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Article 03

## The Patterns of Short Video Usage and Its Impact and Consequences for Older Adults in Rural China

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### Abstract

*Short video app usage among older adults in rural China has grown significantly, reflecting broader digital adoption trends. While previous studies have focused on addiction and health issues, with an emphasis on urban areas, this study explores the social impacts of short videos on rural older adults. Conducted from May to August 2023 in Yongfeng, Jiangxi Province, the research investigates the implications of short video usage among older adults. Data collection involved semi-structured interviews with 18 respondents selected through snowball sampling, analyzed using inductive content analysis and mixed methods. The findings highlight both positive and negative impacts. Short videos provide benefits such as entertainment, social connection, and information access but raise concerns about user suitability and safety. Challenges include accessibility and security, which hinder older adults from fully leveraging digital technology. Addressing these issues can enhance their digital experience, fostering inclusion and maximizing the potential benefits of short video platforms for rural elderly users.*

**Keywords:** *Older adults, Rural China, Short video, Social consequences, Technology*

## Introduction

China is the world's largest social media market, with an expected 927 million users in 2020 (Thomala, 2022). The landscape has changed dramatically during the last few years. China's digital landscape has changed dramatically in recent years, with the fast expansion of social media platforms playing a critical role in defining the country's social, cultural, and economic landscape (Hetz et al., 2015). Social media is a medium and platform for people to express and share their ideas, insights, experiences, and perspectives. The Chinese social media ecosystem is wide and vibrant, so it is not limited to WeChat. Tencent QQ, Sina Weibo, Youku Tudou, Douyin (TikTok), photo editing and sharing app Meitu, restaurant recommendation and food ordering platform Meituan-Dianping, Quora equivalent Zhihu, and dating app Momo are just a few of the most popular Chinese social media platforms.

As internet penetration increased, the characteristics of the new people who came online changed dramatically. The fastest gain was among rural users, where internet penetration surged by 48%, and among over-50-year-olds, which increased by 5.2% since 2020 (Karaş et al., 2022). Older adult (OA) netizens have played major roles in the Internet world, and their Internet use will have an impact on their lives (Chen & Wei, 2019). With 31% of netizens coming from rural regions and a shift in education level among people who use the internet, the information available online is changing. Short video (SV) apps are the latest craze in China. Kuaishou, Huoshan, and Douyin are the most popular apps for hosting SVs, which typically last about 15 seconds. By the end of 2017, nearly 580 million people had watched SVs (Moyer et al., 2022). One major advantage of this format is that the videos are simple to post. Content could be anything from cooking to caring for pets to singing, telling jokes, offering health information, and storytelling (Zhang et al., 2016).

The ageing of rural populations has substantial implications for rural development (He et al., 2023). Defining "old" is difficult because age classification varies by area and time. The United Nations defined the definition of an elder person as people aged 60 and older (Ageing, older people, and the 2030 agenda for sustainable development acknowledgments, n.d.). It has risen to prominence in China. According to recent statistics from China's Rural Development Institute and the Academy of Social Sciences (2021), the OAs in rural China have reached 20.04%, with those aged 65 and up accounting for 13.82%. The use of smartphones and SVs by older adults has benefits for improving social connections, obtaining social support from others, and slowing neurological decline (Maier et al., 2015); however, overuse and obsession will have a negative impact on their physiological and psychological health and may even cause mental health problems such as anxiety and depression (Karaş et al., 2022). In the post-epidemic era, the issue of SV usage among Chinese OAs has gained prominence and received extensive attention. SV applications provide a wide range of content, and older

individuals frequently utilise them as a kind of leisure activity, helping them to keep entertained and connected with friends and family. Furthermore, SV apps function as a digital repository for conserving cultural practices and historical knowledge. OA users can contribute personal narratives, folklore, and local customs, which helps preserve cultural legacies for future generations (Surcheve, 2010). In this context, it is clear that SVs are being overused by people of all ages. Among these generations, the OA used to watch SVs to relieve loneliness and pass the time. This has increased in unexpected ways, both in urban and rural China. This has had a significant impact, which should be considered by sociologists. The main focus of the study was to investigate the usage patterns of SVs and their social consequences for OA. The overuse of SVs by older adults has created a problematic situation, and through this situation, various impacts have been generated. The research problem of the study was: why do OAs who live in rural China overuse SVs? The main research question was to identify the impact of SV usage on OAs in rural China.

## **Literature Review**

### **Short Video App and Chinese Context**

In China, SV platforms have played a crucial role in consumer activism. These platforms provide a venue for users to express their concerns and participate in online rallies, which in turn shape consumer behaviour and have an impact on government laws (Yu et al., 2023). SV platforms have effectively reduced the digital divide between urban and rural areas by delivering educational content to remote regions and shaping attitudes (Ma. W., 2022). These platforms also have a significant impact on moulding the national identity of nations such as China. They promote a sense of belonging and shared values among citizens through positive and patriotic content (Li et al., 2022).

SVs are crucial in promoting Chinese rural culture by enabling farmers to express themselves, share traditions on a worldwide scale, and boost cultural confidence, thereby representing contemporary Chinese life (Meng et al., 2023). The use of SVs has empowered individuals from rural areas to articulate their unique identities and question dominant narratives about rural regions (Matook et al., 2015). SVs encompass the diverse effects on different age groups and the influence of content choices on users' feelings of life satisfaction and emotional well-being (Ying & Phu-Ngamdee, 2023).

In addition, the use of SVs with a Science, Technology, and Society (STS) approach has been beneficial in fostering interest in science, enabling them to make well-informed choices, and enhancing their understanding of the societal impact of science, particularly in difficult periods like the COVID-19 pandemic (Suragarn et al., 2021). These platforms also have a significant impact on moulding the national identity of nations such as China. They promote a sense of belonging and shared values among

citizens through positive and patriotic content (Nimmanterdwong et al., 2021). In addition, the widespread availability of short-form video platforms has resulted in an unanticipated outcome where people are acquiring criminal skills from video content. This necessitates the implementation of regulatory measures to limit the dissemination of harmful behaviours (Enez Darcin et al., 2016).

### **Usage of Short Video Apps in Chinese Context and Older Adults**

In a report titled "From Online to Offline: SV Use and Offline Social Participation of the OA" published by Renmin University of China, Peking University, and Jitterbug (2023), Chinese OAs use smartphones for an average of 3.54 hours per day, with about 90% of them using them for less than 6 hours. A vast majority of them watch SVs for a total of less than 2 hours, but there are still a few older adults who watch them for a total of more than 3 hours.

The existing literature indicates that OA in China is frequently confronted with various issues, such as the loss of their primary social responsibilities upon retirement (Giles et al., 2011), decreased social networks (Feng et al., 2018), decreased social participation (Feng et al., 2020), reduced overall quality of life and happiness (Lei et al., 2014; Chyi & Mao, 2011), and loneliness among those who are left alone by their adult children who work in other regions (Wang et al., 2017). Active ageing is highly influenced by their level of participation in social activities (Guo & Shan, 2019; Liang & Luo, 2012).

OAs' everyday lives and social connections have been profoundly impacted by the fact that SV apps have taken over as their main internet access method (Nimmanterdwong et al., 2021). OAs are no longer considered "digital refugees" due to the popularity of these social media apps (He et al., 2023). For the OAs, these apps have somewhat lessened loneliness, enhanced social relationships, and improved cognitive function (Korte M. et al., 2022). However, excessive use could lead to mental health problems such as anxiety and sadness (Karaş et al., 2022). Simultaneously, some studies indicate that SVAs significantly improve the mental and overall well-being of senior citizens (Nakagomi et al., 2020).

Recent studies have suggested that SV products may provide rural OA with an effective means of maintaining social connections (Cheng, 2023). By utilising these video products, OA can acquire knowledge about social dynamics, improve communication with their adult children, and enhance their skills and talents (Meng et al., 2023). Social overload takes the place of communication overload in situations where people are overburdened with the need to maintain or manage relationships and social interactions in SV apps or other mobile apps because there is a high demand for virtual socialising. Social overload may arise from older individuals' obsession with virtual socialising, which may have an adverse effect on their daily lives or physical health (Maier et al.,

2015). To highlight the perceived effects of SV use on individuals, this study combines the system feature overload, information overload, and social overload that people encounter when using SV and other apps (Zhang et al., 2016). OA may require greater access to diverse information, as they are unable to discriminate between dangerous and deceptive content and slip into information cocoons (He et al., 2023). SV platforms propose personalised material based on algorithms, resulting in OAs' attention being guided by self-interests (Rodriguez-Laso et al., 2007). Because of the lack of information grooming, OA may watch and disseminate rumours and emotional or morally misleading items and are thus exposed to a disproportionate quantity of misinformation and unfavourable social commentary (Meng et al., 2023).

SVs can have both positive and negative effects on health, emphasising the significance of creating ways to enhance benefits while minimising dangers, especially across different age groups. OAs exposed to physical activity-related SVs may have a rise in moderate-to-vigorous physical activity but a decrease in step counts and time spent in low-intensity physical activity (Hutcheon et al., 2018). Social presence, immersion, and credibility perception all have a significant impact on users' intentions to continue using health-related apps (Rabonet, 2014).

The current body of research focuses mostly on the influence of SV consumption by OAs living in metropolitan areas and its consequences (Ma et al., 2022; Sun, 2021; Li et al., 2022). Many studies have explored the social impact and enhancement of well-being among older people living in rural locations through the use of electronic gadgets (Nakagomi et al., 2020). First, there has been little research on SV usage habits and their influence in rural areas. Most research has focused on the consequences of SVs in metropolitan areas. Second, there has been minimal research into the social impact of SV usage in rural communities. Existing research has primarily focused on the psychological and health implications of SV use rather than the societal impact. To overcome this gap, the purpose of this qualitative research project is to look into the daily experiences of OAs who watch SVs later in the day, as well as their social influence. Based on the main objectives, three specific objectives were developed: a) to identify the driving force behind the popularisation of SVs in rural China; b). to explore the impacts and attitudes towards SV usage; and c). to understand the future expectations of SV usage among rural OAs. By systematically exploring these links and potentially influential factors and impacts, researchers and/or evaluators strengthen the scientific case for attributing subsequent change in these outcomes to the activities included in the intervention. Further, this study intends to improve awareness of the impact of digital products on OA living in rural locations as well as motivate further research into measures to promote active aging among this demographic.

## Materials and Methods

### Study Design

This study utilises the method of inductive content analysis to investigate the experiences and social effects of older adults in rural China who use SVs. Content analysis allows for a comprehensive comprehension of participants' own experiences, feelings, and opinions (Downe-Wamboldt, 1992). Moreover, this approach can also aid researchers in generating pertinent concepts, categories, and themes (Graneheim & Lundman, 2004). The study method was segmented into three distinct phases: preparation, organisation, and reporting of findings. During the preparatory phase, a total of 18 individuals were enlisted to participate in the study. During the organisation stage, the gathered data underwent analysis, categorization, and consolidation into thematic groups. Ultimately, during the reporting phase, the study findings were presented in accordance with the comprehensive standards of qualitative research.

### Participant Recruitment

The study was conducted from May to August 2023 in three villages situated in Yongfeng, Jiangxi Province, in the southern region of China. According to the demographic data from the township government, there were around 760 individuals aged 60 years and older in these settlements. In order to optimise the recruiting process, we utilised the social networks of one of our researchers, who is originally from the county and has family members living in the villages being surveyed. We augmented our recruitment endeavours by employing a snowball sampling methodology (Goodman, 1961). When we selected the participants, we considered the main five criteria. Participants were required to be aged 60 years and older, have a minimum of 30 minutes of daily experience using SVs, and possess strong comprehension skills to understand and effectively respond to our questions. Also, OAs who are required to be at home without their young grandchildren and OAs who have engaged in any daily activity as a responsibility. We intentionally excluded OAs who are living with all their family members, although they actively use SVs. Here, the researchers faced some exclusion bias. We selected only OAs who included the afore-mentioned group. However, there were several SV usage OAs who were not included in the group. The rationale behind these criteria was that the researcher wanted to gather data on the social impact of the already vulnerable OAs group. Additionally, we conducted interviews with select participants through accidental sampling in various villages (Otis et al., 1993).

Table 1 displays the demographic characteristics of the participants. Through an analysis of the data, this study identified five distinct themes.

Table 1: Characteristics of the Participants

Variables		N=18	Percentage (%)
Gender	male	10	55.6
	female	08	44.4
Age	60-69	12	66.7
	70-79	05	26.7
	≥80	01	05.6
Empty nesters or not	Yes	11	61.1
	No	07	38.9
Duration of use	<60 minutes	03	16.7
	60-120 minutes	10	55.6
	>120 or more	05	27.7
SVs made	Yes	16	88.9
	No	02	11.1

Source: Developed by the researcher, 2023

### Data Collection

This study employed semi-structured interviews, conducted by two trained interviewers (Smith, 1995), and lasted from 30 minutes to 1 hour. Before conducting the interviews, the objectives of the study were clearly and comprehensibly explained to the participants, and their permission was gained for both the interview and recording with written consent from the participants (Ahern, 2012). In addition, the study included inquiries on the participants' anticipations for improved social adaptability through the utilisation of SVs. The interview tapes underwent a thorough review process and were granted approval by the participants for the purpose of research (Rabionet, 2014). Interviews were conducted in Chinese. Then those interviews were translated into the English language. One of the researchers, who has the sound ability to communicate in both Chinese and English, did the translation and made it accurate with another volunteer friend who has the same ability. Two researchers transcribed the interviews, and finally, researchers evaluated the transcripts to confirm the accuracy of the transcriptions. After completing the 16th interview for data collection and analysis, the theme had been saturated. Two additional interviews were conducted to confirm the theme's saturation, but no new information was revealed. The study included eighteen participants.

### Data Analysis

This study used the inductive content analysis method of qualitative research (Ahern, 2012). Inductive content analysis is a way of systematically describing and interpreting

collected language data (Graneheim & Lundman, 2004) During the open coding phase, two researchers analysed the transcribed material and individually generated titles that captured the participants' experiences (Cohen L., et al, 2017). During the category construction stage, the list of categories was organised based on overarching headings. During the abstraction stage, subcategories with substantial content were organised into primary categories (Graneheim & Lundman, 2004) to enhance the reliability of this study, two researchers coded all interviews separately and without influence from each other. When the two researchers were unable to come to a resolution on data reduction or abstraction, a third researcher examined the codes and engaged in a comprehensive discussion to address any differences until an agreement was reached and the issue was fixed (Ahern, 2012). Furthermore, during coding, the codes were expanded and altered to ensure their comprehensiveness. In addition, feedback loops were employed to guarantee the thoroughness of this study (Cohen L., et. al, 2017).

Table 2 depicts the coding and themes that the researchers used for data analysis.

Table 2: Coding and Themes

Initial Codes	Refine Codes	Conceptual Categories	Themes
Platform	Engagement with Short Videos	Popularity of SV among OAs	Driving Force
Time Duration			
Device			
Interest of SV	SV Preference	Choosing Short Videos	
Discover and Access			
Creation of their own			
Positive Impact on OAs	Impact on OAs	Social Impact of SV on OAs	Attitudes on Impacts
Negative impact on OAs			
Negative Experience	Experience on SV	Experience in using SV	
Positive Experience			
Happiness	Expectation on SV	Expectation of Rural OAs on SV	Future Expectations
Enthusiasm			
Encouragement			

Source: Developed by the researcher, 2023

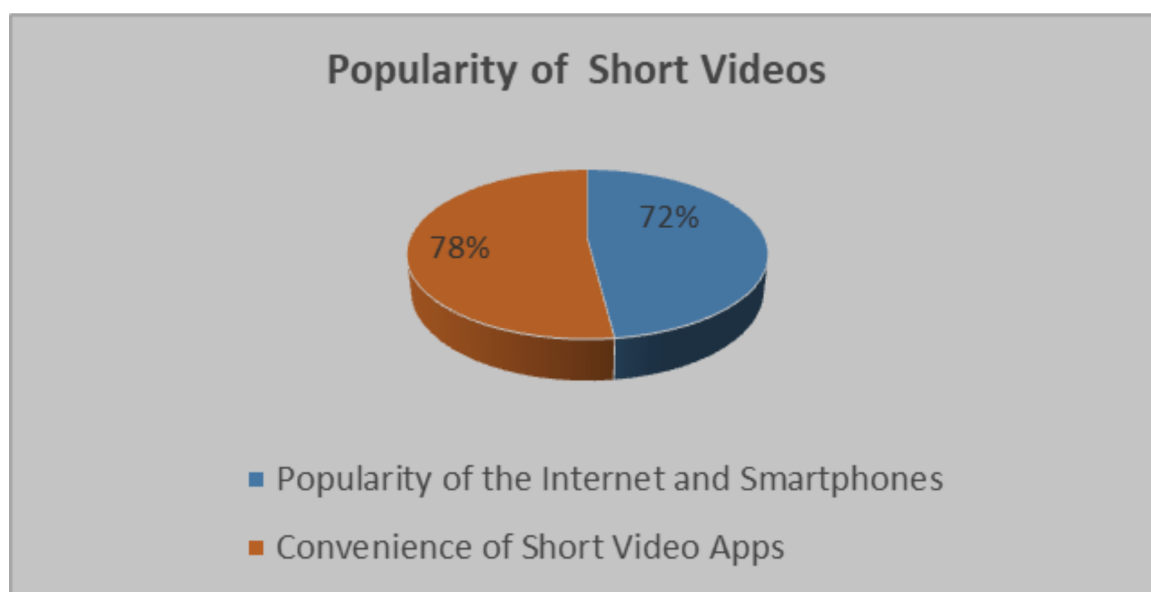


## Results and Discussion

The result section of the study has been divided into three sections. Those three sections were divided based on the three main research objectives. The first section has depicted the results of the driving force of SV app popularisation among the rural OAs; the second section has analysed attitudes towards the impact of SV app usage among the OAs; and finally, it has analysed the future expectations of the OA community about SV apps.

### Driving Force of Short Video App Popularity among Rural Older Adults

Figure 1: Popularity of SVs among Rural Elderly Communities



Source: Sample Survey Data Analysis, 2023

According to the respondents' interviews, the main two driving forces have caused an increase in the usage of SVs among the elderly community in rural China. Those two factors are easy access to the internet in rural areas and increasing and expanding the usage of smart phones among the rural population. The convenience of SV apps for elderly people became the most prominent driving force behind the usage of SV among the population, and as a percentage, it was 78%, while 72% of respondents expressed that the reason for the expansion of SV usage among the population was the popularity and easy access to the internet and smart phones. The research participants have explained their experience regarding the popularity of SVs among them in the following ways.

#### The popularity of the Internet and Smartphones

**Affordability** is one of the main reasons for the popularity of the internet and smartphones. Smart phone and internet packages are affordable, and they can buy these

facilities based on their financial ability. Many rural residents in China now have access to mobile internet through smartphones, allowing them to stay connected, access information, and engage in online activities. A respondent has explained this as follows:

*“Now, the Internet has gained significant popularity even in remote regions, with the majority of households having it installed. Consequently, using a mobile phone to access the Internet has become more convenient” (a 65-year-old woman).*

However, some participants commented that **improved network coverage** has also impacted the popularity of short videos. One participant explained this as follows:

*“We utilise 5G networks, which have remarkable speed, enabling seamless video streaming without any buffering” (a 77-year-old man).*

The further **availability of mobile apps and services tailored to rural users** has also caused frequent. They can have the opportunity to acquire facilities for what they want and what they try to get. SV apps like TikTok and Kuaishuo have contributed to their growing demand among senior individuals residing in rural areas. The popularity of the Internet and smartphones in rural China indicates that these technologies have been increasingly adopted in rural areas in recent years. Also, internet packages are available for various prices, and these reasons have caused people to easily access their smartphones and internet networks.

### **The Convenience of Short Video Apps**

Three main reasons have caused for convenience of SV apps according to the interviewees. According to respondents' SV apps, they offer a high level of convenience to users by **providing quick and easy access** to a wide range of SV content, and these apps are highly convenient to use, even for OAs.

*“These apps allow us to discover and watch SVs on various topics, such as entertainment, news, tutorials, and more, all within a single platform. SVs often have a duration ranging from a few seconds to two or three minutes. They emphasised that these videos are not too long and do not demand significant cognitive effort to view” (a 68-year-old retired teacher).*

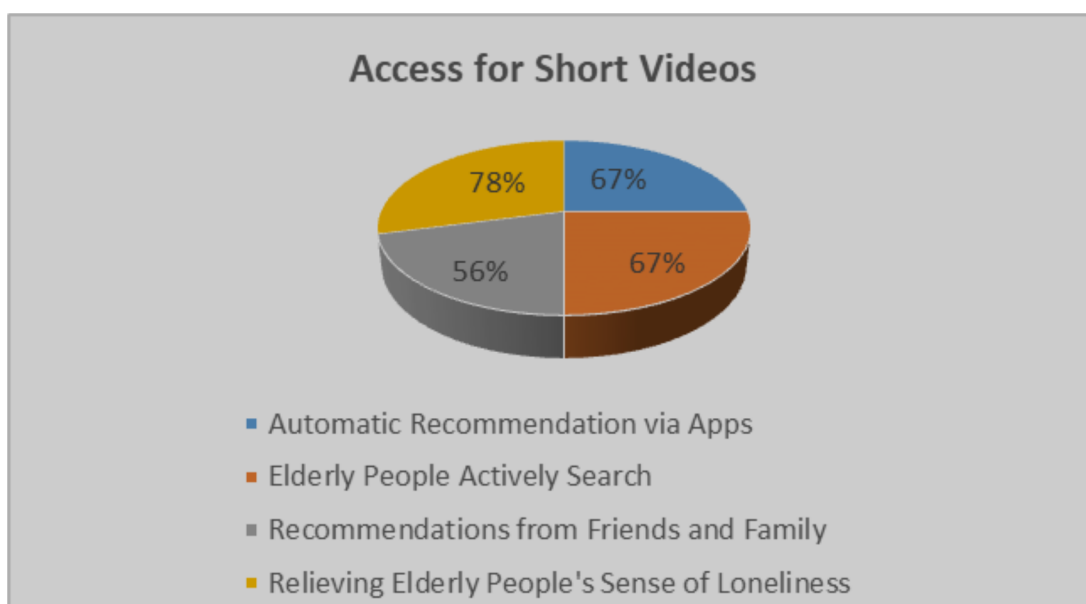
**User-friendly interfaces** are the first reason for convenience. Short video apps like TikTok and Kuaishuo are famous among the Chinese population without generational separation (Kaye et al., 2020). Not only that, but there are numerous contents on these SV platforms that can be used by OAs. China's dedication to the advancement of user-friendly and efficient video technology has greatly facilitated the accessibility and utilisation of essential application items for older individuals residing in rural areas (Niu et al., 2022b).

The convenience of short video apps in China simplifies the process of consuming and sharing video content, making them popular and widely used among a diverse range of users (Hanna et al., 2009). **Seamless video playback** is the next reason for the convenience of SVs. As a result of the seamlessness, they sat in the same place for several hours and watched videos.

### Attitudes towards Short Videos among OAs in Rural China

In this section, the results have been divided into two sections. The first section has discussed access for SVs. The second section has been allocated to discuss the impact of SV usage. Figure 02 depicts the nature of access to the content of SVs.

Figure 2: Access to the Content of SVs



Source: Sample Survey Data Analysis, 2023

### Access to Short Videos

The figure shows four ways of accessing SV content by OAs in rural China. Among them, a vast majority of respondents have revealed that they access SVs to relieve OAs' sense of loneliness. The quantity of 78% percent and the second majority of the respondents explained that they access their SVs app through automatic recommendation and actively searching for OAs. These two access modes were similar to each other, and they may have a mutual relationship. Because while they are searching those apps, the app may generate similar videos. The quantity of these access modes is 67%. The lowest number of respondents revealed that they access these apps and videos on the recommendation of their friends and family members.

Among several thousands of SVs, OAs should select SVs as their choice. The selection of the videos has been done based on primary options. The majority of participants have observed that the videos suggested by the application are typically aligned with their personal interests. A participant stated that,

*"The SV platform has stored my viewing preferences, and now, whenever I open the app, it is populated with videos focused on promoting the health of OAs." (an 83-year-old woman).*

When beginner users install and register for the app, the app automatically recommends some videos, and they start to watch those recommended videos first.

### **OAs Actively Search**

Some segments of OAs have been involved in proactively seeking out videos of interest using the application's search engine. A respondent expressed her preference for Beijing Opera and mentioned that,

*"I was able to find a substantial number of performances when conducting a search. Currently, I engage in listening to them while I am working, which provides me with a sense of fulfilment." (a 65-year-old carpenter).*

According to respondents, this has allowed them to gain new learning and technology for their daily routines. For this purpose, they have searched for some SVs related to their livelihoods. A respondent who was fishing enthusiastically expressed that

*"I acquired a plethora of fishing techniques through the use of mobile applications." (a 72-year-old fisherman).*

### **Recommendations from Friends and Family**

Young people in the family used to create and upload SVs, and they have recommended those OAs in order to increase their views. The selection has been based on **trust and validity**. The situation can be understood by examining the following statement:

*"A substantial amount of information regarding the prevention of COVID-19 is acquired through SVs that my friends forward to me. Further health videos suggested by my daughter are very helpful." (a 73-year-old retired nurse).*

### **The Social Impact of SVs on OAs in Rural Areas**

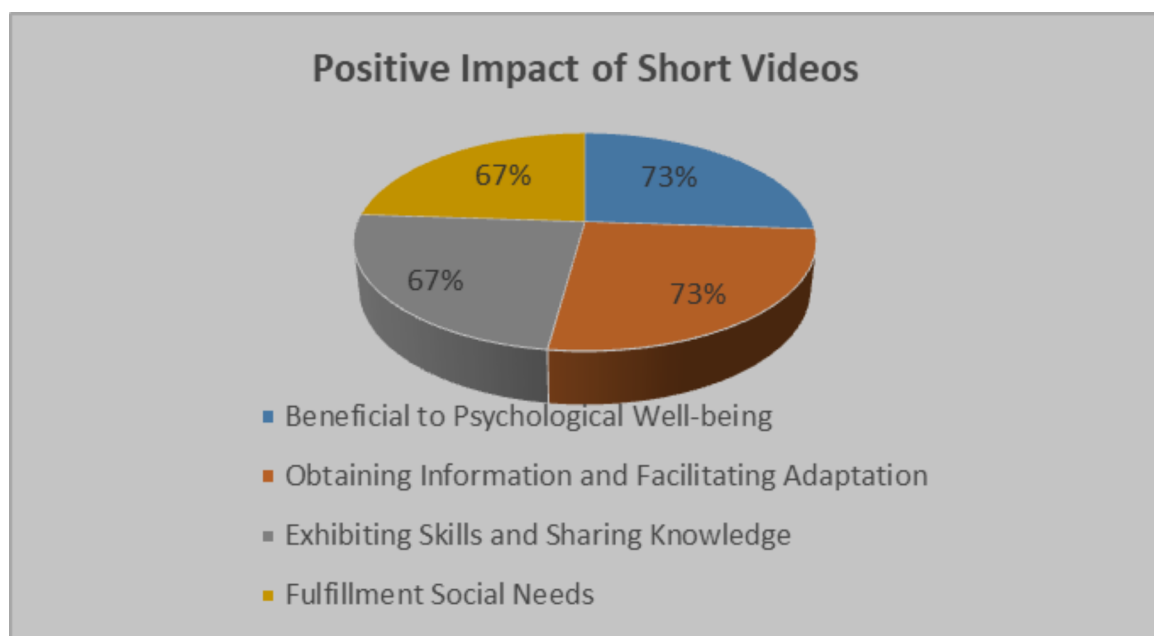
SVs are very popular among Chinese. Even when they are travelling, walking, or working, they watch SVs in order to fulfill various needs (Sharninghausen et al., 2023). Watching

SVs has generated numerous impacts on the OAs community in rural China. These impacts can be categorised into two categories: positive and negative impacts.

### Positive Impact

The following figure, number 3, depicts the way OAs have a positive impact on SVs.

Figure 3: Positive Impact of Short Videos



Source: Sample Survey Data Analysis, 2023

According to respondents' interviews, four main positive impacts were identified by the OAs. The vast majority of respondents have revealed that they could have gotten some extent of psychological well-being through SVs while simultaneously obtaining information and facilitating adaptation. The number of respondents for these two benefits was 73%. Apart from these, they have used SVs in order to fulfil some social needs, exhibit their skills, and share knowledge. The percentage of these two impacts was 67%.

### Psychological Well-being

There are a number of possible reasons for the psychological wellbeing impact of SVs usage in the OAs community, according to respondents. The first reason is that SVs have reduced the loneliness of these OAs. They use SVs as an effective technique for reducing loneliness and offering psychological comfort (Gross, 2002). After retirement, they have to stay in their homes, and many young and middle-aged family members are not at

home due to their education and employment purposes. A respondent revealed how SVs can help overcome his loneliness and make him happy, as follows:

*"If there is no farm work to do, I watch SVs to relax myself." "Everyone in the village is an OA. I feel very lonely. Watching SVs can make me not feel lonely and boring." SVs are always lively, like someone is constantly talking to me and telling stories, making my home always full of laughter and joy, which won't make my home seem so lonely." (a 74-year-old man).*

Another reason to relate to psychological wellbeing was the **reduction of retirement stress** among OAs. According to them, with their retirement, they are responsible for managing the family's agricultural land and looking after their grandkids. These have caused stress, worries, and anxiety due to these unfamiliar working conditions. While they are engaging in this work, they watch SVs in order to reduce stress.

The following statement has shown it: Watching entertaining or uplifting SVs can help reduce stress and provide a temporary escape from daily worries and anxieties.

*"Following my cancer diagnosis, I experienced stress and anxiety. Nevertheless, a video showcasing the positive mindset of another individual battling cancer served as a source of inspiration and instilled in me the determination to continue despite the challenges." (a 77-year-old male cancer patient)*

SVs can cause an **increase in optimistic perspectives** on a particular area, and due to this, psychological well-being can be increased. Listening to and watching short music videos can heal dementia patients, and they behave in a positive way after listening to and watching these short videos.

SVs can **create a sense of social connection** by allowing viewers to engage with content creators, comment, and share videos with friends and family, fostering a sense of community. This has caused an increase in social connections. Further relaxation has been achieved, and social connection has increased by watching and sharing SV with elders. Watching calming or soothing SVs, such as nature scenes or meditation videos, can promote relaxation and help unwind after a long day.

### **Obtaining Information, Exhibiting Skills, and Sharing Knowledge**

OAs are normally used to acquire and share knowledge and information. Previously, it was done using books, newspapers, etc. However, they do not use these strategies anymore since they have smartphones and high-speed networks in rural areas. Their easy access is one of the reasons for their usage of SVs for obtaining information, exhibiting skills, and sharing knowledge, according to the respondents.

*“Living in a very isolated rural region allows them to remain well-informed about global happenings without the need to venture outside their homes. SVs are being updated at a high pace nowadays, enabling us to quickly and easily get the most recent news.” (An 80-year-old retired university lecturer).*

Using these videos, they share and obtain information and knowledge. Their physical disability and vision impairment made it difficult to read or write books. The next reason is the ability to engage in emotional communication through technology. In contemporary society, many people have a complex lifestyle, and due to this complexity, most people live outside of their original villages and homes. This has created distance among family members.

*“Our family members and children are living outside due to their education or employment. We share our emotional connection through technology.” (A 69-year-old rural woman).*

*“Consequently, despite the fact that our family members do not reside in the same household, we still share mutual interests and subjects of discussion.” (A 72-year-old woman).*

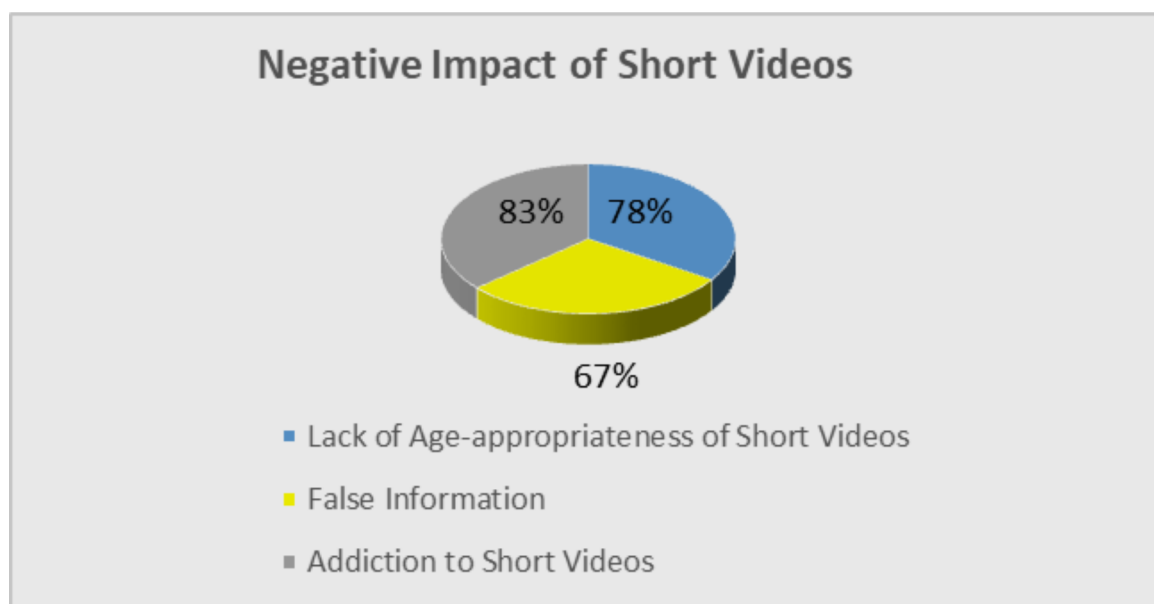
**Engaging with a wider audience** has also caused people to use SVs for knowledge and experience sharing and acquiring flat forms. When they are elderly and isolated from their public sphere, they have to be trapped in their private sphere. Their skills and knowledge can be hidden due to their isolation. According to them, they are able to use these SVs as a platform for sharing their knowledge and skills.

*“SVs have inspired me to cultivate my own hobbies and enhanced the quality of my life.” Previously, I worked as a carpenter and crafted several pieces of furniture. Currently, I am endeavouring to acquire the knowledge and skills necessary to create captivating architectural structures.” (a 65-year-old carpenter).*

### **Negative Impact**

The rural old population has also faced adverse experiences while utilising SVs, such as concerns over suitability for their age, dissemination of incorrect information, potential hazards linked with the platform, and occasional addiction to SVs. The following figure shows the negative experience and impact that rural OAs faced using SVs.

Figure 4: The Negative Impact and Experience of SVs



Source: Sample Survey Data Analysis, 2023

According to the above figure, it could be identified that there are three main negative impacts and experiences that they have faced due to SV usage. The majority of respondents have depicted addiction as the main negative impact. As a percentage, it was 83%, and the second majority of respondents revealed that the lack of age appropriateness (78%) also has a negative impact on this. The lowest number of respondents revealed that false information was the main negative impact that they faced related to these SVs.

### False Information

Sometimes the OAs are alone at home, and they have very little communication. If there is someone who continues to communicate with them, they believe them without any consideration. Sometimes, the issue of misinformation in SVs is prevalent and frequently leads to **financial losses** for OAs. Particularly, information related to health products may contain multiple instances of misinformation. A respondent explains this condition as follows:

*"I suffer from chronic hepatitis, and I came across an advertisement on the video that made a bold assertion about their medication's ability to treat various liver-related ailments. I purchased the item, but it failed to function, resulting in a loss of more than 4000 yuan" (a 77-year-old OA male cancer patient).*



**The creation of negative mental conditions** is also another reason for negative impact-driven false information. Another participant expressed concern about the prevalence of quasi-pornographic content in SVs, highlighting the negative impact it has on mental and emotional well-being. Moreover, the concern is in the fact that when we see these videos, there are frequently minors present, and it is detrimental for them to be exposed to such explicit material.

### **Addiction to SVs**

**Lack of physical activity** is the main result of addiction. This has resulted in a number of physical impairments and contributed to feelings of isolation and loneliness, ultimately causing mental issues. Additionally, prolonged screen time from watching short videos may result in eye strain. A participant stated,

*"I watch SVs for a total of two hours of video content on a daily basis. It helps me escape from reality. Once, I inadvertently neglected to retrieve my grandson from school due to my preoccupation with watching movies. On multiple occasions, I neglected to do the tasks that were assigned to me." (A 62-year-OA male).*

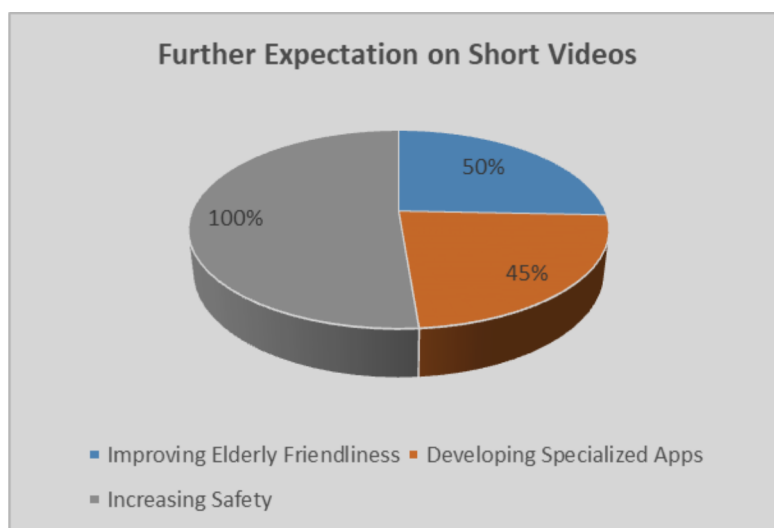
Not only can addiction **impact daily living**, but it can also have detrimental bodily consequences. Being addicted for a period of time, spending the entire day fixated on their phone, which resulted in damage to their eyes.

It disrupts sleep patterns and reduces cognitive function. It is crucial to monitor and address SV addiction in OAs to promote their overall well-being and quality of life. The prevalence of SV addiction among OAs has detrimental impacts on their physical and emotional well-being.

### **Expectations of Rural Older Adults for Using Short Videos**

Ultimately, the expectations from SVs are mentioned by the respondents, and Figure number 5 depicts the expectations revealed by the elderly community.

Figure 5: Expectations of Rural Elderly People for Using SVs



Source: Sample Survey Data Analysis, 2023

According to the figure, it could be identified that there are three main expectations among respondents. All the respondents recommended that safety (100%) and security should be increased, and half of the respondents expected to increase elderly friendliness (50%). A further lower number of respondents are expected to develop specialised apps (45%). Enhancing its appropriateness for senior users is crucial.

### Improving Elderly Friendliness

According to respondents, elderly friendliness is very weak; additionally, some older individuals proposed the development of a senior mode or elderly mode that includes features such as larger font sizes and time reminder and management functions. According to a participant, it could be identified as the following:

*"Due to our limited visual acuity and low level of education, it is necessary for the information to be presented in a straightforward and uncomplicated manner." (a 72-year-old woman).*

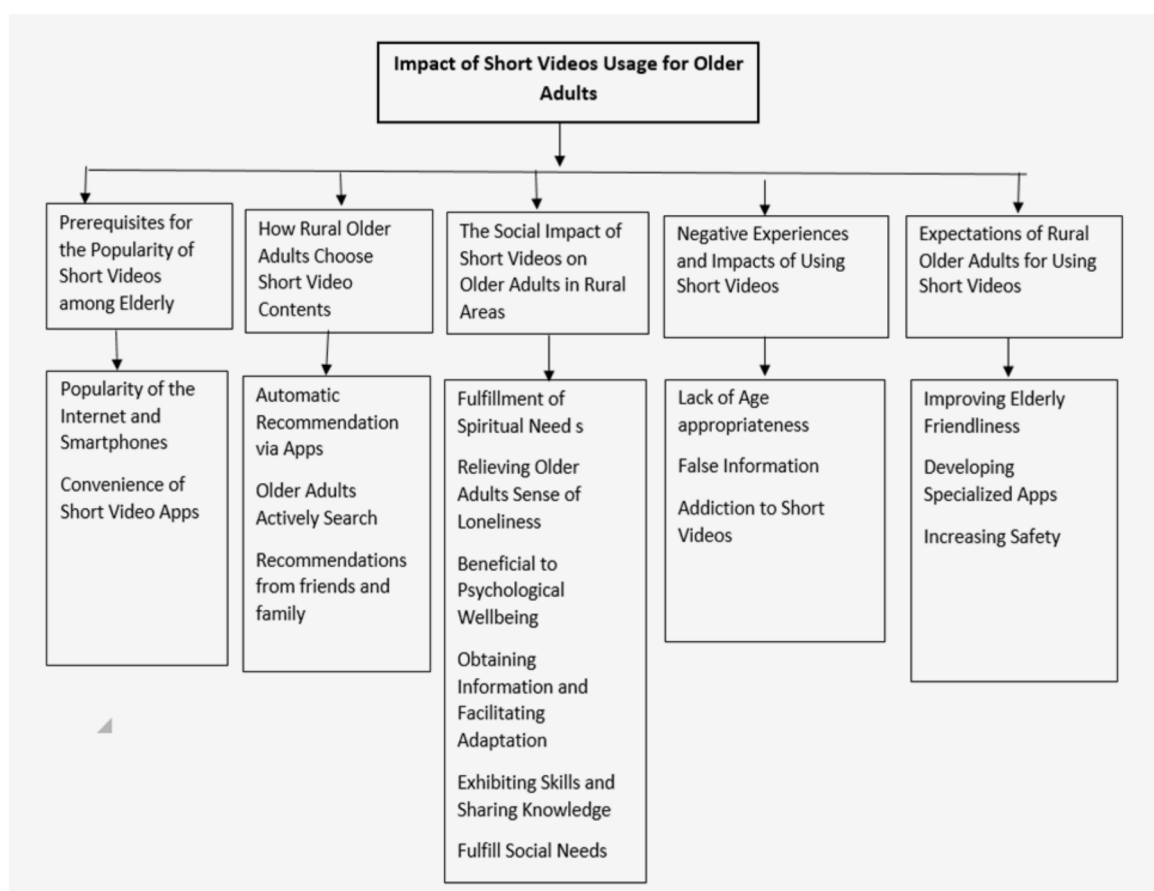
They have low technical literacy, and with their age, their eyesight is low. People trust some apps more than others do. Research findings show that the type of application has a great effect on mobile users' perceptions of the friendliness of mobile apps. Several reasons need to be developed for friendliness. Among them, their physical disability and low education were the main reasons.

## Increasing Safety

The participants proposed that video websites should strengthen their oversight methods and implement legal laws to protect viewers of video material. In addition, they suggested that unverified short films should be clearly marked. Participant 6 expressed that *“The necessity for enhanced safety measures, stating that there is an excessive presence of fraudulent individuals in SV content. We have all been misled and experienced financial setbacks. We must not allow the scammers to freely engage in their activities without facing consequences.”* (an 80-year-old retired university lecturer).

The overall result can be depicted in the following Figure 6.

Figure 6: Overall Results of the Study



Source: Sample Survey Data Analysis, 2023

## Discussion

The goal of this paper was to explore the impacts of the usage of SVs among OAs in rural China. To pursue this goal, we carried out in-depth interviews with relevant OAs. In this section, we present the potential limitations of the study, after which we discuss the key

findings. First, being a self-reported study, there is the likelihood that respondents could exaggerate or underreport issues. For instance, respondents could over-report positive experiences associated with SV usage and/or under-report the negative impacts. Moreover, memory bias could contribute to some respondents not being able to accurately report their experiences with the use of SVs. Also, since this was a qualitative study, it was unable to build up causal relationships among variables. Therefore, to overcome this limitation, it is important that future studies apply quantitative and multivariate statistical techniques.

### **Reasons for the Popularity of SVs among OAs in Rural Areas**

While urban areas in China have traditionally had better access to the Internet and smartphones, efforts to improve infrastructure and connectivity in rural regions have led to significant growth in the usage of SVs. The extensive accessibility of broadband networks in rural China (Hanna et al., 2009), particularly due to the continuous development of 5G networks (Niu et al., 2022b), along with the popularity of smartphones (Zhu et al., 2021), have established the technological foundation for the utilisation of SVs. Further, in 2016, Chinese mobile Internet users accounted for more than 95.1% of the population with Internet access, with 80.7% of new Internet users first gaining online access through mobile devices (CNNIC, 2017).

Further, the rise of the mobile internet can be attributed to several factors, including the increasing availability of mobile devices, the development of wireless communication technologies, and the growth of mobile applications. The widespread adoption of smartphones has been a key driver of the mobile Internet, with over 6.56 billion smartphone users worldwide as of 2021 (Statista, 2023a). The growth of mobile applications has also contributed to the rise of the mobile Internet. Mobile apps allow users to access a wide range of services, including social networking, online shopping, and mobile banking, from their smartphones. As of 2021, there were over 3.3 million mobile apps available on the Google Play Store and over 2.2 million on the Apple App Store (Dogtiev, 2022).

Three main reasons have caused for convenience of SV apps according to the interviewees. User-friendly interfaces are the first reason for convenience. Short video apps like TikTok and Kuaishuo are famous among the Chinese population without generational separation (Kaye et al., 2020). Not only that, but there are numerous contents on these SV platforms that can be used by OAs. China's dedication to the advancement of user-friendly and efficient video technology has greatly facilitated the accessibility and utilisation of essential application items for OAs residing in rural areas (Niu et al., 2022b). Seamless video playback is the next reason for the convenience of SVs. As a result of the seamlessness, they sat in the same place for several hours and watched videos. The convenience of short video apps in China simplifies the process of

consuming and sharing video content, making them popular and widely used among a diverse range of users (Hanna et al., 2009). Algorithm-driven recommendations that cater to individual preferences have also been convenient for OAs.

### **The Way of Access for SVs by the OAs in Rural Areas**

The beginner users have accessed the video through the automatic appearance of the videos. Given that the majority of apps possess extensive analysis capabilities, the app will prioritise and promote videos in a specific category based on the frequency and depth of a reader's engagement with such videos (Zheng, 2023). Further big data utilisation has recommended data and videos for beginner users, and the software also suggests leisurely and pleasurable content, which is generally preferred by OAs (Dogtiev, 2022).

Searching also empowers OAs by giving them a heightened sense of control and influence. The outcome is contingent upon their own tastes. SVs semantic understanding involves fields such as computer vision, natural language processing, and knowledge mapping and is a comprehensive cross-research direction (Zheng, 2023). Many methods exist for video understanding; among these is information extraction (Wang et al., 2022). According to their particular interest and ability to freely choose and view a wide range of content in SV format, they have chosen SVs. This has resulted in an expansion of knowledge and the acquisition of more techniques regarding their livelihoods. Given that the majority of applications include a search feature, OAs have the ability to proactively seek out videos that pique their interest, enhancing their independence (Dogtiev, 2022). They emphasised their convenience in swiftly transitioning to the next video or seeking content that aligns with their particular preferences (Zheng, 2023).

Recommendations from friends and family have a significant impact on the selection of short video (SV) content for these respondents. Furthermore, OAs have warmly embraced videos that are suggested by friends or family members, as these videos are closely connected to local happenings and their lives. When friends and family members suggest SV content, it adds a personal touch and credibility to the recommendation, influencing the viewer's decision-making process (Gross, 2002). While many elderly folks passively get SV content through push notifications on App platforms (Anderson, 2020), it is possible for various APPs to determine the specific themes that interest them by analysing network data, such as big data. Moreover, the search function (Kaye et al., 2020) of APPs grants rural old folks their own personal area for choosing, allowing them significant independence and providing a means for developing their self-identity.

### **Positive Impacts of Usage of SVs for OAs in Rural Areas and Reasons for It**

An empty nest is a common phenomenon in rural China (Anderson, 2020). This has doubled their loneliness. OAs have used SVs to overcome their loneliness, and it has

been successful. Watching SVs can help them pass their leisure time effectively (Zheng et al., 2023). Apart from these reasons, serving the spiritual context is also one of the reasons psychological well-being can be acquired through SVs. Further, SVs serve as a means of accessing information that specifically meets the spiritual needs of the elderly (Fan & Yang, 2022). The narrative structure of SVs effectively conveys the life experiences of others, particularly focusing on the optimistic and positive aspects. This, in turn, enhances the psychological well-being of OAs. It enhances the significance of rural living in a positive manner (Fan & Yang, 2022). Healing could also be gained from SVs. Further carers have also healed from this music, and they work in a fully inspired way (Sharninghausen et al., 2023).

This study found that SNs have reduced psychological problems among OAs in Rural China. Watching SVs can indeed be beneficial to psychological well-being in various ways (Fan & Yang, 2022). Overall, incorporating a healthy balance of SV viewing into one's routine can contribute to improved psychological well-being and overall quality of life. Prior studies have demonstrated that brief video content has a beneficial impact on emotional anxiety (Gross, 2002). Moreover, concise movies can enhance the mental health of older individuals living in rural areas (Fan & Yang, 2022). SVs are a crucial means for OAs to acquire information, aiding their comprehension of societal shifts and fostering social integration and adaptation.

Further, these findings highlighted that SVs are used by them to acquire knowledge, and it has become productive. Findings from several studies have demonstrated that short-duration videos are more preferred by viewers when seeking knowledge content. According to Guo et al. (2019), a maximum duration of three minutes for a video is more appealing to the audience, as they can be more engaged through the MOOC platform. Moreover, studies have also confirmed that knowledge is better distributed using videos that last less than 5 minutes, enhancing the capabilities and skills of the student in a learning environment.

Further findings highlighted that SVs can be used as a flat form of sharing knowledge for OAs. They have used SV flat forms to share and acquire knowledge due to their convenience regarding this. According to research, memory can be more recalled and processed with the use of SV clips (Monserrat et al., 2014). The audiovisual features of videos grab the attention of the audience, enabling users to process various information in an easy and natural manner. People can utilise a SV platform with the goal of collaborative learning. A study done by (Suragarn et. al, 2021) has shown that by employing a comment section for the video shown, knowledge can be easily accessed and obtained by the viewers, contributing to a better comprehension of the short video. Serving as a carrier of information, the video has been utilised in the sharing and exchanging of knowledge on social network websites.

Through instant shares, these videos are used as educational materials for OAs and can be accessed by users globally at any time of the day. The online nature of the videos can be used as an advantage by educational institutions by inviting potential students, maintaining current ones, and reconnecting with alumni through involvement and engagement (Bevan et al. 2020).

### **Negative Impacts of Usage of SVs for OAs in Rural Areas and Reasons for It**

Watching SVs can have negative impacts on OAs, such as increased feelings of isolation and loneliness, reduced physical activity, and potential strain on their eyesight due to prolonged screen time (Deng et al., 2022). Additionally, excessive exposure to short videos may lead to decreased cognitive function and memory retention in OAs. It is important to monitor and regulate screen time for OAs to ensure their overall well-being and mental health (Peek et al., 2014). Furthermore, rural OAs frequently encounter difficulties in discerning between secure and hazardous content in SVs, resulting in potential economic and health repercussions that necessitate attention. Moreover, the OAs frequently experience physical and emotional issues as a result of their addiction to SVs.

The results of this study advance prior studies, which have determined that hacking financial information is the most dominant form of mobile malware and that financial and store apps, therefore, are the least secure for mobile users (Chatterjee et al., 2016). Mobile phone stores and online shopping apps are less secure because different developers make them. This finding is consistent with those of Choi et al. (2015), who found that mobile user trust is lower among buying apps and highest among banking apps. According to a survey conducted on mobile apps, those used for banking and e-commerce are among the most commonly used. More than half of users with smartphones use financial apps (Bohon, 2017). Azfar, Choo, and Liu (2016) demonstrated that users' communications over communication apps such as VoIP are not well protected. Decoding intercepted communication is easy for people with malicious intentions.

### **Further Expectations of SVs by the OAs in Rural Areas**

The study findings show that future expectations regarding these SVs are mainly, it should focused on security and OAs friendliness. There are several reasons for increasing the safety of the SVs App. Because the elderly have no proper technology literacy regarding this, they have to avoid cheating, misleading, and health-related distress on SVs. Previous research has provided mixed results regarding the responsibility for app users' security. While Delac, Silic, and Krolo (2011) found that app developers should bear the responsibility for users' security, a study by Mutchler, Doupé, Mitchell, Kruegel, and Vigna (2015) showed that less than 75% of app users were not sure who was

responsible for app security. In fact, most suggest that the government should be responsible for such security through the judicial system. However, other studies have found that mobile device security is limited (Gupta et al., 2014), and no government regulations have been instituted to protect mobile users' security (Jones & Chin, 2015). In their research regarding the security of health apps, Knorr and Aspinall (2015) concluded that sensitive data included in health apps lacks sufficient security because app developers do not give enough priority to security during app development. The findings of the current study support Knorr and Aspinall's (2015) conclusion and show that app developers prioritise their profits while developing new apps.

## Conclusion

Enhancing "active ageing" and enabling greater "participation" among rural OAs have become important challenges in China. This involves helping them better adjust to societal changes and effectively cope with the impending ageing population. The Patterns of Short Video Usage and its Impact and Consequences for Older Adults in Rural China," the conclusion drawn is that short video usage among older adults in rural China has both positive and negative impacts. The usage patterns of short video apps among elderly people reflect a complex interplay between technological advancements, social dynamics, and individual well-being. Nevertheless, there are ongoing issues with the suitability and safety of SV apps for older users. The proliferation of broadband and smartphones in rural China has enabled the dissemination of SVs goods, reducing the barriers for OAs to maintain social relationships. SVs enhance intergenerational connections among OAs, diminish their feelings of isolation, and promote their psychological well-being. In addition, SVs cater to the spiritual requirements of OAs, aid in their comprehension of societal transformations, and facilitate their social assimilation and adjustment. Nevertheless, there are ongoing issues with the suitability and safety of SV apps for OA users. Additional measures are required to improve their accessibility and security, thereby enabling OAs to fully experience the advantages of digital technology. It is recommended that further research be conducted to better understand the long-term effects of short video usage on older adults in rural China and to develop strategies to promote healthy and balanced technology use among this demographic.

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