

Research on the Pathways and Impacts of Digital Inclusion among Older Adults in China: A Literature Review Based on CSSCI

Xiaojuan Hu¹, Fen Xie^{2,*}

¹Faculty of Education, Guangxi Normal University, Guilin 5411004, Guangxi, China

²School of Journalism and Communication, Guangxi Normal University, Guilin 541004, Guangxi, China

*Correspondence Author

Abstract: *Digital inclusion of older adults has emerged as a prominent topic within academic circles in recent years. A comprehensive analysis of relevant CSSCI-indexed papers in China reveals that these studies have adopted diverse perspectives. The mainstream of research has centered on exploring pathways to achieve digital inclusion and its associated impacts. Concurrently, attention has been directed toward factors impeding older adults' digital inclusion, as well as the concept of digital exclusion framed as a rights issue. Collectively, these research outputs address a series of questions regarding digital inclusion among China's older adults from multiple dimensions.*

Keywords: Older adults, Digital inclusion, Digital exclusion.

1. Introduction

Currently, Chinese society is undergoing two major waves of social development: first, digital technologies have been deeply embedded in various sectors of society, reshaping the lifestyles and social interaction patterns of the Chinese people; second, the country's demographic structure is becoming increasingly aged, with population aging entering an advanced stage. Data from China's seventh national population census indicate that the population aged 60 and above stands at approximately 264 million, accounting for 18.7% of the national population. Against the backdrop of the concurrent advancement of "digitalization" and "population aging," Chinese society is confronted with a prominent issue of the "digital divide." How to assist older adults in achieving digital inclusion and ensuring they share in the benefits of the digital era has thus become a critical topic in addressing the challenges of population aging.

This urgent social need has garnered significant attention from researchers in recent years. Since 2016, among the annual projects funded by the National Social Science Fund of China, there has been a sustained increase in the number of approved projects focusing on the intersecting issues of "digitalization" and "population aging." This trend reflects the high priority accorded by government policymakers to digital inclusion for older adults, as well as the active response of academia to this practical issue. Concurrently, driven by the catalytic effect of the COVID-19 pandemic on digital services and the promotion and popularization of the concept of "smart elderly care," a body of high-quality academic has been published in CSSCI (Chinese Social Sciences Citation Index) source journals, exploring themes such as the digital divide among older adults, their digital literacy, and intergenerational support. Over the past decade, scholars have approached the topic from diverse perspectives, accumulating valuable knowledge that enhances our understanding of

digital inclusion for older adults in China.

However, despite the vigorous growth of this research field, no systematic review, reflection, or integration of existing studies has been conducted to date. This paper aims to address the following core questions through a systematic review and analysis of relevant CSSCI literature:

- 1) Question of Path Exploration: What key pathways and specific strategies for promoting digital inclusion among older adults in China have been identified and proposed in existing studies?
- 2) Question of Research Methods: What are the core research methodologies employed in current studies on digital inclusion for older adults in China?
- 3) Question of Research Reflection: What limitations exist in the existing literature?

2. Overview of Research on Digital Inclusion of Older Adults

The present study centers on the theme of "digital inclusion of older adults," with articles selected based on the criterion of examining the relationship between older adults and digital technologies. A total of 17 CSSCI academic journals in the field of journalism and communication (excluding extended editions) were included, covering the period from January 2016 to July 2025. Each issue of these journals was systematically reviewed and assessed to identify relevant studies, resulting in a final sample of 59 papers. The key arguments, authors, and research methodologies of each selected paper have been summarized in the table below. It should be noted that one of the papers addresses both facilitating and hindering factors influencing digital inclusion.

Table 1: The specific information of 59 papers

Factors Influencing the Promotion of Older Adults' Digital Inclusion			The impact of digital inclusion for the elderly		
Author(s)	Viewpoint(s)	Method(s)	Author(s)	Viewpoint(s)	Method(s)
1.Yang Yifan et al.	Differentiated policy and institutional design; age discrimination and stereotypes; gaps in individual resource endowments.	speculation	1.Wu Weihua et al.	Constructing elderly subcultures and resisting traditional stereotypes	speculation
2.Zhou Yuqiong et al	Age-appropriate communication systems and communication frameworks	speculation	2.Jing Yixin et al	Enhance happiness in old age	qualitative
3.Shi Junying	Age-appropriate product design	speculation	3.Sun Xinru et al	Emotional expression, social participation, and construction of subjectivity	qualitative
4.Zhou Yuqiong	Perception of WeChat's characteristics and popularity	speculation	4.Yuan Yuan et al	Misperceptions and conflicts in intergenerational communication	speculation
5.Li Biao	Community influence, personalized needs, satisfaction level, willingness to provide digital feedback, and the socioeconomic status of the offspring	Quantification, qualitative	5.Huang Zhongjun et al	Intergenerational group identity segmentation	speculation
6.Gan Haochen et al	Government subsidies, endowment insurance (differences in income structure)	quantification	6.Jiang Qiaolei et al	Breaking original media habits, information empowerment, relationship empowerment, action empowerment	qualitative
7.He Jianping et al	Perceived usefulness, perceived ease of use, intergenerational technical support	Quantification, qualitative	7.Wang Yanlong et al	Maintaining authority and constructing family cultural space	qualitative
8.Peng Lan	Breaking down the barriers at the levels of channels, content, and culture	quantification	8.Ding Zhuojing et al.	Improving the ability to adapt to society	quantification
9.Shi Junying	Age-appropriate product design	speculation	9.He Jianping et al.	Enhancing happiness	quantification
10.He Jianping et al.	E-Health literacy, seeking social support, media characteristics, educational level	speculation	10.Wu Cuiping	Reconstructing identity, expanding channels of expression, improving the quality of elderly care, and ameliorating intergenerational relationships	speculation
11.Wang Wei	Credibility, information factors, interpersonal factors, and personal factors	quantification	11.Wu Jing	Characterized by symbolic aging, with simple and straightforward meaning construction.	speculation
12.Wu Jing	Psychological characteristics, mental state, and living and cultural background	qualitative	12.Zhou Yuqiong et al	Digital generation gap and health generation gap	quantification
13.Gai Lontao et al	User factors, media factors, environmental factors	speculation	13.Mou Yi et al.	Useful for COVID-19 prevention, but with a misleading tendency.	Quantification, qualitative
14.Zhang Lin et al.	The dynamic spiral of co-evolution between endogenous empowerment and exogenous empowerment	quantification	14.Pan Shuya	Interpersonal relationships, social identity, and social support	quantification
15.Zhang Dawei et al	Intergenerational feedback in obligatory relationships, peer mutual assistance in reciprocal relationships, and authoritative guidance in utilitarian relationships	qualitative	15.Wang Yun et al.	Reshape digital identity	qualitative
16.Xiong Hui et al	Agent usage mode	qualitative	16.Gu Chenyu et al.	Health information overload and health information avoidance	quantification
17.Yan Sanjiu et al.	Perceived usefulness, perceived ease of use, intergenerational technical support, and active aging	qualitative	17.Liu Chanjun	Loneliness arising from digital connection	quantification
18.Zhu Yajing	Performance expectation, effort expectation, facilitating conditions, computer anxiety, perceived stress	quantification	18.Gong Wen et al	Health information avoidance	quantification
19.Zhao Qingting et al.	Intergenerational digital feedback		19.Xie Xingzheng	Health information adoption	quantification
			20.Jia Yu	Digital addiction	Quantification, qualitative
			21.Xiong Hui	Reconstructing family authority and acquiring information	qualitative
			22.Wu Linlin	Satisfying social face, acquiring information, and constructing communication space	Quantification, qualitative
			23.Lei Xia et al	The potential risks of believing and spreading rumors	qualitative
			24.Xie Xingzheng et al	Privacy perception	quantification
			25.Jiang Zhaojun et al	Enhance subjective well-being	quantification
			26.Xiong Hui et al	Constructing elderly identity	qualitative
			27.Jiang Qiaolei et al	Reducing the levels of depression and anxiety, obtain social support, and	quantification

				improve health literacy	
			28.Zhou Yuqiong,Chen Siyuan	Life narratives of the elderly group	speculation
			29.Wang Donglin et al	Constructing a quasi-acquaintance community	qualitative
			30.Zheng Manning et al	Social interaction, identity management, group cohesion, risk of rumors	quantification
			31.Chen Juan	Sharing health information and obtaining emotional support	quantification
			32.Liu Yi et al	Avoiding health information	qualitative
			33.Hu Liangyi et al	Constructing platform-based emotions	qualitative
			34.Wang Pengcheng et al	Digital addiction	quantification
			35.Zhao Hong	Self-presentation of the elderly group	speculation
			36.Huang Jun et al	Believing and spreading rumors	qualitative
Barriers to digital inclusion for the elderly			The elderly do not participate in digital inclusion.		
Author(s)	Viewpoint(s)	Method(s)	Author(s)	Viewpoint(s)	Method(s)
1.Zhou Yuqiong	Learned helplessness, fear of technology	Quantification, qualitative	1.Fang Hui et al	Treating “disconnection” as a cultural phenomenon	speculation
2.Li Biao	Risk perception	quantification	2.Wu Juncheng	Identity Positioning, Family Power Relations, and the Constraints of Urban-Rural Social Structure	qualitative
3.Gan Haochen et al	Labor Crowding-Out Effect and Child Dependency	Quantification, qualitative			
4.Wu Linlin et al	Issues of health	qualitative			

2.1 Factors Influencing Older Adults’ Digital Inclusion: Institutional Orientation, Individual Characteristics, Family Ties, and Social Relationships

Factors influencing older adults’ digital inclusion have been analyzed by numerous researchers from an optimistic perspective, with subsequent explorations into how to facilitate older adults’ achievement of digital inclusion. A complete communication structure is inherently composed of corresponding institutional systems, material equipment, technical support, and socialized individuals. When digital technologies are integrated into the social lives of older adults, these components emerge as foundational factors. Operating at a macro level, institutional frameworks provide explicit guidance for older adults’ digital inclusion, aiming to foster a more human-centered, age-friendly communication environment.

Additionally, researchers have examined how factors such as Chinese older adults’ individual characteristics, family environments, and social relationships impact their digital inclusion from various angles. An empirical study conducted by Li Biao in Beijing identified that individual traits—including age, income, educational attainment, personalized needs, satisfaction levels, and willingness to use technology—and social relationships, such as group pressure (from relatives, colleagues, and classmates), significantly influence older adults’ digital inclusion [1]. A field survey of older adults in Shenzhen by Zhou Yuqiong and her team revealed that subjective factors, specifically older adults’ perceptions of WeChat’s features and popularity, exert a greater influence on their adoption and use of WeChat than objective factors like demographic variables and health status [2]. Among various personal characteristics, older adults’ health needs stand out as a particularly impactful factor. Coupled with the impact of the COVID-19 pandemic, interactions between older adults and digital media have become a routinized behavior for accessing the latest

pandemic updates, making health information needs a critical variable affecting their digital inclusion.

From a geographical perspective, most of the aforementioned studies have focused on analyzing factors influencing digital inclusion among urban older adults, with relatively few examining their rural counterparts. If older adults are considered a digitally vulnerable group, rural older adults can be regarded as occupying the most disadvantaged position within this cohort. Of the 59 papers reviewed, only a limited number have addressed digital inclusion among rural older adults. Rural older adults differ significantly from their urban counterparts in terms of individual characteristics, media literacy, and social relationships. Compared to urban older adults, rural older adults face greater constraints from both subjective and objective factors, or may even meet their basic needs without requiring digital inclusion. When discussing strategies to support older adults’ digital inclusion, attention should be paid to disparities in media literacy stemming from urban-rural divides.

To summarize, a network structure of digital inclusion can be constructed, one that is grounded in older adults’ individual characteristics while being shaped by family ties, social relationships, and communication institutions. Older adults’ digital inclusion constitutes an individual-societal-technological interaction process rooted in subjective agency and social relationship networks. It requires not only objective access conditions but is also influenced by subjective traits, and further necessitates external support.

2.2 Transformations in Older Adults’ Achievement of Digital Inclusion: Media Empowerment, Cultural Construction, and Authority Reconfiguration

Digital inclusion has been shown to facilitate both enablement and empowerment. Most researchers have adopted an optimistic stance toward the outcomes of older adults’ digital

inclusion. Successful integration of digital technologies by older adults allows for more enriched life experiences, enabling information empowerment, relational empowerment (including the recovery of lost relationships and the establishment of new ones), and behavioral empowerment (providing greater opportunities and spaces for self-expression, self-presentation, and the formation of new collective cohesion) [3]. Building on this, they are not only able to engage in intergenerational interactions and maintain positive family relationships but also convert virtual social connections into real-world interactions, construct elderly group relationships, expand social engagement, and thereby develop a sense of group belonging and self-identity. Digital inclusion for older adults is regarded as a process of resocialization mediated by new media, capable of satisfying both emotional and material needs while enhancing digital well-being.

Digital inclusion also enables the creation of a subculture among the elderly population. Research in this area has been conducted from the perspective of intergenerational differences. As digital natives, younger generations wield significant influence over the discourse of online subcultures, often mocking older adults' "clumsiness" with digital technologies and trivializing their distinctive memes and social media posts. However, on self-media platforms such as Douyin (TikTok) and Kuaishou, a group of trend-savvy silver-haired internet celebrities has emerged, displaying behaviors that contradict traditional stereotypes of the elderly. These individuals skillfully employ youth-oriented discourse to reconstruct the group's image, bridging the perceived gap between *erciyuan* (two-dimensional) culture, *guofeng* (traditional Chinese style) culture, and traditional elderly culture [4]. It is evident that while generational differences exist between the digital subculture of older adults and that of adolescents, there is also a growing trend toward mutual recognition. Older adults, refusing to be outdone, are gradually challenging the younger generation's dominance in online discourse.

Elderly authority can be reshaped within family and community contexts. It has been argued by researchers that elderly groups who achieve digital inclusion do not lose their traditional authority as elders. Technological empowerment is viewed merely as a temporary "technological bestowal of power." Within the context of traditional Chinese culture, older adults continue to assume the role of etiquette instructors on new media platforms such as WeChat groups, domesticating the norms of family groups and constructing localized cultural spaces [5]. The so-called "digital weakness" of older adults is limited to the technical dimension; in terms of cultural authority (particularly regarding traditional etiquette), they retain their traditional influence. While technology undoubtedly creates new cultural forms, existing cultures also become embedded within new technologies. When examining the interaction between technology, society, and individuals, attention must be paid not only to how technology permeates and transforms humans but also to how society and culture domesticate and influence technology.

Considerations of negative impacts: Achieving inclusion does not equate to successful inclusion. A small number of researchers have focused on the negative consequences of

older adults' digital inclusion, particularly online fraud and privacy violations, noting that the media literacy of older adults is often insufficient to address the negative effects of new media. However, high-quality research on issues such as mobile phone addiction among older adults—which has been widely discussed in recent years—remains scarce.

What transpires after older adults achieve digital inclusion? The findings discussed above provide partial answers. The focus of research has shifted from empowerment to enablement, and from changes in individuals' emotional lives and daily experiences to the construction of social relationships and cultural creation.

2.3 Barriers to Older Adults' Digital Inclusion: Technophobia and Compensatory Mechanisms

Factors inhibiting digital inclusion, which correspond to those facilitating it, have been identified by researchers in the process of exploring pathways to digital integration for older adults. With the popularization of smartphones and improvements in living standards, access to hardware devices is no longer a constraining factor for older adults' digital inclusion. The primary constraints lie in insufficient subjective understanding of WeChat, learned helplessness, and technophobia—specifically concerns about privacy security and falling victim to fraud [2]. These factors have deterred many older adults from engaging with new media. Thus, to encourage digital inclusion among older adults, issues such as overcoming their fear of technology and fostering accurate perceptions cannot be overlooked, as these form the basis for informed decisions to integrate. Additionally, the ability of various offline communication methods to meet information needs has left some older adults lacking motivation and enthusiasm to engage digitally.

2.4 Non-Inclusion: As a Right of Choice

Most studies, grounded in the reality of digital inclusion as the prevailing norm, have framed inclusion as an inevitable imperative. However, a small number of researchers have offered a more critical perspective on the "heated push for inclusion," arguing that non-inclusion among older adults should be recognized as an entitlement worthy of preservation. They contend that "disconnection" ought to be examined as a cultural phenomenon, emphasizing that a senior-friendly digital environment should not merely urge older adults to overcome all obstacles to achieve digital inclusion; rather, it must safeguard the right to disconnection for those unable to integrate [6].

In practical terms, digital inclusion among elderly individuals in remote areas and the oldest-old requires not only conscious subjective readiness but also sufficient external stimuli. Unfortunately, scholarship in this area, particularly empirical research, remains scarce. It would be imprudent to demand that all older adults in China "rush into the digital world" while ignoring their specific socioeconomic characteristics and the realities of rural life. Greater attention should be paid to developing human-centered alternatives for older adults lacking the necessary subjective or objective capacities to engage with digital life, ensuring their access to media services in an information society.

3. Research Characteristics

1) Emergence of New Concepts and Models: Exploring Key Pathways and Specific Strategies. The factors influencing older adults' digital inclusion have been examined from various perspectives by researchers, leading to the proposal of a series of new concepts and models with problem-oriented and practical significance. Zhou Yuqiong's concepts such as "digital generation gap" and "digital reciprocity," along with their corresponding operationalization methods, have gradually gained widespread recognition. Additionally, He Jianping and colleagues' revised technology acceptance structural equation model, the extended comprehensive model of information seeking, Li Biao's constructed UTAUT model for older adults' adoption of new technologies, and Wang Wei's model of factors influencing elderly WeChat users' health information adoption behavior all possess innovative practical value. These contributions have established an integrated perspective for understanding both the processes of digital inclusion and its subsequent outcomes. Based on insights into aging and digitalization, Zhou Yuqiong and others have advocated for integrating research on older adults' communication relationships with broader social changes, arguing that elevating "elderly communication studies" to "aging communication studies" could unlock greater academic potential [7].

3.2 Diversity in Research Methods

From a scientific standpoint, research methodologies in the field of older adults' digital inclusion have been continuously refined through exploratory practice. In recent years, researchers have employed methods such as questionnaire surveys, semi-structured interviews, online ethnography, and theoretical speculation. These approaches encompass both empirical, quantitative data validation and in-depth phenomenological analysis, enabling an understanding of the relationship between older adults and digital technologies from multiple dimensions and perspectives.

3.3 Emerging Research at the Cultural Level

Relevant studies have followed an evolutionary trajectory: from investigating how new media technologies diffuse among older adults, to evaluating their effects, and further to exploring the development of elderly online subcultures. As older adults have increasingly engaged with new media, they have gradually formed stable, group-specific phenomena, laying the groundwork for emerging research at the cultural level. Considerations rooted in the context of traditional Chinese culture have also come into focus. As carriers of traditional cultural transmission and inheritance, older adults can, after achieving digital inclusion, innovate forms of cultural communication and reconstruct authority that has been eroded by technology in an era of rapid media technological development.

4. Academic Reflections

1) Existing studies have predominantly focused on the influence of older adults' individual characteristics, family dynamics, and group relationships on their digital inclusion, while attention to communication systems and institutions

remains relatively underdeveloped. Although sporadic perspectives have mentioned the need to build a more friendly and inclusive digital environment, specific strategies for achieving this remain to be further explored by industry practitioners and government authorities.

2) Research has largely centered on urban elderly populations. Reflecting on existing studies, one might ask: Who is being included? The answer, by and large, points to urban older adults with greater proximity to technology. Do rural older adults require digital inclusion? What conditions would their inclusion necessitate? In the 2021 National Social Science Fund, three projects addressed older adults' digital inclusion, with two focusing specifically on rural elderly populations — indicating that attention to rural older adults' digital inclusion has risen to the level of national demand. Against a backdrop where inclusion has become a political and mainstream academic discourse, priority should be given to recognizing the heterogeneity within the elderly population. It is not our intention to advocate for unconditional digital inclusion for all older adults; rather, we envision a more inclusive and shared digital society—one that avoids blindly promoting universal digital inclusion and does not overlook the information needs of severely vulnerable groups, such as older adults in remote areas, rural regions, and the oldest-old. Thus, the development of communication systems and institutions better adapted to an aging society, as well as the relationships between elderly individuals' socioeconomic characteristics, family dynamics, cultural lives, and digital inclusion, remain to be investigated through more in-depth and comprehensive empirical research.

3) What possibilities emerge after inclusion? Existing research findings have primarily focused on instrumental practical utility, with insufficient attention to cultural dimensions. Memes and silver-haired internet celebrities cannot represent the entirety of elderly subculture. Older adults' digital inclusion is embedded in profound cultural contexts, family ties, and social relationships—factors that, in turn, shape new cultural forms. These emerging phenomena resulting from digital inclusion require deeper examination. Chinese older adults are situated amid the currents of social transformation, demographic shifts, traditional culture, and media technology. As they transition from audiences to communicators, the question of how they construct cultural spaces through new media within the Chinese context demands further in-depth study. Without consideration of historical and cultural contexts, analyses of the impacts and outcomes of older adults' digital inclusion may lose much of their academic value.

5. Conclusion

In analyzing older adults' digital inclusion, research must center on human agency, employing diverse methodologies — including empirical investigation, critical analysis, and textual interpretation—to examine the contexts, issues, and outcomes of digital media usage, while synthesizing lessons from the interactions among technology, individuals, and society. With the advent of an aging society, communication research focused on older adults will confront increasingly multifaceted challenges. We call for in-depth analyses of the relationship between internal heterogeneity within the elderly population and technology, alongside efforts to construct a

more age-appropriate and human-centered communication environment. Additionally, older adults should be recognized as active agents in cultural creation, with their subjective initiative in the face of technology subject to thorough examination.

The four research questions addressed in this study—how older adults achieve digital inclusion, what transpires after inclusion, why some remain excluded, and how to address non-inclusion—offer insights for guiding future inquiry within the framework of domestic mainstream academic discourse over the past five years.

Funding

This research was funded by Guangxi Philosophy and Social Science Foundation Project: A study on the influence of family intergenerational communication to youth attitudes toward aging in the Digital Age (Nos:23FSH028).

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