction

1.1. Background of the Study

Globally, the outbreak of the COVID-19 pandemic has led to the widespread adoption of technology and social media on an unprecedented scale. These technological and social media applications aim to ensure public safety, provide access to information, enhance productivity, and foster social connections. Although elderly individuals may have a limited understanding of technology and tend to use social media less frequently than younger generations, previous studies have indicated that social media use has a positive impact on maintaining social relationships and preventing loneliness among older adults. Additionally, it has the potential to improve health literacy by providing access to health-related information [5].

The COVID-19 pandemic has profoundly altered psychological and social environments globally and has introduced new challenges in the way data is collected. For older adults, in particular, social isolation and loneliness have become significantly more prevalent issues. An Australian survey found that pandemic-induced loneliness was the most prevalent cause of personal stress [4]. As older adults were among the first groups advised to stay at home, they faced stricter social distancing measures [2]. Thus, there is a proposal to improve information and communication technologies (ICTs) for the older adult population as a potential strategy to combat social isolation and loneliness.

1.2. Purpose of the Study

Previous studies have examined the relationship between the use of social media for COVID-19-related information and symptoms of anxiety. These studies have also investigated how anxiety symptoms mediate the relationship between informational social trust and anxiety, as well as the impact of anxiety symptoms on informational social trust and COVID-19 safety behaviors among older adults [6]. Domestically, research has predominantly employed quantitative methods to explore new media usage among the elderly [10]. Nonetheless, these studies have typically emphasized quantitative analyses, with qualitative aspects receiving limited attention. Furthermore, earlier research has primarily focused on smartphone utilization by older adults, with WeChat use receiving comparatively less scrutiny [13].

The objective of this study is to assess the effects of WeChat usage on loneliness and social isolation among elderly individuals in Guangzhou during the COVID-19 lockdown. Employing qualitative research methods, this study aims to gain a more comprehensive and in-depth understanding of older adults’ experiences and perceptions regarding WeChat usage.

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1.3. Research Questions

Building on this, the study proposes the following research questions: What are the motivations behind and effects of WeChat use among older adults in Guangzhou during the COVID-19 lockdown? With regard to social media use, what experiences and sentiments do older adults in Guangzhou have concerning WeChat?

1.4. Theoretical and practical significance of the research questions

Theoretically, this study augments the existing body of knowledge regarding social media use among the elderly. While prior research has investigated smartphone utilization by older adults, the impact of specific platforms, such as WeChat, has not been extensively studied within this demographic. Moreover, this research probes into the motivations behind WeChat use by older adults during the pandemic lockdown, offering a novel viewpoint for understanding their social necessities and behavior patterns. It also examines the interplay between the digital divide and the generational gap, providing both empirical evidence and theoretical reinforcement for these critical concepts.

Practically, the findings of this study offer actionable insights for governments and organizations in crafting ICT policies tailored to the needs of older adults. By enhancing the understanding of social media use among the elderly during health crises, policymakers can formulate more effective strategies. Additionally, the insights gained into the motivations and impacts of WeChat use could guide social media platforms toward implementing more age-friendly features. Recognizing how older adults employ WeChat to mitigate loneliness and anxiety during the pandemic could not only improve their life quality but also serve as a potent mechanism for health promotion and education. It is essential to ensure that vital health information is conveyed accurately and efficiently to this vulnerable group.

2. Literature Review and Theoretical Framework

2.1. Impact of the COVID-19 Pandemic on the Social Life of Older People

Various studies have scrutinized issues pertaining to the formulation and execution of pandemic prevention protocols. These measures may have inadvertently exacerbated a "digital divide," stemming from a lack of consideration for the specific requirements of the elderly. In contrast, older individuals in rural settings, recognized as a vulnerable group, demonstrated distinct media usage patterns and protective behaviors during the COVID-19 pandemic. Intergenerational exchanges within this age group were notably characterized by shared familial emotions through new media, although preferences varied with health and educational statuses. For instance, television's role in encouraging the adoption of COVID-19 protective practices among the elderly was minimal. Yet, the plethora of mobile media and the literacy of their children significantly influenced their accurate understanding of the pandemic. Conversely, the elderly endorsed television as a trustworthy medium for rectifying misinformation, largely due to their trust in the credibility of official sources.

Addressing the digital divide by enhancing technological and informational infrastructures, specifically to facilitate elderly access to health code systems is essential for pandemic management. Improvements, along with digital literacy training, can bridge knowledge gaps and meet emotional needs, thereby reducing the digital divide among older individuals. However, persistent economic disparities could mean that the digital divide, although lessened, may not be completely eliminated in this demographic. Collectively, these studies emphasize the need to fully accommodate the needs of older populations in the development of preventive health strategies and to implement comprehensive measures to address the digital divide in an age of widespread digitalization.

2.2. Prevalence of Mobile Internet and Social Media Among Older People

Prior research has thoroughly investigated the engagement of older individuals with electronic devices and media in the digital era. These studies have explored facets such as the older population’s willingness to learn, the convenience of communication, and the challenges presented by generational gaps and digital divides.
Despite limitations related to age and education, older adults are generally receptive to adopting electronic products and committed to learning about them [10]. This indicates a positive attitude and motivational disposition among the elderly toward digitalization. Mobile phone use among older people has facilitated communication, especially during the pandemic, with the ubiquity of smartphones enabling remote interactions and reducing the necessity for physical gatherings—underscoring the practical benefits of digital technology in their lives [7].

However, a generational divide, particularly in mobile phone adoption and usage between older individuals and their younger counterparts, with the younger generation often assisting their parents in learning how to use these devices [12]. The medium itself contributes significantly to the generational divide, suggesting that the surge of digital media has given rise to a new form of digital divide superimposed upon the traditional generational gap, resulting in a ‘digital generational gap’.[11] Synthesizing these findings, it becomes apparent that while older people display a willingness to engage with and positive attitudes toward electronic products in the digital age, and digital technology serves to facilitate communication and mitigate the impacts of the pandemic, the persistent issues of generational gaps and digital divides present a multifaceted challenge that is further complicated by the media’s influence.

2.3. WeChat as the Main Social Media Platform Used by the Elderly

Older adults in Shenzhen exhibit high levels of adoption, sustained use, and frequent engagement with WeChat, primarily for its social functionalities [11]. In Shenzhen City, the introduction of WeChat has notably enhanced leisure and social interaction among the elderly. "Social loneliness," often associated with WeChat communication, is not necessarily inherent to the platform [8]. They encourage proactive participation in social activities to combat this perception. WeChat has played a crucial role in expanding social networks, deepening interpersonal relationships, and facilitating online engagement for entertainment purposes.

Additionally, mixed-methods study established a high rate of WeChat usage among the elderly [9]. The app meets their ‘uses and gratifications’ needs and acts as a tool against ‘social loneliness’ by fostering communication. To some degree, WeChat has ameliorated the challenges associated with an aging population. Nevertheless, the persistent issue of the digital divide is still within this demographic [9]. He emphasizes the essential role of the younger generation in offering digital literacy support to their elders.

2.4. Application of Social Support Theory in the Use of WeChat by Elderly Individuals

Previous studies have utilized various theoretical frameworks to examine new media use among the elderly. For instance, the triple collocation theory was applied to explore the relationship between smartphone use styles, content, and usage locations among the elderly, delving into the interactions between these elements [7].

3. Research methodology

3.1. Research Design

This study comprised seven interviews and one focus group session. These interviews allowed for a reconstruction of the past, interpretation of the present, and predictions for the future [1]. During the interviews, participants reflected on their experiences and perceptions before, during, and after the COVID-19 lockdown in Guangzhou, providing seven distinct perspectives. The focus group, on the other hand, facilitated a dynamic exchange of ideas, enabling participants to discuss and deliberate on various viewpoints.

The research design assumes that participants will offer candid responses. However, a limitation is the homogeneous age demographic of the interviewees, who are all seniors with an average age above 68. With advancing age, some may face challenges with memory retention and articulation, which could affect their ability to fully recount their experiences or express their viewpoints. There is a risk that some interviewees might not accurately convey their thoughts or emotions pertaining to the Guangzhou lockdown.

Nevertheless, given that participation in the interviews and focus group was voluntary, and considering that older individuals can offer extensive life experiences, this approach has the potential to yield rich and insightful data for the study.

3.2. Participant Recruitment and Sample Selection

For respondent selection, the researcher purposefully targeted older individuals proficient in using WeChat, adhering to the age categories that define seniors in China. This strategy ensures that those who cannot use WeChat are excluded from the interviews, thus optimizing both time and resources.

3.3. Data Collection: Design and Process of Qualitative Interviews

In this study, qualitative interviews were employed. The researcher sought elderly participants in Guangzhou who were open to engaging in in-depth, face-to-face discussions. Data was meticulously gathered during these individual interviews. Following the collection phase, the researcher summarized and coded the interview data, which facilitated the formation of experimental conclusions.

As the principal investigator, the researcher meticulously crafted the interview questions and
accompanying sub-questions to keep the focus sharp throughout the investigation. The researcher then conducted realistic simulations in the homes of the elderly to fine-tune the approach, adjusting speech speed, tone, and eye contact to suit the participants' needs.

The formal interview process began in a teahouse where consenting elderly participants were invited for morning tea. This pre-interview gathering allowed for a relaxed exchange of basic information and acclimatization to the interview setting.

The actual interviews were tailored to the needs of each participant. For those who could not engage for long due to health issues, the researcher posed direct questions and used straightforward language to elicit prompt responses. Seven elderly individuals ultimately participated in the study. With their permission, the sessions were audio-recorded for accuracy.

Post-interview, the researcher transcribed the recordings to text, summarizing them to identify patterns and draw insights. The analysis revealed commonalities and distinct characteristics among the participants, which informed the researcher's understanding of WeChat's role for the elderly during the pandemic management.

3.4. Development of Interview Questions

The specific questions for this interview were as follows:

- Did you use WeChat to stay in touch with family and friends during the COVID-19 lockdown, and if so, did this help reduce feelings of loneliness?
- Did you utilize WeChat to obtain information about COVID-19, and if so, has this anxiety influenced your frequency or manner of using the app?
- Have you ever felt anxious or worried about COVID-19 information while using WeChat, and if so, has this anxiety influenced your frequency or manner of using the app?
- Do you believe that anxiety affects your trust in the social information shared on WeChat, and do you view this impact as positive or negative?
- Have you engaged in discussions or shared information about COVID-19 on WeChat? How does participating in these activities affect your emotions and behavior?

3.5. Interview Process and Record

<table>
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<tr>
<th>Meeting</th>
<th>Date</th>
<th>Duration</th>
<th>Location</th>
<th>Participants</th>
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<td>18mins</td>
<td>Tea house</td>
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4. Result

4.1. Open coding

4.1.1. The use of WeChat by the elderly during the pandemic closure period

During the Guangzhou pandemic lockdown, the elderly—a particularly vulnerable societal group—risked losing frequent contact with the outside world. However, WeChat, as a mainstream communication tool, served as a vital platform for them to stay connected with friends and family. Many elderly users expressed that WeChat provided a sense of closeness through ‘voice calls’ and ‘video calls,’ essentially becoming their ‘24-hour contact’ method for interacting with the world and accessing information.

In-depth discussions revealed that WeChat's utility extended beyond just keeping in touch; it included features like shopping through mini programs, having groceries delivered, and assistance with tasks such as disposing of garbage. During the lockdown, the elderly's understanding of these services expanded, along with their appreciation for the measures in place during the pandemic.

Their adeptness at navigating WeChat—whether it was sourcing information, verifying its credibility, or embracing functions beyond socialization—illustrates their proactive adaptation and cognitive growth in the face of social restrictions imposed by the pandemic control.

4.1.2. Impact of WeChat on Older People's Social Life During the Pandemic Closure

Interviews revealed that during the pandemic, social life became a key means for the elderly to mitigate loneliness. Many shared photos of their daily activities on WeChat and greeted friends online, with some noting that the pandemic led to reconnections with long-lost acquaintances. The features of WeChat, especially ‘video calls’ and ‘voice calls,’ were highlighted for their role in providing comfort and joy. Elderly individuals with children abroad used video calls to overcome the distance, significantly alleviating their longing and concerns. Moreover, video calls offered a way for those distressed by the lockdown to connect with familiar faces, share warm greetings, and attain emotional stability amidst the uncertainty of the pandemic.
4.1.3. Impact of WeChat Use on the Mental Health of the Elderly

The psychological well-being of the elderly garnered additional concern during the blockade. From the interviews, it was clear that the prolonged lockdown induced panic and disseminated negative information, causing loneliness and symptoms of anxiety. Some seniors likened the lockdown to being in "prison," experiencing boredom and tedium. Before the pandemic, community work and other engagements facilitated information exchange, which was suddenly halted, leading to an information void and a heightened sense of isolation.

The elderly demonstrated diverse methods for discerning the veracity of information about the pandemic. Some relied on personal judgment, correlating new information with past experiences, though this could be subjective and prone to error. Others trusted only official sources, disregarding anything outside of government or community announcements. Interestingly, a third perspective emerged where the truthfulness of the information was not actively vetted. Instead, this group approached information—true or false—as a cognitive process, embracing new knowledge and social realities regardless of its accuracy. This 'cognitive' approach seemed to foster a more optimistic outlook, helping them to adapt more readily to the challenges posed by the pandemic.

4.1.4. Summary of Open Coding

The open coding process yielded several concepts, including reduced contact with the outside world, WeChat as a communication tool, the use of voice and video calls, applet functionalities (shopping, running errands, discarding rubbish, etc.), processing and recognition of information, learning and cognitive processes, social life as a remedy for loneliness, engagement in WeChat groups and Moments, reconnecting with friends, the importance of voice and video calls, long-distance family communication, emotional support, and stability.

4.2. Axial Coding

The transition from open to axial coding in this study was as follows:

4.2.1. WeChat as a Socializing Tool in the Context of the Pandemic

WeChat's role as a social tool during the pandemic included codes indicating: a bridge to the outside world; an augmentation of social life through WeChat groups, sharing in Moments, and voice and video calls; and practical uses such as shopping and running errands. Thus, during the pandemic, WeChat emerged as a crucial conduit for the elderly to connect with society. Beyond basic text communication, WeChat's diverse social features—like groups, Moments sharing, and calls—greatly enhanced the seniors' social experiences and interactions with the world. WeChat's practical functions, catering to everyday needs, proved invaluable for older adults during the pandemic.

4.2.2. Psychological Reactions and Adjustments of Older Adults

The psychological reactions and adjustments of the elderly during the pandemic involved feelings of loneliness and anxiety, alongside the emotional support afforded by WeChat, and their various attitudes and coping strategies concerning the crisis. Confronted with the emotional toll of the pandemic, the elderly actively sought connections with the outside world to alleviate distress. WeChat served as a vital emotional anchor during this time, offering solace, whether through video chats with family or consoling exchanges with peers online. These connections fostered a positive mindset among the elderly, helping them approach the pandemic's challenges with resilience and optimism.

4.2.3. Information Reception, Processing, and Recognition

This category encompasses the dependence on information reception; diverse methods for discerning truth from falsehood, such as empirical inference, reliance on official sources, and a cognitive approach to processing information. The continuity of information flow remains critical for the elderly, especially amid pandemic-related communication constraints. They depend heavily on WeChat and other media for news and updates. The strategies they employ to ascertain the veracity of information vary some use their life experiences for judgment, others trust solely official announcements, and some adopt a learning-oriented mindset, viewing the intake of information—accurate or not—as a cognitive process. These varied approaches to information assessment reflect the elderly's multifaceted perspectives and adaptive strategies in the digital era.

5. Conclusions and Discussion

5.1. Results and Discussion

This paper examines the use and influence of WeChat among older adults in Guangzhou during the COVID-19 lockdown and examines the motivation and effect of older adults in Guangzhou in using WeChat during the COVID-19 epidemic blockade through the analysis of qualitative interviews, as well as the experience and feeling of older adults in Guangzhou in using WeChat in terms of social media use.

In terms of the motives and effects of WeChat use by older people in Guangzhou during the COVID-19 epidemic blockade, this paper finds that during the COVID-19 epidemic blockade, older people in Guangzhou lost frequent contact with the outside world because of their disadvantaged social status. WeChat
became their main tool for maintaining emotional ties with friends and relatives, meeting daily life needs, and obtaining and sharing information. It not only enhances the convenience of their lives and alleviates their sense of loneliness, but also promotes their positive psychological development and their learning and acceptance of new technologies.

In terms of social media use, the experience and feelings of WeChat use among older adults in Guangzhou, this paper found that during the outbreak blockade, older adults in Guangzhou experienced rich social exchanges via WeChat, including text, video, and voice calls, especially with distant family members. Such communication provided them with emotional support and comfort, which helped to stabilize their emotions and alleviate concerns about the epidemic. In addition to social functions, WeChat's shopping and errand-running functions also met their practical needs. At the same time, they received information through WeChat and learned how to recognize the authenticity of information and perceive new things. Overall, WeChat not only met their daily needs but also helped them to actively cope with the psychological challenges of the epidemic.

Based on these findings, this study concludes that WeChat played a crucial role for older adults in Guangzhou during the epidemic, not only fulfilling their socialization, information access, and daily life needs but also providing them with emotional support. Elderly people demonstrated a high degree of adaptability and resilience to modern technology and information during this special period, and they were not only able to utilize the various functions of WeChat to increase the convenience of their lives but also successfully coped with the psychological challenges posed by the epidemic through WeChat. Overall, WeChat provides great support for older adults in Guangzhou in terms of functional, emotional, and psychological adaptation.

Both this paper's study and previous studies explored the new media use of older adults during the COVID-19 epidemic but with different foci and conclusions. This paper concentrates on the motivations, effects, and experiences of WeChat use by older adults in Guangzhou during the New Crown Epidemic blockade, which emphasizes the important help that WeChat provided to older adults in terms of functionality, convenience, emotional support, and psychological adaptation. In contrast, previous studies have examined the new media use of older adults more macroscopically. For example, the use of smartphones among older adults was explored through the triple collusion theory, emphasizing that smartphones fulfilled older adults' "need to save face" and avoided the risk of neo collagenic infections during the epidemic [7]. Overall, this paper explores the specifics and benefits of WeChat use among older adults in Guangzhou from a micro perspective, while previous studies have analyzed the use of new media by older adults and the socio-cultural factors behind it from a macro perspective.

The results of this study have both theoretical and practical significance. In the theoretical sense, the utilization of WeChat among the elderly population extends beyond the simple transmission and exchange of information. It serves as not only a communication tool, but also a crucial link for emotional connection. This study reveals how WeChat is used by the elderly population to strengthen interpersonal relationships and emotional ties in specific social and cultural contexts. It challenges our traditional understanding of the single function of communication software and highlights the importance of revisiting and expanding its functions to respond to the diverse needs of the elderly. In addition, the study highlights the wide range of ways in which older people use WeChat. It emphasizes that their technological habits, abilities, and needs can differ significantly. This serves as a reminder that future research should carefully consider the diversity within this group in order to accurately capture their behaviors and needs.

In a practical sense, as the population ages, the social participation and quality of life of older people become increasingly important. Social media platforms like WeChat play a notable role in this regard, particularly in helping older individuals cope with feelings of loneliness and isolation. This suggests that we need to carefully consider how to utilize technology in order to enhance the social participation of older individuals when developing social policies and conducting urban planning. In addition, this study also reveals that WeChat is effective in helping older people stay connected with the outside world during emergencies, such as epidemics. Therefore, in the future, in similar situations, society should prioritize the utilization of new media technologies to ensure that individuals of all ages can maintain connectivity with the outside world. However, the study also found that older people struggled to access relevant services or fulfill specific needs if they did not have a smartphone. This sheds light on the digital divide and emphasizes the importance of ensuring equal access to digital resources for everyone, particularly in emergency situations. Therefore, in addition to utilizing new media technologies to improve the external connections of older individuals, we must also consider those who do not possess smartphones or are unfamiliar with these technologies. It is crucial to provide them with the essential training, resources, and support to prevent their marginalization in the digital society.

5.2. Study Limitations and Future Research Directions

5.2.1. Limitations of the Sample Size

The qualitative interviews used in this study included only seven older participants, which constitutes a relatively small sample size. Although qualitative research does not aim to statistically analyze large samples, but rather seeks in-depth understanding and description, it is still important to acknowledge that small sample size may limit the generalizability and translatability of the findings. Future studies may consider expanding the sample size to obtain a larger and more diverse dataset.
5.2.2. Limitations of the Research Methodology

The current study relied solely on qualitative interviews as the primary method of data collection. In order to gain a more comprehensive understanding of the current situation, motivation, and effects of WeChat use among older adults, future research could consider incorporating other research methods, such as quantitative questionnaires, experimental designs, or observations. In particular, quantitative research can provide clearer and more precise evidence for the findings, as well as identify the relationship between variables.

5.2.3. Limitations of Sample Representativeness

As the sample was primarily selected through the researcher's personal contacts, this may introduce selection bias and limit the sample's representativeness. For example, these older participants may all have similar social backgrounds, educational levels, or economic statuses, which would affect the generalizability of the study. Future studies may adopt random sampling or multi-district sample selection methods to ensure the diversity and representativeness of the sample.

5.2.4. Limitations of the Sample Area

Only elderly people in the city of Guangzhou, a first-tier city, were studied, and their characteristics are significantly different from the rest of China. Therefore, future research should include elderly people in rural areas and other cities.

5.2.5. Directions for Future Research

Given the limitations mentioned above, future research could be extended to different regions and larger sample groups to enhance the generalizability of the study. In addition, considering that the usage needs and experiences of older people may change over time and with technology, conducting regular studies would help capture these changes and provide timely and relevant recommendations for policy formulation and the design of social media platforms.

References