Factors Influencing Digital Disconnection among the Elderly

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Abstract: Through in-depth interviews with 24 elderly people, the performance and influencing factors of the digital disconnection of the elderly were investigated, and the current situation and difficulties of their use of digital media were explored, looking forward to making recommendations for the digital integration of the elderly. The study found that the Internet use among the elderly cannot be divided into "full access" or "total disconnection", but there is also a "gradual" difference in the use of internet. The degree of digital disconnection in the elderly can be divided into complete disconnection and partial disconnection. Partial disconnection can be subdivided into passively receiving information, actively searching for information, and actively delivering information. The degree of digital disconnection is affected by individuals, groups, society, and digital media. On this basis, this thesis analyzed the impact of digital disconnection on the lives of the elderly, and put forward suggestions to help the elderly to use the Internet in the view of different social subjects.

1. Introduction

The idea of "Disconnecting" was first introduced in the D*isconnecting with Social Networking Sites* by Light. Later in his research with Cassidy, he noted that disconnection is not just about not using social media, but also about the strategic ways users use social media for their personal needs (Light, 2014). Digital disconnection refers to the ability to disconnect from the network infrastructure of the information society.

In contemporary China, aging and informatization are two major characteristics in the process of social transformation (Wang, 2020). According to the 45th *Statistical Report on Internet Development in China* released in April 2020, as of March 2020, China's elderly Internet users aged 60 and above accounted for only 6.7 percent of the country's total Internet users, and only about 23 percent of those aged 60 and above used the Internet.

As informatization progresses in society, the demand of the elderly for information is increasing, but the speed of mastering digital media is far behind the development speed of digital media, so the elderly face great challenges in the process of integrating into the digital society.

In this paper, the influencing factors of digital disconnection among the elderly were investigated through semi-structured in-depth interview, in order to provide reference for the elderly to integrate into the Internet society.

2. Research Method

The in-depth interview method was adopted in the study. Considering the limited range of people who could be contacted during the epidemic period, the respondents were identified as young urban elderly (65-74 years old). A total of 24 elderly people were interviewed while taking into account the characteristics of gender, age, housing situation, education level and so on. After the consent of the interviewees, the interview data were recorded in the form of written record and audio, etc., and the written data were transcribed into about 41,000 words. In order to protect the privacy of interviewees, their basic information is anonymously coded.

This study analyzed the interview data in the form of three-level coding to sort out the relationship between the digital disconnection of the elderly and the influencing factors at various

levels. In order to ensure the accuracy of data collection and analysis, methods such as cross sorting and triangulation test were adopted in the study. Coding criteria were formulated and coding loopholes were cross-checks for several times.

3. The Degree of Digital Disconnection among the Elderly

It is found that there are large differences in the degree of digital disconnection among the elderly groups. The digital disconnection of the elderly can be divided into complete disconnection and partial disconnection.

(1) Complete disconnection

Complete disconnection refers to the state in which the elderly are completely disconnected from digital media in their life. The elderly who are completely disconnected usually lack the channels to learn and use digital media effectively, which leads to their incomplete understanding of digital media. In addition, education level and physical condition are also the reasons why some elderly people find it difficult to access the digital media. On the other hand, there is a growing recognition of the difficulties the elderly face in accessing the digital media, and with better social services, older people could choose a variety of ways to achieve their goals, which can also lead to complete disconnection.

(2)Partial disconnection

The partial disconnection can be divided into passive reception of information, active search for information and active production of information.

The elderly who receive information passively can use digital media to access basic information, but they do not acquire information consciously and actively, either produce and process information. The elderly who are passive receivers of information can get help in using digital media, and their children can use spare time to help them access digital media.

The elderly who actively access information could use smartphones to access the Internet and have the awareness to actively access information and learn digital skills, but they are still limited to access information and could not produce information. Individual factors and the lack of appropriate design for the elderly to use the digital media may hinder their production of the information.

The elderly who actively participate in information production are skilled in digital media use and can actively participate in the process of information production to a certain extent. This group accounts for a relatively low proportion of respondents. They have a high level of education and digital media use skills. Due to the demands of work, they have a high degree connection of digital media and can actively participate in information production and creation. However, the complicated operation of digital media is still the main factor which constraint the connection of the digital media. With the growth of age, the degeneration of eyesight, joints and other physiological functions, the complicated website procedures are big obstacles for the elderly, and there is need for the appropriate design of digital media for the elderly.

The extent and use of digital media among the partially disconnected elderly are different. Based on the interview results, the use of digital media of the surveyed elderly is presented as follows:

4. Factors Influencing Digital Disconnection among the Elderly

4.1 Individual Factors

4.1.1 Physical and Mental Conditions

Available data shows that physical and psychological factors are two important internal factors affecting Internet use among the elderly. Physical aging is the root cause of impaired learning ability and operational degradation in the elderly, such as impaired vision and reaction ability (Shi & Chen, 2019), and inadequate ability to discriminate and process information (Zhao & Kuang, 2018). The psychological anxiety of the elderly in using the Internet mainly stems from the lack of digital skills. They feel at a loss what to do in the face of the sudden arrival of digital society, so

they choose not to touch the digital media (Dong & Wang, 2020).

The Older adults in good health are more willing to choose to access digital media, they have better eyesight, better operating and memory skills, and they are more willing to learn and use smart devices. The Older adults with poorer health conditions are relatively less willing to access digital media and they are not able to learn and remember skillfully. Instead, they are more willing to use devices with large fonts and simple programs.

4.1.2 Level of Education

Highly educated older people use digital media frequently (He, 2017). With higher education level, the ability to discriminate and absorb the information is relatively strong. In contrast, older people with low education level have relatively weak ability to absorb and distinguish the information.

4.1.3 Free Time

Limited leisure time is one of the barriers to the access of digital media for older people. With household chores and work occupying limited energy and time, digital media will become less attractive over time. Therefore, some well-educated older people will consciously control the length of the access of digital media and they will disconnect autonomously after exceeding a predetermined length in order to achieve an optimal balance.

4.1.4 Motivation for Digital Access

The motivation of digital media access is the direct reason for the elderly to access the Internet. Through the analysis of the interview data, we found that the motivation of the elderly to access the Internet can be roughly divided into two types: passive access and active access. Passive access means that the elderly have to access the Internet for practical reasons, such as contacting with family members and making payment on cell phones. Active access refers to the seniors who actively request access to digital media. These seniors are motivated to access the Internet because of their awareness of the advantages of the Internet and their practical needs.

4.2 Group and Social Factors

Group and social factors are important external factors that influence older adults' Internet use. And the factors which affect the digital media access are divided into support from offspring, peer influence, digital inclusion and exclusion.

4.2.1 Support from Offspring

Offspring exert an important influence for older adults to understand and access to digital media (Zhao & Kuang, 2018). Older adults are more likely to reduce or even stop using digital media if their loved ones are not patient or do not have the energy to guide them in their use of digital media (Ni, 2019).

For older adults who are separated from their children, keeping contact with their children is one of the motivations for their digital media access. During the interviews, several older adults contacted their family members through digital media such as WeChat, and some older adults who are disconnected with digital media also want to communicate more convenient with their children through smart devices. For those who live with their children, on the one hand, their children can provide help and support for digital media access immediately for their parents; however, on the other hand, with the children's good care of their lives, older adults' social needs can be easily satisfied and their willingness to access digital media may become lower.

Due to economic, cultural, living conditions and other reasons, the younger generation also lacks a supportive attitude toward digital media access for the elderly. The lack of learning opportunities for digital media use is an important reason why older adults encounter difficulties in using the Internet.

4.2.2 Peer Influence

Older adults whose groups are happy to use digital media are more likely to access and use digital media (Lan & Lu, 2019). Group factors can influence the initiative of digital media access among older adults. When the majority of older adults are in a group that tends to use smartphones and access the Internet, older adults will be more motivated to access digital media. In addition, friends and relatives who are already connected to digital media can also help to enhance the older adults' motivation to access digital media.

The social circles which are generally unfamiliar with digital media will lead to a lack of external access motivation for older adults (Ni, 2019; Peng, 2018). And the probability of digital disconnection is greater for older adults who can realistically gain enough group affiliation to not have to rely on digital media (Jin & Zhao, 2019). When older adults are in a group where fewer people use smartphones and have access to the Internet, older adults may not be as motivated to access digital media. At the same time, it is not easy for the elderly to get timely help when they encounter difficulties in using digital media, and they are more passive in accessing digital media.

4.2.3 Digital Inclusion and Exclusion

The inclusion and exclusion of the macro social environment in terms of digital media use will affect the initiative and possibility of digital access for the elderly. The prevalence of mobile payment and the popularity of the Internet provide a better digital access environment for older adults while the diversification of payment means provide more choices for older people when paying and reduce the need for choosing mobile payment, thus preventing their digital access.

4.3 Digital Media-Related Factors

4.3.1 Functions of Digital Devices

The degree of digital disconnection among the elderly varies greatly with different digital devices. To some extent, the limited function of the old equipment is one of the reasons for the restriction of digital access for the elderly. The experience of digital devices affects the motivation of digital access of the elderly. Font size, brightness of screen and other facility-related conditions affect the physical experience of digital use of the elderly; The psychological experience of digital use was influenced by the speed of Internet connection, memory size and signal quality.

4.3.2 The Advantages and Disadvantages of Digital Media

Compared with traditional newspapers, radio and television, telephone and SMS, digital media have obvious advantages, such as more immediately access to information, more convenient registration in hospital, and more entertaining functions. In contrast, digital media also have some disadvantages, such as doubtful authenticity of information, advertisement popover and privacy leakage (Kuntsman & Miyake, 2019). And privacy concern is the most obvious motivation for the disconnection (Light, 2014). Besides, the interface and program design are not suitable for the elderly on some websites and software.

It should be noted that on the one hand, the impact of digital media's disadvantages on the elderly stems from the fact that it does have many problems that affect the elderly's experience of using it; on the other hand, there are also subjective factors of the elderly themselves. Some of the elderly people are influenced by traditional concepts and subconsciously exaggerate the defects and problems of the Internet, which affects their own mentality and thus affects the access of the digital media.

4.3.3 Access Conditions and Device Prices

Because of frugality, some older adults are prone to digital disconnection. When it comes to financial matters, the elderly are more likely to be afraid of digital media, concerning that excessive exposure to privacy will lead to loss of property, thereby reducing or avoiding digital media access behavior. The cost of using the Internet and the price of internet equipment can lead to a certain degree of digital media disconnection among the elderly. During the interviews, many older adults were reluctant to buy a smartphone or use an outdated device abandoned by their children.

Besides, many software and web sites are primarily for profit, so they charge fees for membership. When faced with procedures with payment setting, the elderly will choose to avoid using them, which has also become a reason for the digital media disconnection of the elderly.

5. Impact of Digital Disconnection on the Elderly Group

Among the older adults who are completely digitally disconnected, some of them think that the digital disconnection has no significant impact on their life. The elderly do not view digital media as a valuable or more efficient life tool (Quan-Haase, et al., 2018). Their current life satisfaction degree is generally high, and they can satisfy their social needs through other ways such as children's company and group gatherings, so they do not have to access digital media.

Another group of the elderly think that the disconnection does bring some inconvenience to their lives, especially since mobile payment has become more and more common and digital disconnection makes transactions inconvenient. In addition, the elderly who have been separated from their children for a long time cannot use WeChat video to communicate with their children. Moreover, some of the disconnected elderly believe that digital disconnection will reduce the efficiency of life and work, cause the obstruction of information access and show the trend that the higher the digital access, the stronger the dependence on digital media.

6. Related Recommendations

With the rapid development of the aging process, the elderly have become a huge group that cannot be ignored. The big expansion of the digital disconnection will make the elderly disconnect from society, which will lead to inevitable social conflicts for social development. To help the elderly access digital media, we should attach importance to their spiritual world, integrate the digital media with the aging society, and play the proper role of new media in the lives of the elderly. The access to digital media should start with government support, new media guidance and help from groups around the elderly.

The government is supposed to combine the strength of market with social forces to improve the construction of information and communication technology infrastructure and network coverage, and provide preferential or reduced telecom prices for the elderly in order to promote the use of the Internet among the elderly. Moreover, improving information literacy is the key to digital media access (Ferro, et al., 2011). The assistance of digital access for the elderly should start from popularizing the importance of digital media and disseminate its role and significance, so that promote digital access for the elderly. The government should use public platforms and resources to train older adults on digital skills (van Deursen & van Dijk, 2009).

Enterprises should design information products with simple graphical interfaces, large buttons, and easy manipulation to accommodate the eyesight of the older adults. For example, the keyboard with large tabs or different colors on a computer or mobile phone to help the elderly distinguish them, and a mouse that fits the shape of the palm of an elderly person's hand. In addition, the digital media should enrich the online information resources and develop the information content which is suitable for the old adults' needs, such as the elderly health preservation, literature, drama, Chinese opera, painting, etc. In addition, the exhibition platform, consultation service, health guidance and other personalized services for the elderly can enable them to obtain better user experience and broaden the connection between the elderly and the outside world.

Family is one of the important factors affecting digital access of the elderly. For the elderly who have difficulties in digital access, families should give full understanding and tolerance, patiently guide their digital access behavior, and equip the elderly with smart devices if economic is possible.

7. Conclusion

This essay has made a brief analysis of the extent and influencing factors of digital disconnection among the elderly through interviews and the following conclusions were broadly drawn after the

analysis of the interview data.

At present, digital media offers ways for older adults to maintain social engagement (Gardner, et al., 2012), as well as a number of support services for older adults that potentially improve quality of life and maintain a sense of autonomy (Slegers, et al., 2008). Complete digital disconnection is relatively rare, and more older adults are in the state of actively accessing information or passively receiving information. The factors influencing the digital access of the elderly can be roughly divided into personal factors, social environment factors and digital media-related factors, and different factors have different degrees of influence on the elderly group. Moreover, some older adults believe that their lives have become more convenient after accessing the Internet, while others propose that digital disconnection has no significant impact on their lives. In order to reduce the impact of digital disconnection on the elderly, the government, related businesses and family members need to make efforts to help the elderly.

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