

Research on the impact of Internet use on the level of social adaptation in the elderly—Empirical analysis based on CLASS 2020 data

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Abstract: Based on the data of the 2020 China Elderly Social Tracking Survey, this paper explores the heterogeneous impact of Internet use on the social adaptation level of the elderly from the perspective of resocialization theory. Using descriptive statistics and multiple linear regression, the study concluded that low levels of Internet use weakened the social adjustment level of older adults to varying degrees. Accordingly, it is necessary to take into account the current situation of Internet use by the elderly, increase the popularization of network infrastructure, improve the digital literacy and digital ability of the elderly, create a good network ecological environment, and help the elderly cross the digital divide.

1. Introduction

China is facing the challenge of a rapidly growing population ageing. According to the data released by the National Bureau of Statistics in February 2024, by the end of 2023, China's population aged 60 and above will reach 297 million, accounting for 21.1% of the total population; The population aged 65 and over was 217 million, accounting for 15.4%. ^[1]With the acceleration of China's aging and the continuous expansion of the elderly population, how to help the elderly adapt to the changes of the new era and improve their social adaptation level has become an important topic of widespread concern and discussion in academia, government departments and even the whole society.

Although the in-depth development of information technology has brought digital opportunities and dividends, it has also triggered new social governance challenges, especially the digital divide. The elderly group is the special group that is most widely and profoundly affected by the phenomenon of the digital divide.

In view of this, this study aims to analyze the impact of Internet use on the social adaptation level of the elderly, and explore new ways to promote the construction of a digitally inclusive society and help the elderly achieve digital integration.

2. Literature review and theoretical assumptions

2.1. Literature review

At present, some studies have mainly discussed from the perspective of Internet use, and most of the studies support the "network gain effect theory", and found that Internet use is conducive to improving the mental health^[2] and life satisfaction of the elderly^[3], and also has a significant effect on the physiological health of the elderly.^[4] From a positive perspective, it is concluded that new media plays a significant role in improving the adaptation of daily life, social psychology and social relations.^[5] In addition, based on the perspective of active aging, the study found that Internet use has a significant positive effect on social adaptation, and the more the elderly use the Internet, the more significant the improvement of positive aging indicators.^[6] At the same time, based on the "network gain effect theory", Gong Yujiao found that compared with the elderly who do not use the Internet, the use of the Internet can significantly improve the social adaptability of the elderly, and the elderly group can also actively apply Internet technology in the digital society, so as to better integrate into the digital society.^[7]

2.2. Theoretical assumptions

Socialization is the stage and process that must be passed through the normal life of an individual, which runs through the life of an individual, and resocialization is a special stage of the socialization process.^[8] Socialization makes people grow, and the role of resocialization is to transform, develop and improve people, and help individuals realize their self-and social values. Once basic digital access is secured, the use of digital technology by older people becomes key. Resocialization theory states that resocialization involves not only access to a new environment, but also the ability to act effectively in that environment. Thus, by using the Internet with the help of digital technologies, older persons can learn new forms of communication, ways of obtaining information and norms of online behavior. The acquisition of these skills is an important factor in the successful adaptation and social activity of older persons to the digital society. From this perspective, the ability of older persons to use ICT digital technologies determines their ability to effectively integrate into the digital social environment.

Therefore, this paper proposes the following hypothesis: the lower the level of Internet use, the lower the level of social adaptation of the elderly group.

3. Study design

The data used in this study are from the 2020 China Longitudinal Aging Social Survey (CLASS 2020), which is a large-scale national and continuous social survey project jointly designed and implemented by the Population and Development Research Center and the Institute of Gerontology of Chinese University. CLASS 2020 covers a total of 464 village (neighborhood) committees in 28 provinces (autonomous regions and municipalities directly under the central government) across the country. The content of Internet use involved in this survey is the most comprehensive and representative among the national surveys on the society of the elderly, which can provide the latest data support for the development of this study. A total of 11,398 individual samples of the elderly were obtained in CLASS 2020, and 9,176 valid samples were finally obtained after variable screening, missing values and extreme value processing.

The dependent variable in this study was the level of social adaptation. The social adjustment level variables were measured using the Social Adjustment Scale developed by Chen Bo (Chen Bo, 2010). The scale consists of 8 questions, including "I would like to participate in some work of the

village/neighborhood committee if I have the opportunity", "I often want to do something for the society", "I like to learn now", "I feel that I am still a useful person to society", "society is changing too fast, and it is difficult for me to adapt to this change", "now, there are more and more opinions that I find it difficult for me to accept", "I am difficult to accept more and more new social policies today", and "the current social changes are becoming more and more unfavorable to the elderly". The score of each question is set to 0~4 points, and the corresponding questions are inversely assigned and the total scores are added to obtain the social adaptation score of the elderly group with the interval of 0~32, and the higher the score, the higher the social adaptation level of the elderly group.

The independent variable in this study was Internet use, which was based on the questionnaire "Do you use the Internet?" (including using mobile phones and other electronic devices to access the Internet)" and re-assign the score in the question, Internet = 0, never Internet = 1.

Based on the existing research, the control variables in this study included gender, age, education level, hukou nature, self-rated health status, marital status, residence style, and number of surviving children. Among them, the education level is converted according to the education level items, and the values of "illiteracy", "private school/literacy class", "primary school", "junior high school", "high school/technical secondary school", "junior college" and "bachelor's degree or above" are assigned as 0, 3, 6, 9, 12, 15 and 16 in turn. The self-rated health status was assigned a value of 1~5 from "very unhealthy" to "very healthy", and the higher the score, the better the self-rated health status of the elderly.

In this study, a multiple linear regression model was used to evaluate the impact of Internet use on the social adjustment level of older adults. Control variables such as gender, age, and years of education were included in the model. The aim of this model is to reveal how different levels of the digital divide independently affect the level of social adaptation of older adults after controlling for other relevant factors.

4. Empirical results and findings

Table 1: Linear regression analysis of the impact of Internet use on the level of social adaptation in the elderly

	Model 1
	Level of social adaptation
Gender	-0.026 ⁺ (0.075)
Age	-0.017 (0.007)
Educational attainment	0.024 [*] (0.011)
Marital status	-0.019 ⁺ (0.084)
Nature of the account	-0.032 ^{**} (0.085)
Self-rated health	-0.119 ^{***} (0.042)
Residency style	0.015 (0.028)
Number of surviving children	0.029 ⁺ (0.033)
Internet Usage	-0.275 ^{***} (0.096)
<i>N</i>	9176
<i>R</i> ²	0.104
adj. <i>R</i> ²	0.103

Standardized beta coefficients; Standard errors in parentheses

⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

According to Table 1, the coefficient of Internet use is -0.275, which has a very high negative significance relationship ($p < 0.001$). The results show that the lower the level of Internet use, the lower the level of social adaptation of the elderly, that is, the reduction of the frequency of Internet technology use significantly reduces the social adaptation level of the elderly. Thus, the hypothesis was verified. This result highlights the importance of the use of Internet technology in maintaining social networks, improving quality of life and maintaining mental health among older people. Explained from the point of view of resocialization, the use of the Internet can help older people to maintain social connections, obtain updated information, participate in distance education and leisure activities, which are all important aspects of active participation in social life. Therefore, the use of the Internet is an effective means of social adaptation for the elderly, and the rational use of technology can help the elderly to better integrate into society, obtain resources and maintain interpersonal relationships, and this conclusion is consistent with previous studies.^[9]

5. Conclusions and discussions

Based on the perspective of resocialization theory, this study empirically analyzes the heterogeneous impact of Internet use on the social adaptation level of the elderly in China, and the low level of Internet use has a significant negative impact on their social adaptation level, although the manifestations and degrees of influence are different, but this phenomenon is reflected in both rural and urban areas.

According to the overall layout and planning of China's national strategy to actively respond to population aging, combined with the concept of active aging proposed by the World Health Organization, this study has the following implications:

First, we need to improve the digital literacy and capabilities of older people and help them bridge the digital divide. Studies have found that the use of the Internet can promote better integration of older people into society. Therefore, the Internet environment needed by older persons should be provided and encouraged to actively use the Internet. Second, it is necessary to strengthen the management of cyberspace and create a good cyber ecological environment. At the national level, the management of cyberspace should be strengthened, to prevent the potential harm caused by online fraud and other negative information to the elderly, to create a safe online environment for the elderly, and to ensure the cybersecurity of the elderly. Third, organizations should stimulate the enthusiasm of the elderly and encourage them to participate in social activities that combine online and offline elements. They should provide the elderly with various venues and channels for social participation, carry out a variety of social activities, and fully mobilize their awareness and enthusiasm for social engagement.

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