Helping the Silent Elderly: A study on the effect of narrowing the information gap and knowledge gap in the pure elderly family

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Abstract: In the context of COVID-19, the implementation of policies in closed- off managementand digital epidemic prevention measures for elderly families is basically completed by grassroots community staff, and the community will take the initiative to provide door-to-door services and notification through interpersonal communication, so as to narrow the information gap in epidemic prevention and control.This study focuses on the human-to-human transmission activities between pure elderly families and community workers in the context of COVID-19. Qualitative methods are adopted to explore the driving patterns and effects behind the human-to- human transmission between pure elderly families and community workers through participatory observation and in-depth interviews.It was found that the intensity of the relationship between pure elderly family members and community workers changed from weak to strong in the context of the epidemic. The media literacy improvement of pure elderly family members during the epidemic mainly depends on repeated face- to-face interpersonal communication by community workers, and the elderly are more willing to accept it.The model of interpersonal communication is directly effective, but it is inefficient and unable to fundamentally bridge the digital divide of the elderly.

Key words: Pure old family;Digital divide;Person-to-person transmission;epidemic prevention and control

1 Introduction

Since the outbreak of COVID-19, digital technology has become an important weapon in epidemic prevention.Full coverage of trip code big data is applied in trip tracing, artificial intelligence technology helps contact-free service, and 5G communication technology ensures the smooth progress of onlineresumption of work and school .However, the benefits brought by the adoption of new technologies are not equal to all members of society. As new technologies continue to emerge, new digital gapsand digital divide will also appear.

On April 1, 2022, Shanghai entered a state of static management due to the impact of COVID-19.During this period, a begging letter from residents of The Second Village of China Normal University circulated online, describing that many elderly people living alone in the community have suffered from lack of food and drink since the lockdown on April 1.As early as the seventh national census data showed that China's population

aged 60 and above has reached 264 million.The number of empty nesters in China has exceeded 100 million, according to the fourth sample survey on the living conditions of the elderly in urban and rural China.Despite the large size of China's elderly population, most of them live outside the digital life and are not as active in the Internet as young people, so they have received little attention from public opinion.It is an important task to protect the elderly, especially those in the elderly families, as the epidemic is becoming normal.

In view of the "digital divide" problems faced by many elderly people who cannot access the Internet or use smart phones, encounter inconveniences in daily life such as travel, medical treatment and consumption, and cannot fully enjoy the convenience brought by intelligent services, The State Council general office on the elderly should be resolved using intelligent technical difficulties of the implementation of the plan (countries do hair [2020] no. 45) and the national health committee of the national working committee office on aging on the further notice helpage "wisdom" in 2022 (the health aging letter [2022] no. 94) put forward a series of helpage measures, the special channel for "no code service", "love post for the elderly" for medical convenience service, agent registration channel, "love seat" for information assistance for the elderly, etc., focusing on the actual needs of middle-aged and elderly people in regular epidemic prevention and control.

We have noticed that for pure elderly families, the implementation of the policy is basically completed by the hands-onteaching of community grassroots staff and volunteers, and the community will take the initiative to provide door-to-door services and notifications through interpersonal communication, so as to narrow the information gap in epidemic prevention and control.We also observed that older people take more time to understand directive policies, and community workers aremore stressed and less productive.In this context, it is of great significance to study the driving patterns and effects behind interpersonal communication between pure elderly families and community workers.

2 Literature Review

2.1 A review of studies on pure old families

There is still no clear definition of "pure old family" in academic circles. Liu Tongchang believes that the concept of the elderly living alone and empty-nesters are the same, which refers to the elderly aged 60 and above who live alone or with a couple.Peng Liang believes that living alone refers to a way of life, which describes the living conditions of the elderly living alone.In this paper, the "pure elderly family" is defined as the family with all the family members over the age of 60, including: the elderly family living alone (no matter how far away from the children's home address, as long as one person can be identified as the single-living elderly family);Households with both spouses aged 60 or above;A family of elderly people living with their parents or other elderly relatives (at least one of whom is aged 60 or above).

As for the research on "pure elderly family", only 24 relevant literatures can be found by searching "pure elderly family" as the subject word on The Website of China National Knowledge Foundation, whose research fields are almost all focuse on family structure and intelligent elderly care service.Scholars Li Fen and Gao Xiangdong studied the environment and demand of urban pure elderly family pension service from the perspective of family structure change.Based on the special physiological and psychological characteristics of the new elderly, scholar Bai Ruyue explored the design of smart home medical products for the new elderly.Yu Lixin, a scholar, made a comparative analysis of old families and pure old families on the

consumption choices and driving factors of rural elderly families.Then, "old people living alone" was used as the keyword to search, and a total of 2113 literatures were found. After selecting "News and media" as the subject, only 19 literatures were found and the correlation was weak.This study will focus on the group of pure old family members and explore the dilemma of filling the information gap and knowledge gap.

2.2 A review of research on the digital divide in the elderly

The digital divide first appeared in a 1989 review article in a British publication. In 1999, the Us National Telecommunication and Information Administration (NTIA) defined the digital divide as the difference between "information rich group" and "information poor group" in information communication technology. It can also be translated as "information gap".There is still no unified standard for the definition of "digital divide".A popular definition of "digital divide" refers to the differences in the mastery and use of digital technologies in the information age due to geographic, income, educationallevel and race, and the resulting inequalities faced by different groups in society.

Specifically, in terms of domestic studies on the elderly and digital divide, relevant literature was searched on CNKI, which mainly focused on the following aspects: cause analysis of the digital divide for the elderly, exploration of the bridging path and effect research.Scholars Wang Yanling and Jiang Yining studied from the perspective of bridging the path, and believed that the government should lead, enterprises should respond, and that communities and social organizations should actively participate, to help China's "silver generation" better integrate into the digital life;Liu Jiaomeng, a scholar, focuses on the effect research and focuses on the family field, and believes that family digital feedback, an intergenerational interaction model, can effectively narrow the digital divide.Scholars Liu Chihao and Qiu Gan believe that peer groups, such as friends, colleagues and neighbors, can be an important option to help the elderly achieve intergenerational support and digital access.

The existing literature on the digital divide of the elderly generally focuses on the macro perspective of social synergy to help the elderly and the micro perspective of family and peer digital feedback. This study focuses on the effect of interpersonal interaction between community workers and pure elderly family members for bridging the digital divide.

2.3 questions

From the perspective of person-to-person transmission in the community, this paper will take pure elderly family members as research objects and try to answer the following questions: Simple community help has always been available, why is it particularly important in the context of the epidemic?In the context of the epidemic, are there specific education activities aimed at improving the media literacy of the elderly?How does interpersonal communication play a role in bridging the digital divide dilemma of pure old families?What effect has been achieved?

3 The research methods

This paper mainly adopts the research methods of participatory observation and semi-structured interview to

try to answer the above questions.

A total of 12 key samples (including 2 pre-interview subjects) were selected for this study, including 5 community workers and 7 purely elderly family members.The interviewees first included some representative cases, and selected different factors to screen the samples, taking into account gender, occupation, educational level and other factors.Secondly, snowballing sampling is used to obtain samples, which on the one hand improves the information credibility of the studied object and on the other hand can efficiently collect more samples.The interviews were conducted by one-to-one face-to-face interviews, and the total duration of each interviewee was no less than 30 minutes.

According to the research question and purpose, a preliminary semi-structured interview outline was developed and used to interview 2 pre-interview subjects. After the pre-interview, the interview results and the feedback of interviewees are summarized, and the final interview outline is formed after modification.

The content of the interview with community workers mainly includes: the time line of docking with pure old families;specific work content;how to gain old people's trust and support for work;difficulties encountered in the work and experience.

The content of interview with pure old family members mainly includes: basic family information and other information;acceptance of information on various outbreaks;willingness to cooperate with community workers;evaluation of community workers;difficulties and experiences in contact with community workers during the epidemic.

In the process of interviews and research, researchers tried their best to avoid the four ethical issues and deviant behaviors emphasized by scholar al-an Bryman :(1) damage to participants;(2) Do not use not-informed consent documents or materials;(3)Violating the privacy of study participants;(4) Deceiving participants.In addition, if the interviewees have any questions or dissatisfaction during the interview, they can keep silent or quit during the interview. The interview materials that the interviewees declared they did not want to make public were not included and cited in this study.

In addition, as a community volunteer, I followed community staff to carry out voluntary services to pure elderly families for many times, and entered the field of interpersonal communication for participatory observation.

4 The conclusion

4.1 The relationship between community workers and pure elderly family members is strengthened under the epidemic

Before the outbreak of the epidemic, community workers had maintained a certain degree of contact with pure elderly family members. As the weak in community life, community workers generally took the initiative to care for the elderly out of work requirements and social responsibilities, but such interaction was more like a casual acquaintance.Due to the lack of kinship and geographical factors, the kinship generated by work is weak for a long period of time.

"Normally, the widower and lonely would be registered by the community there are activities aimed to help the elderly organized by some institutions, and our community staff would take those volunteers to the family to chat to know the recent situation of the old, giving some daily necessities.Generally,,the community would

also organize some activities to promote everyone's communication, such as calligraphy competition for the elderly, and the participants are usually a few people who are in good condition. Most of the healthy elderly people like to sit downstairs and chat. Our community staff often meet them and communicate with them . Most of the talking is about parents. " (Community worker)

However, after the outbreak of the epidemic, the closed-off management of the community and home isolation brought great inconvenience to the life of the elderly living alone. It was difficult to solve the problems such as lack of food and medicine. At this time, the community workers took on this part of the responsibility.

For old people who live alone, the way they are exposed to the media is relatively single .In their daily life, TV is the most common and most frequently used media, where they get news from. And it serve as an inportant way of entertainment and a part of emotional sustenance. But the information obtained from the television is quite limited, most of it is one-sided and fuzzy. The other way of getting information is the cellphone, which is usually not connected to the Internet and is mainly used for making and receiving calls. Even with smartphones, older people are generally far less adept at searching information than younger people.So in a public health event like COVID-19, it remains the spoken language medium that makes the key difference.

"When entering and leaving the community, we need to wear masks, take temperature, register information and some specific and subtle access management methods. Our staff will post whose rules in the wechat group of the community, and we will also broadcast them through loudspeakers in the community. There are volunteers in charge of access management, and most people in the community do not need us to communicate in detail.But for pure old family,,it is very difficult for them to do the basic scanning code when going out. We have to explain the current epidemic prevention policy for them and help them complete the application of health code."(Community worker)

Therefore, the isolation of the epidemic and the strangeness of the elderly who living alone using mobile phone make it necessary for the community and the elderly living alone to interact frequently. Through intimate interpersonal communication, the previous weak relationship has been transformed into a strong one, and the relationship between the community workers and the pure elderly family members has been strengthened.Community workers with higher media literacy conducted digital education for elderly family members through one-on-one oral communication, forming a new pattern of community interpersonal communication network during the epidemic.

4.2 The achievement of traditional interpersonal communication and persuasion goals

Compared with young people who can quickly obtain real-time updates of the epidemic and learn about measures taken by local governments, the elder are limited by knowledge level, media contact and other factors, so naturally they would takes more time to understand the new situation.

After the new measures are informed, community workers will carry out door-to-door propaganda and teach the elderly living alone.When the elderly come into contact with new information technologies for the first time, they often have little or no understanding of relevant technologies, and they are not familiar with those powerful and diverse epidemic prevention information service .Community workers usually bring a student volunteer to visit the elderly families. In addition to the most basic travel code and health code application

and acquisition teaching, the most important work is to understand their personalized needs, and help the elderly learn to pay fees and see doctors and other needs through the intelligent system. The volunteers need to teach the old over and over again, simplifying the steps as much as possible, until the elderly can operate independently.

"It is not enough to explain it again and again. It is difficult for them to feel the seriousness of the epidemic. We cannot broadcast it to them like regular news, which will have no effect.There are also things that need to be operated by mobile phones. For example, some elderly people need to go to the outpatient clinic for regular check- ups, but they are not able to use the special appointment system. We will ask student volunteers to teach them how to use it.It's not complicated, it just takes time and energy."(Community worker)

As universal vaccination has become normal, older people are becoming more aware of the risks of COVID-19 through television, friends and family, and community outreach, and their willingness to use IT is also increasing.Under the repeated propaganda of community workers, most of the elderly living alone are willing to cooperate with their work, especially when they know that if they do not cooperate, it will have a bad influence on others around them, so they will be more active. With disinfection, code scanning, mask wearing and various epidemic prevention information technologies becoming necessities of life, the elderly are becoming more proficient in the operation of smart devices such as mobile phones, and the conflict between previous health concepts and current COVID-19 measures has been constantly resolved among them.

"They volunteered very hard. My oldman's medicine for coronary heart disease was about to run out during the closure of the community. I called the community and thet arranged volunteers to buy medicine for us soon. We are very willing to cooperate with the epidemic prevention policy, but because we are too old to keep up with the pace of society now. Though there are a lot of intelligent product is convenient, we don't know how to operate them, and our children is not around, we can only ask the community again and again to teach us."(Pure old family members)

In order to integrate into the society, elderly people living alone have alleviated their technological anxiety through face-to-face communication with community workers and repeated technical operations, and become increasingly skilled in digital epidemic prevention technologies, which are common in daily life.

4.3 The dilemma of single human-to-human transmission

In the face of the sudden epidemic outbreak, everything is starting from scratch, exploration, both the number of people and experience is lacking, so the community workers can only start from the most basic and effective interpersonal communication, but always relying on community staff’s oral communication with the pure old family members to complete the old bridging the digital gap clearly is not enough.

According to the theory of social exchange, in interpersonal communication, if the reward is greater than the cost, we are willing to maintain this interpersonal communication relationship.But if the reward is less than the cost, we would end the human-to-human transmission.The communication between the community staff and the pure elderly family members largely depends on the efforts of the community, and the overall efficiency is not very high due to the large amount of efforts in manpower and time.

In the context of repeated epidemics, closed management and new digital epidemic prevention technologies have emerged frequently. If human-to-human transmission based on spoken language media is always relied

on to bridge the digital gap for pure elderly family members during the epidemic, neither efficiency nor final effect will be the best.

5 Discussion and Suggestions

In the context of the epidemic, many elderly people are at a loss as to what to do, exposing the problem that China's digitalization process is too fast but the transition period from traditional services to smart services is too short.Relying on the traditional interpersonal communication is the most direct and effective for the elderly group, but at the same time, the loss of manpower is also huge.

Convenience is an important foundation for the elderly to live freely under the epidemic.In terms of technology, embedded smart home and wearable smart devices can be used in the home of pure elderly families for intelligent detection of the home environment and various important life parameters, so that the safety of the elderly in the home environment can be better guaranteed.All kinds of digital epidemic prevention measures should be more inline with the habits of the elderly, and one-click services should be customized for different needs, so as to break the technological anxiety of the elderly and improve the efficiency of community workers.In terms of teaching, the community can make good use of the positive influence of the community on the elderly, organize the elderly groups in the community to learn and use smart products together, strengthen the communication between the elderly, which is conducive to helping them improve the ability to use digital epidemic prevention technology and solve various problems encountered in the process of using the digital device.

This is a long-term social issue. It is necessary to establish a more long-term coping mechanism, conform to the digital trend, develop smart products more suitable for pure elderly family members, explore the model of smart old-age care, and let technology facilitate the life of the elderly rather than hinder it.

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