ISSN: 3079-6601

Research on Influencing Factors of Information Addiction in the Elderly Based on the COM-B Model

Tingting Li[1,*]

[1]Business College , Southwest University, Chongqing 402460,China

[*] Corresponding Author

Abstract

[Purpose/Significance] Studying the influencing factors of information addiction in the elderly is conducive to promoting the elderly to use various types of information more scientifically and healthily, and helping them better adapt to the digital transformation of society.

[Method/Process] Based on the COM-B model, this study collected 350 valid questionnaires, focusing on three dimensions: Capability (information literacy, cognitive function), Opportunity (technological accessibility, social support level), and Motivation (positive psychological capital, fear of missing out). Empirical research was conducted using structural equation modeling.

[Result/Conclusion] The results show that information literacy, cognitive function, social support level, and positive psychological capital have a significant negative impact on the elderly's tendency toward information addiction, while technological accessibility and fear of missing out have a significant positive impact. The mediating effect test reveals that positive psychological capital and fear of missing out play significant mediating roles in multiple pathways.

Keywords

COM-B Model, Information Addiction, Elderly, Influencing Factors, Structural Equation Modeling.

1. Introduction

Against the backdrop of the interweaving of the longevity era and the digital age, a large number of elderly people are actively integrating into the online world, becoming a non-negligible new force of netizens. On January 17, 2025, the China Internet Network Information Center (CNNIC) released the 55th Statistical Report on Internet Development in China in Beijing [1]. According to the report, by the end of December 2024, the scale of elderly netizens aged 60 and above in China had reached 156 million, accounting for 14.1% of the total netizen population and 52.95% of the elderly population aged 60 and above. On average, at least 1 out of every 2 elderly people can access the Internet, indicating that more and more "silver-haired people" are actively embracing the digital age.

The digital age has brought abundant resources, convenient services, and social connections to the elderly, promoting their social participation and improving their quality of life. However, it is also accompanied by problems such as the digital divide, network security risks, excessive dependence, and information overload. As a vulnerable group in terms of information, the elderly show an obvious digital divide compared with "digital natives" in three aspects: digital access, digital use, and digital knowledge [2]. Nevertheless, many elderly people develop information addiction while bridging the digital divide. Social issues such as "aging Internet addiction" and "silver-haired heads-down groups," which exacerbate the disability of the elderly population, have attracted widespread attention from all sectors of society. During the

ISSN: 3079-6601

2023 "Two Sessions," Jin Li, a member of the National Committee of the Chinese People's Political Consultative Conference and Vice President of Southern University of Science and Technology, also proposed the issue of "a serious imbalance between supply and demand of silver-haired content" in his proposal, calling for attention to the problem of "elderly Internet addicts" [3]. General Secretary Xi Jinping clearly put forward the implementation of the national strategy to actively respond to population aging in the report of the 20th National Congress of the Communist Party of China [4]. Given the country's emphasis on the elderly group and the urgent social need for aging-friendly development, it is imperative to pay attention to the healthy information utilization of elderly netizens.

Accordingly, this study takes the COM-B (Capability, Opportunity, Motivation, Behavior Model) model as the theoretical basis to explore the influencing factors of information addiction in the elderly and reveal the structural relationships among these factors. The aim is to improve the elderly's ability to identify and judge information, guide them to establish healthy habits of information acquisition and use, thereby better safeguarding their physical and mental health and rights. This study will also contribute to promoting the digital transformation and inclusive development of society.

2. Literature Review

2.1. Research on Information Addiction

Luo Ling [8] argued that information addiction specifically refers to the addictive behavior of seeking information that emerges with the development of the online virtual society. Currently, information addiction is regarded as a type of behavioral addiction [9], defined as a state in which individuals engage in compulsive information consumption behaviors with the development of the Internet. Individuals with information addiction experience an irresistible desire and uncontrollable impulse for information, leading to inappropriate and repeated information-seeking behaviors. This manifests as repeated and continuous information interaction behaviors of individuals in virtual environments such as the Internet through mobile terminals like mobile phones and computers, accompanied by typical addictive symptoms such as emotional changes, conflicts, withdrawal, and relapse [10]. In this study, information addiction is defined as an abnormal behavioral pattern in the Internet age, characterized by individuals' excessive craving for and compulsive acquisition of information, resulting in psychological dependence and impairment of daily life functions.

Systematic research on addiction began in the 19th century and made significant progress in the 20th century, particularly in the fields of psychology and neuroscience. Initially, the focus was on substance addiction (e.g., alcohol, opium, tobacco), and later expanded to behavioral addiction (e.g., gambling, online pornography) [10]. With the popularization of the Internet and personal computers, the ways in which people acquire and consume information have undergone tremendous changes. Research on information overload and related behavioral issues gradually increased starting from the 1990s. Scholars began to conduct more systematic studies on the phenomenon of information addiction and explore its underlying psychological, sociological, and neuroscientific mechanisms. From a neuroscientific perspective [27], information addiction originates from the dopamine impulse generated in individuals. When humans are exposed to information stimuli, the relevant nerves in the brain are activated, thereby generating a craving for information. Samarraie H [28] believed that information addiction stems from humans' need for information. Users become addicted to the content in the process of using media to meet their own needs, and experience excitement and satisfaction through continuous information acquisition and use, thus forming an abnormal addictive phenomenon. Wang Wentao [10] analyzed the behavioral mechanism of information addiction from three dimensions: neural mechanism, psychological response, and external

ISSN: 3079-6601

representation, and proposed the HSC three-stage model of information addiction with the incentive sensitization theory as the core. Later, he constructed models of the formation mechanism of information addiction under different scenario characteristics, taking entertainment and leisure, learning and creation, business transactions, and health tracking as scenarios.

2.2. Research on Information Addiction in the Elderly

Current academic research on information addiction in the elderly is mainly carried out in the fields of psychology, sociology, and communication. In the field of psychology, Jia et al. [11] explored the relationship between real-life social support and Internet addiction among the elderly during the COVID-19 pandemic; Yang et al. [12] studied the impact of interaction with children on Internet addiction in the elderly, using loneliness as a mediating variable; Jin Yong'ai [13] used Maslow's hierarchy of needs theory and the Activity Theory framework to explore the impact of short videos on the lives of middle-aged and elderly groups from the dimensions of family, social interaction, social adaptation, and mental health; Sun Yuchen [2] analyzed the processing mechanism of digital addiction in the elderly from the perspective of attention mechanism.

In the field of sociology, Wang et al. [14] adopted a qualitative descriptive research method to investigate the elderly's cognition and experience of Internet addiction, and introduced factors that may affect Internet addiction in the elderly into demography; Deng Ming [15] used Media Dependency Theory and the flow theory proposed by psychologist Mihaly Csikszentmihalyi to analyze the social and psychological motivations behind short video addiction among middle-aged and elderly people; Wang Bin [16] constructed a localized model, considering the impact of new human capital, family resources, and macro-environment on the elderly's Internet use; Jia Yu et al. [17] elaborated on the influencing factors of Internet addiction from the perspective of intergenerational interaction.

In the field of communication, Song Meijie et al. [18] comprehensively explored the multiple dimensions of short video addiction among the elderly from the perspectives of empowerment theory, media practice, and social culture; Zhou Yuqiong [19] used the DUE framework (Diffusion-Use-Effects) and cognitive-behavioral theory to conduct an in-depth analysis of the all-round impact of new media on the elderly. There are relatively few studies on information addiction in the elderly in the field of library and information science. Wang Fei et al. [20] conducted an empirical study on the elderly's smartphone use, addiction status, and cognitive function using the Multiple Cognitive Ability Self-Rating Questionnaire (MASQ) and the Smartphone Addiction Scale (SAS).

2.3. Research on Influencing Factors of Information Addiction

A review of the literature shows that the factors influencing information addiction mainly include individual factors, social factors, and technical factors. At the individual level, personality traits, cognitive ability, and emotional state constitute the basic influencing factors. Among them, mental health problems (such as depression and anxiety) will aggravate dependence; cognitive function (activation level and control ability) regulates information processing; technology acceptance and adaptation ability, together with digital literacy and skill level, jointly affect the risk of addiction. At the social level, social network support and family connections reduce the tendency of addiction, while social deprivation and loneliness promote its development; cultural values and social identity exert their unique effects by influencing information needs and usage behaviors. At the technical level, usability, information quality and type, and personalized recommendation algorithms are key factors that promote or inhibit information addiction. The details are shown in Table 1.

Table 1 Summary of research related to factors influencing information addiction

ISSN: 3079-6601

Scholar	Influencing Factors	Research Object
Luo Ling[8]	Information flood, driving force of communication mode, dominance of psychological needs	No specific group
Dai Bao et al.[21]	User factors (needs and motivations, emotions and attitudes, personality and abilities, demographic factors); Environmental factors (social media-related factors, societal factors)	College students
Jia Yu et al.[17]	Intergenerational relationships (whether moving with family, whether taking care of grandchildren, interaction with children)	The elderly
Shi Yinan et al.[22]	Cognitive and behavioral factors (self-reflection, self-doubt, low self-efficacy, negative self-evaluation); Psychological factors (loneliness, depression, social anxiety, self-esteem); Usage motivations (entertainment, social interaction, self-expression, social information seeking); Personality traits	No specific group
Kayis et al.[23]	Big Five Personality Traits (Openness, Neuroticism, Extraversion, Conscientiousness, Agreeableness)	Adolescents
Guo et al.[24]	Parenting Styles: Positive (e.g., emotional warmth), Negative (e.g., rejection and overprotection); Interpersonal Relationships, Gender	College Students
Parmaksız[25]	Personality traits, self-efficacy	College students

ISSN: 3079-6601

In summary, although domestic and foreign research on information addiction, information addiction in the elderly, and the influencing factors of information addiction has achieved certain results, there are still some shortcomings. From the perspective of research objects, most existing studies focus on information-rich groups (such as college students), while there are relatively few studies on information addiction behaviors of the elderly. From the perspective of research content, studies on information addiction focus on media research, including Internet addiction, mobile phone addiction, social media addiction, and game addiction. However, essentially, media such as the Internet, mobile phones, games, and social media themselves do not have addictive properties. What users are addicted to is actually the content and information provided by these media; addiction to these media is essentially addiction to information. From the perspective of research theories, some scholars have explored the formation mechanism of information addiction to a certain extent, but few have explored the influencing factors of information addiction formation from the perspective of behavioral theories.

To address the above shortcomings, this study takes the elderly, an information-vulnerable group, as the research object and introduces behavioral theories to explore the influencing factors of information addiction in the elderly.

3. Theoretical Foundations and Model Construction

In 2011, British psychologist Susan Michie et al. [29] established the Behavior Change Wheel (BCW) theory on the basis of integrating 19 theoretical frameworks related to behavior change. This theory is used to analyze the influencing factors and action mechanisms of individual health behaviors, and its core layer is the COM-B model. The COM-B model holds that individual behavior is the result of the joint action of three factors: Capability, Opportunity, and Motivation. Capability and Opportunity can not only have a direct impact on behavior but also exert an indirect impact on behavior through Motivation. The COM-B model covers factors at the individual, organizational, and social levels, and can explore the promoting and hindering factors of individual behavior from different levels. It is widely used in behavioral research such as consumption behavior, management behavior, environmental protection behavior, and health behavior [30].

Based on this, this study adopts the COM-B model to examine information addiction among older adults, analyzing influencing factors across three dimensions: capability, opportunity, and motivation.

3.1. Capability Factors

In the COM-B model, Capability is regarded as one of the core factors affecting individual behavior [31]. To deeply explore the influencing factors of information addiction in the elderly, this study subdivides the Capability dimension into two sub-dimensions: information literacy and cognitive function. For the elderly, a high level of information literacy can help them effectively screen information, identify false content, protect personal privacy, and reasonably arrange the time for information acquisition and use, thereby combating information overload and reducing the risk of information addiction.

Cognitive function focuses on the brain's ability to process information, including attention, memory, comprehension, decision-making ability, etc. In information addiction, the importance of cognitive function lies in its impact on how individuals process received information, make decisions on whether to continue browsing or stop, and whether they can recognize and control their own information consumption behavior [32]. With the increase of age, the elderly may face a natural decline in cognitive ability, such as a decrease in working memory capacity and a slowdown in processing speed. These changes may make it more difficult for them to cope with

ISSN: 3079-6601

complex information environments, making it difficult to effectively regulate themselves, thereby increasing the possibility of being addicted to information. Based on this, the following hypotheses are proposed:

H1: Information literacy has a negative impact on the elderly's tendency toward information addiction.

H2: Cognitive function has a negative impact on the elderly's tendency toward information addiction.

3.2. Opportunity Factors

In the COM-B model, Opportunity refers to the potential opportunities and conditions existing in the individual's environment, which may promote or restrict the individual's specific behavior [34]. In the study of information addiction in the elderly, this concept can be further subdivided into two dimensions: technological accessibility and social support level. Technological accessibility reflects the convenience for the elderly to use information technology to obtain and operate information resources, while social support level measures the degree of support and help the elderly receive in social interaction. These two dimensions interact to shape the information behavior pattern of the elderly and may have a significant impact on their tendency toward information addiction.

Technological accessibility includes the availability of hardware and software, Internet access, and personalized recommendation algorithms [35]. Whether the elderly can easily access smart devices and applications, as well as stable network connections and affordable network services, is crucial for the elderly to use information frequently and for a long time. Social support level includes family support, friend support, and community participation [36], such as whether family members provide help and guidance to the elderly in the use of technology, whether they reduce the elderly's dependence on digital media through shared activities, and whether the community provides offline activities and communication platforms to encourage the elderly to participate in physical social interactions and reduce excessive dependence on online information due to loneliness. Based on this, the following hypotheses are proposed:

H3: Technological accessibility has a positive impact on the elderly's tendency toward information addiction.

H4: Social support level has a negative impact on the elderly's tendency toward information addiction.

3.3. Theoretical Foundations and Model Construction

In the COM-B model, Motivation is defined as the individual's internal desire and belief system, which constitute the key internal driving force for promoting individuals to take specific behaviors [37]. In this study, Motivation is specifically defined as two constructs: positive psychological capital and fear of missing out. At the end of the 20th century, psychologists such as Seligman initiated the positive psychology movement, exploring various positive psychological potentials that promote individual self-realization from a new perspective [38]. Under the influence and inspiration of the positive psychology movement, American scholar Luthans et al. [39] proposed the concept of positive psychological capital in 2004, which refers to the positive psychological qualities that individuals explicitly or implicitly possess in the process of growth and development, including four components: self-efficacy, optimism, resilience, and hope [40].

The high self-efficacy of the elderly is positively correlated with a lower tendency toward information addiction, and their confidence promotes self-control in information consumption. Clear hope goals endow information use with purpose, promote time management, reduce aimless browsing, and inhibit the tendency toward addiction. Resilience enables them to adjust strategies in the face of information overload, maintain healthy usage habits, and prevent the

ISSN: 3079-6601

aggravation of dependence. An optimistic attitude regards digital technology as a tool to assist life rather than a means of escape, and this positive perspective reduces the risk of information addiction.

In addition, fear of missing out refers to the anxiety that individuals experience when they worry about missing events, information, or experiences in their social circles [41]. Among the elderly group, fear of missing out may lead to frequent checking of social media and other information sources to ensure that they keep up with trends or are not excluded. This continuous monitoring behavior may aggravate the tendency toward information addiction. Based on this, the following hypotheses are proposed:

H5: Positive psychological capital has a negative impact on the elderly's tendency toward information addiction.

H6: FOMO has a positive impact on the elderly's tendency toward information addiction.

In the COM-B model, Capability and Opportunity can not only have a direct impact on behavior but also exert an indirect impact on behavior through Motivation [29]. Therefore, the following hypotheses are proposed:

H7: Positive psychological capital plays a mediating role between information literacy and the elderly's tendency toward information addiction.

H8: Positive psychological capital plays a mediating role between cognitive function and the elderly's tendency toward information addiction.

H9: Positive psychological capital plays a mediating role between technological accessibility and the elderly's tendency toward information addiction.

H10: Positive psychological capital plays a mediating role between social support level and the elderly's tendency toward information addiction.

H11: FOMO plays a mediating role between information literacy and the elderly's tendency toward information addiction.

H12: FOMO plays a mediating role between cognitive function and the elderly's tendency toward information addiction.

H13: FOMO plays a mediating role between technological accessibility and the elderly's tendency toward information addiction.

H14: FOMO plays a mediating role between social support level and the elderly's tendency toward information addiction.

Based on the above theoretical basis and relevant literature references, this study proposes a model of factors influencing information addiction in the elderly based on the COM-B model, as shown in Figure 1.

ISSN: 3079-6601

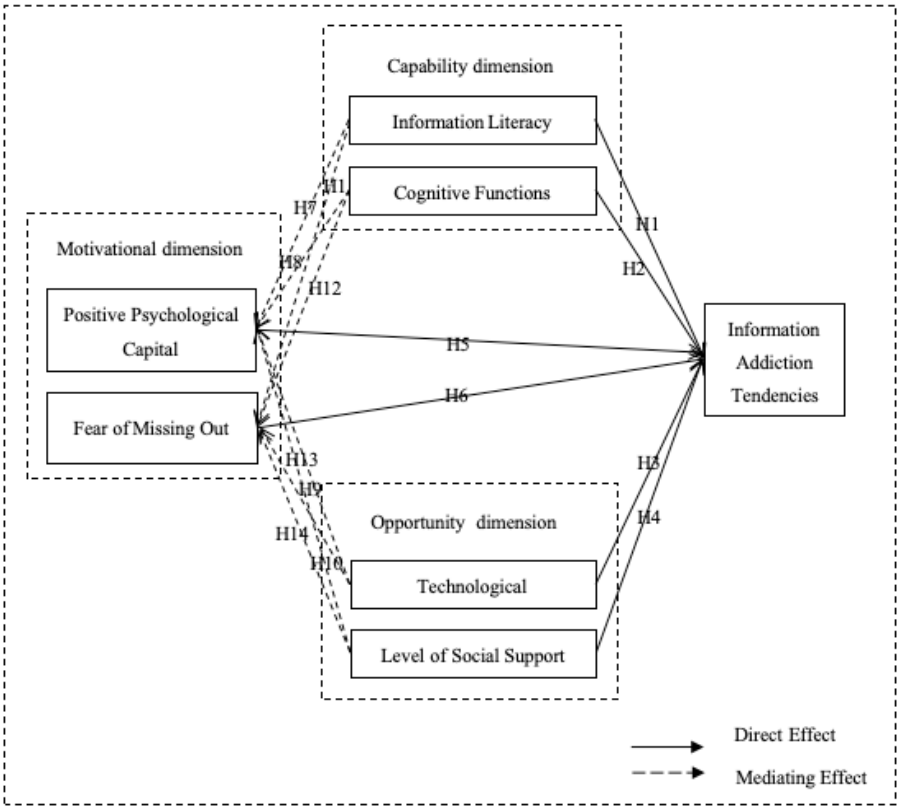

Fig.1 A model of factors influencing information addiction in older adults based on the COM-B model

4. Data Acquisition and Data Analysis

4.1. Questionnaire Design

This study adopts the questionnaire survey method to collect data, with the research objects being elderly people aged 60 and above who have the ability to act independently. The content of the questionnaire includes the variables based on the COM-B model mentioned above, and specific measurement items are set. The questionnaire consists of two parts: the first part is personal basic information, and the second part is the items of each variable in the research hypotheses.

The design of the scale refers to existing domestic and foreign research literature and relevant mature scales. The theme of the existing scales is adapted to integrate the content of this study, and a total of 27 measurement questions are set. All indicators adopt a 5-point Likert scale, requiring respondents to rate each question from 1 (completely inconsistent) to 5 (completely consistent). The specific scale design and item sources of the questionnaire are shown in Table 2.

Table 2 Variable Measurement Question Items and Sources

Research Variable	Measurement Items	Source
Information Literacy	IL1 I know how to use Internet search engines to find information that interests me.	Xia Zhijie et al.[32];
	IL2 I can use email or social media to share useful information with family and friends	Jiang Xuan et al.[42];
	IL3 I can judge whether the information on the Internet is scientific and reliable	Cheng Ying et al. [43]

ISSN: 3079-6601

	IL4 I know how to set a strong password to protect the security of my online account	
Cognitive Function	CF1 I can remember the names of new information or people I recently encountered CF2 When multiple tasks require simultaneous attention, I can focus on completing the current task. CF3 I can easily switch between different tasks, such as transitioning from cooking to replying to a text message CF4 I feel I can quickly understand information on the screen and respond	Xia Anqi et al.[32] Choe et al.[44] Huang et al.[45]
Technical Accessibility	TA1 I own my own smartphone/computer/tablet TA2 My home has a stable and reliable internet connection TA3 My electronic devices feature large fonts and voice assistant functions specifically designed for seniors TA4 I find the interfaces of the apps or websites I use to be user-friendly, easy to understand, and operate	Moody et al.[35] Moody et al.[46]
Level of Social Support	SS1 When I feel lonely, my family spends time with me or stays in touch via phone or video chat SS2 Some friends teach me how to use new apps or internet features SS3 My community service center or senior university frequently organizes activities to help older adults learn digital technology.	Cheng Ran et al.[47] Inui et al.[36] Wilson et al.[48] Chen Wei et al.[49]
Positive Psychological Capital	PPC1 Even when faced with new digital technologies, I believe I can learn to use them. PPC2 I set clear goals and believe that through sustained effort, I can master new digital skills PPC3 Even when occasionally encountering setbacks, I believe I will make progress in using technology in the future PPC4 When facing challenges in learning new technologies, I can quickly recover from setbacks	Li Zeqing[50] Li Li et al.[51] Zhang Kuo et al.[52]
Fear of Missing Out	FM1 When I see friends sharing their activities online, I often worry that I'm missing out on important things FM2 I feel like I'll miss information important to me if I don't check social media updates promptly FM3 Even when I have nothing specific to do, I frequently check my phone just in case I miss any updates	Przybylski[41] Song Xiaokang et al.[53]

ISSN: 3079-6601

Information Addiction Behavior	IA1 I find it difficult to control my online time and often exceed my planned schedule IA2 I feel anxious or uneasy when I cannot immediately access the internet or digital devices. IA3 I find myself needing increasingly longer periods of time online to feel satisfied. IA4 I have postponed or canceled important social activities due to excessive internet use IA5 After prolonged use of information devices, I often experience eye strain and neck/shoulder pain	Young[54] Chen Shuhui[55] Wang Wentao et al.[56]

4.2. Data Analysis

4.2.1. Statistical Analysis of Basic Information

To eliminate potential problems in the questionnaire, this study conducted a pre-survey before the official release of the questionnaire and improved the scale structure and content based on the pre-survey results. A total of 76 questionnaires were collected in the pre-survey. The overall Cronbach's α coefficient of the measured variables was 0.860, which was greater than the acceptable value of 0.8, indicating that the reliability of the pre-survey data was good; the overall KMO value of the measured variables was 0.804, which was greater than the acceptable value of 0.8, indicating good validity. Therefore, all original items were retained.

The official questionnaire adopted a combination of online and offline methods. Considering the particularity of the survey objects, this study assisted eligible elderly people in completing the questionnaire by explaining the questionnaire items while ensuring the authenticity of the data. The questionnaire collection lasted for two weeks. After excluding invalid questionnaires such as those with too short online answering time, repeated options in most questions, contradictory options, and perfunctory answering attitudes, 350 valid questionnaires remained. The demographic information of the survey objects is shown in Table 3.

Table 3 Basic statistics of the sample

Descriptive Characteristics	Category	Frequency	Percentage
Gender	Male	176	50.3%
	Female	174	49.7%
Age group	60–70 years old	112	32.0%
	71–80 years old	163	46.6%
	80 years and older	75	21.4%
Education Level	Elementary school or below	87	24.9%
	Junior high school	71	20.3%
	High School/Vocational School	112	32.0%
	Junior college	55	15.7%
	Bachelor's degree and above	25	7.1%

4.2.2. Reliability and Validity Test

(1) Reliability Test

Cronbach's α coefficient and composite reliability (CR) value were used to test the reliability of the observed variable data. The reliability results of each variable in the questionnaire are

ISSN: 3079-6601

shown in Table 4. The overall Cronbach's α coefficient of the scale was 0.958, the Cronbach's α values of each variable were all greater than 0.8, and the CR values were all greater than 0.7. This indicates that the scale has good reliability and high credibility.

Table 4 Results of Reliability and Convergent Validity Tests

Variable	Measurement Item	Cronbach's α	AVE	CR	Std. Estimate
Information Literacy	IL1	0.887	0.662	0.887	0.807
	IL2				0.791
	IL3				0.812
	IL4				0.843
Cognitive Function	CF1	0.882	0.652	0.882	0.827
	CF2				0.779
	CF3				0.801
	CF4				0.822
Positive Psychological Capital	PPC1	0.901	0.694	0.901	0.838
	PPC2				0.824
	PPC3				0.839
	PPC4				0.831
Fear of Missing Out	FM1	0.906	0.763	0.906	0.874
	FM2				0.861
	FM3				0.885
Technical Accessibility	TA1	0887	0.661	0.886	0.813
	TA2				0.821
	TA3				0.816
	TA4				0.802
Level of Social Support	SS1	0.871	0.692	0.871	0.832
	SS2				0.799
	SS3				0.864
Information Addiction Tendencies	IA1	0.891	0.619	0.890	0.798
	IA2				0.780
	IA3				0.805
	IA4				0.796
	IA5				0.754

(2)Validity Testi

To test whether multiple items of the same latent variable have high consistency and distinguish different latent variables of different measurement items, convergent validity and discriminant validity were used to test the scale validity. Confirmatory factor analysis was used to test the convergent validity and discriminant validity of the scale. The test results showed that the AVE values of all latent variables were greater than 0.5, and the standard estimates (Std.Estimate) were all greater than 0.7, indicating that the scale had good convergent validity. As can be seen from Table 5, the square root values of AVE corresponding to each variable were all greater than the absolute values of the correlation coefficients between the variable and other variables, indicating that the variables in the scale had good discriminant validity.

Table 5 Result of Discrimination Validity Test

ISSN: 3079-6601

	IL	CF	PPC	FM	TA	SS	IA
IL	0.814						
CF	0.629	0.807					
PPC	0.603	0.612	0.833				
FM	0.644	0.619	0.536	0.873			
TA	0.627	0.645	0.594	0.639	0.813		
SS	0.599	0.646	0.603	0.654	0.604	0.832	
IA	0.685	0.689	0.667	0.678	0.677	0.680	0.787

Note: The numbers on the diagonal are the square root values of the AVE of the factor, and the other values are the correlation coefficients.

4.2.3. Hypothesis Test

(1) Evaluation of Structural Equation Model Fit

A structural equation model was used to verify the relationships between variables in the model of factors influencing information addiction in the elderly, and the first step was to conduct an overall fit test. CMIN/DF, RMSEA, and RMR are indicators reflecting the difference of the model. Among them, the ideal standard of CMIN/DF is between 1 and 3, and RMSEA and RMR less than 0.05 indicate that the model has a certain degree of difference. TLI, CFI, and NFI are indicators reflecting the similarity of the model, and their values all greater than 0.9 indicate that the model has a certain degree of similarity. The model fit indicators are shown in Table 6, indicating that the model has a good fit.

Table 6 Model Fit

Indicator (General Standard)	Value
CMIN/DF (<3)	1.134
RMSEA (<0.05)	0.020
RMR (<0.05)	0.048
TLI (>0.9)	0.993
CFI (>0.9)	0.994
NFI (>0.9)	0.949

(2) Path Analysis

It can be seen from Table 7 that the significance levels of all hypotheses are less than 0.05, indicating that hypotheses H1, H2, H3, H4, H5, and H6 are all valid. The hypothesis test results are shown in Table 7.

Table 7 Results of Hypothesis Testing

Hypothesis	Hypothesis Content	Standardized Estimate	S.E.	C.R.	P	Hypothesis Test Results
H1	Information literacy has a negative impact on the elderly's tendency toward information addiction	-0.173	0.058	-2.704	0.007	Supported
H2	Cognitive function negatively influences information addiction	-0.164	0.062	-2.478	0.013	Supported

ISSN: 3079-6601

	tendencies in older adults					
H3	Technological accessibility positively influences information addiction tendencies among older adults	0.150	0.053	-3.189	0.020	Supported
H4	Social support levels negatively influence older adults' information addiction tendencies	-0.159	0.048	2.515	0.015	Supported
H5	Positive psychological capital negatively influences older adults' information addiction tendencies	-0.190	0.063	2.320	0.001	Supported
H6	Fear of Missing Out Positively Influences Information Addiction Tendencies in Older Adults	0.163	0.058	-2.444	0.012	Supported

(3) Mediating Effect Test

The Bootstrap method of Amos software was used to analyze the mediating effects of 8 paths. The number of samples was adjusted to 2000, and the 95% confidence interval was calculated. If the confidence interval of the indirect effect estimate does not contain 0, it is considered that there is a significant mediating effect.

As can be seen from Table 8, except that the confidence interval of CF-FM-IA contains 0, the confidence intervals of other paths do not contain 0. Therefore, positive psychological capital and fear of missing out play a significant mediating role between information literacy and the elderly's tendency toward information addiction; positive psychological capital plays a significant mediating role between cognitive function and the elderly's tendency toward information addiction; positive psychological capital and fear of missing out play a significant mediating role between technological accessibility and the elderly's tendency toward information addiction; positive psychological capital and fear of missing out play a significant mediating role between social support level and the elderly's tendency toward information addiction. However, fear of missing out does not play a significant mediating role between cognitive function and the elderly's tendency toward information addiction. Therefore, except for hypothesis H12, hypotheses H7, H8, H9, H10, H11, H13, and H14 are all supported.

Table 8 Results of the mediation effects test

Path	Std. Estimate	SE	Bias-corrected 95% CI		
			Lower	Upper	P
IL-PPC-IA	-0.042	0.021	-0.096	-0.013	0.004
IL-FM-IA	-0.041	0.021	-0.095	-0.01	0.009
CF-PPC-IA	-0.04	0.022	-0.101	-0.007	0.013

ISSN: 3079-6601

CF-FM-IA	-0.022	0.017	-0.069	0.002	0.072
TA-PPC-IA	0.035	0.02	0.005	0.087	0.022
TA-FM-IA	0.037	0.022	0.007	0.095	0.013
SS-PPC-IA	-0.043	0.022	-0.104	-0.01	0.004
SS-FM-IA	-0.046	0.023	-0.103	-0.011	0.012

5. Results and Discussion

Based on the COM-B model, a comprehensive theoretical framework for behavior change, this study systematically analyzed how the characteristics of Capability, Opportunity, and Motivation promote or inhibit the elderly's excessive dependence on information and potential addictive behaviors from three core dimensions, aiming to reveal the multi-dimensional influencing factors of the elderly's tendency toward information addiction. The conclusions drawn based on empirical research are as follows:

(1) In the Capability dimension, both information literacy and cognitive function of the elderly have a negative impact on their tendency toward information addiction. Specifically, a higher level of information literacy and cognitive function can reduce the elderly's excessive dependence on information and the risk of addiction. As the ability of individuals to acquire, evaluate, and use information, information literacy plays a significant positive role in enhancing the elderly's resistance to information addiction. This is consistent with the research results of Sun Yuchen [2], who pointed out that the weakness of digital literacy is one of the important factors leading to digital addiction in the elderly. In addition, the study by Zhou Min et al. [57] also emphasized the importance of improving the elderly's health information literacy for maintaining their health in the context of "Internet +".

Cognitive function, as the mental ability of individuals to process information, make decisions, and solve problems, also has a negative impact on the elderly's tendency toward information addiction. This indicates that elderly people with stronger cognitive function are more likely to conduct rational information processing and reduce the possibility of information addiction. The results of this study further confirm the important role of information literacy and cognitive function in the information behavior of the elderly. They not only are consistent with the views of previous studies but also have new findings, that is, improving the information literacy and cognitive function of the elderly can effectively reduce the risk of their information addiction.

(2) In the Opportunity dimension, technological accessibility has a significant positive impact on the elderly's tendency toward information addiction, while social support level has a significant negative impact on it. This indicates that when information technology provides more convenience for obtaining and using information, the elderly may be more likely to develop excessive dependence on information or addictive behaviors; strong support from family, friends, and communities helps to reduce the elderly's excessive dependence on information technology and the risk of addiction.

Similar to the influencing factors of Internet addiction in adolescents, this study further confirms that the popularization and ease of use of technical equipment make it easier for the elderly to access various online services, but at the same time, it also increases the risk of their excessive use of the Internet [58]. In addition, social support can serve as a buffer mechanism to help the elderly establish healthy Internet usage habits and reduce the possibility of Internet addiction [59].

(3) In the Motivation dimension, positive psychological capital has a negative impact on the elderly's tendency toward information addiction, that is, the elderly group with higher positive

ISSN: 3079-6601

psychological capital (including self-efficacy, hope, optimism, and resilience) is less likely to have excessive dependence on information or addictive phenomena. This is consistent with the research results of Karas et al. [60], who pointed out that there is a correlation between smartphone addiction and depression, anxiety, and sleep quality in the elderly, and the construction of positive psychological capital helps to alleviate these negative emotions, thereby potentially reducing the risk of information addiction.

On the other hand, fear of missing out is positively correlated with the elderly's tendency toward information addiction. Existing studies have clearly pointed out that individuals who use social media more frequently are often accompanied by a higher level of fear of missing out, which may prompt individuals to use information technology more frequently to avoid missing important information or social events [61]. Elderly people who experience a higher level of fear of missing out are more likely to show excessive dependence on or addiction to information reception.

(4) Positive psychological capital plays a significant mediating role between the elderly's tendency toward information addiction and personal Capability and external Opportunity factors. That is, positive psychological capital not only directly reduces the elderly's tendency toward information addiction but also plays a key mediating role by improving individuals' ability to process information and optimizing the use of external resources. This finding is consistent with the role of positive psychological capital in promoting behavior change in existing literature [62].

In the COM-B model, Capability, Opportunity, and Motivation are three key factors affecting individual behavior. The mediating effect analysis of this study further clarifies the mechanism of positive psychological capital in the information addiction behavior of the elderly. As an internal motivational resource, positive psychological capital can enhance the elderly's self-efficacy and optimistic attitude, thereby improving their ability to use information technology and making more reasonable choices when facing information overload [63]. In addition, positive psychological capital is also closely related to social support, and can indirectly affect the information behavior of the elderly by enhancing their social interaction and the social resources they obtain [64].

(5) Fear of missing out plays a mediating role between information literacy, technological accessibility, social support level, and the elderly's tendency toward information addiction. Fear of missing out not only directly affects the elderly's tendency toward information addiction but also indirectly promotes the formation and development of the tendency toward information addiction by influencing how they use information literacy, respond to technological accessibility, and perceive social support.

The study found that although fear of missing out shows a significant mediating role between the elderly's tendency toward information addiction and various factors, its mediating effect is not prominent in the specific relationship between cognitive function and the tendency toward information addiction. This means that compared with other factors such as information literacy, technological accessibility, and social support level, the impact of the elderly's cognitive function on their tendency toward information addiction is more direct, and this impact is not easily significantly regulated by fear of missing out.

The reasons for the insignificant mediating role of fear of missing out between cognitive function and the elderly's tendency toward information addiction can be analyzed from the following two aspects: First, cognitive aging. With the increase of age, the cognitive function of the elderly may decline, including memory, attention, and processing speed, which may weaken their ability to process complex information, including the identification and regulation of fear of missing out emotions. Therefore, even if they experience fear of missing out, the elderly may not necessarily show typical information addiction behaviors due to limited cognitive resources.

ISSN: 3079-6601

Second, changes in social participation. Compared with young people, the scope and mode of social activities of the elderly may be different. They may pay more attention to the depth rather than the breadth of social interaction. Therefore, fear of missing out may have a relatively small impact on their information usage habits. The elderly may pay more attention to the quality of actual interpersonal communication rather than participation in the virtual world.

6. Conclusion

Based on the COM-B model, a comprehensive theoretical framework for behavior change, this study constructed a multi-dimensional factor model influencing the elderly's tendency toward information addiction by refining each dimension of Capability, Opportunity, and Motivation from three core dimensions. The structural equation modeling (SEM) method was used to analyze the collected questionnaire data. The results show that information literacy, cognitive function, social support level, and positive psychological capital have a negative impact on the elderly's tendency toward information addiction, while technological accessibility and fear of missing out have a positive impact on the elderly's tendency toward information addiction. Positive psychological capital and fear of missing out show significant mediating roles in multiple action paths.

In the empirical analysis, the questionnaire was used as the main tool for data collection, which ensured the directness and timeliness of the data, but there were also potential biases caused by differences in participants' psychological states and subjective cognition. Future research is recommended to adopt a mixed method, combining quantitative questionnaires with qualitative in-depth interviews, and consider introducing big data analysis strategies to obtain data from social platforms, so as to enhance the representativeness of samples and reduce human interference. In addition, full consideration should be given to the moderating or mediating role of demographic variables (such as gender, age, educational background, etc.), and stratified analysis or moderating effect testing should be conducted to improve the segmentation and explanatory power of the conclusions, thereby enhancing the universality and practical guiding significance of the research conclusions.

References

[1] China Internet Network Information Center. (2025). 55th statistical report on internet development in China [EB/OL]. Retrieved March 18, 2025, from https://cnnic.cn/n4/2025/0117/c208-11228.html.

[2] Sun, Y. C. (2023). Systematic governance of digital addiction in the elderly (Xitonghua zhili laonianren shuzhi chenyin) [J]. Studies on Socialism with Chinese Characteristics (Zhongguo Tese Shehuizhuyi Yanjiu), (1), 69–80.

[3] The Paper. (2023, March 6). Member Jin Li calls for attention to "elderly internet addicts": Media should innovate content for the elderly (Jin Li weiyuan huyu guanzhu "wangyin laonianren": Meiti yao duo wei laonianren chuangxin neirong) [EB/OL]. Retrieved March 18, 2025, from https://www.thepaper.cn/newsDetail_forward_22163851.

[4] Qiushi. (2022, December 1). Promoting the realization of basic elderly care services for all elderly people (Tuidong shixian quan ti laonianren xiangyou jiben yanglao fuwu) [EB/OL]. Retrieved March 18, 2025, from http://www.qstheory.cn/dukan/qs/2022-12/01/c_1129172856.htm.

[5] National People's Congress of the People's Republic of China. (2012, December 29). Law of the people's republic of China on the protection of the rights and interests of the elderly (Zhonghua renmin gongheguo laonianren quanyi baohu fa) [EB/OL]. Retrieved March 18, 2025, from http://www.npc.gov.cn/npc/c30834/202101/14b79b7777315475186447f7958730127.shtml.

[6] World Health Organization. (2022, October 1). Ageing and health [EB/OL]. Retrieved March 18, 2025, from https://www.who.int/zh/news-room/fact-sheets/detail/ageing-and-health.

ISSN: 3079-6601

[7] Erikson, E. H. (2018). Childhood and society (Tongnian yu shehui). Beijing: World Publishing Corporation.

[8] Hammond, C. J. (2018). An introduction to behavioral addictions: Concepts and the example of gambling disorder. Journal of the American Academy of Child & Adolescent Psychiatry, 57(10, Supplement), S71–S72. https://doi.org/10.1016/j.jaac.2018.08.015.

[9] Wang, W. T., Qian, P. B., Tang, S. J., et al. (2023). The origin, behavioral mechanism and stage model of information addiction phenomenon (Xinxi chenyin xianxiang de chenyin suyuan, xingwei jili he jieduan moxing) [J]. Library and Information Service (Tushu Qingbao Gongzuo), 67(22), 68–79.

[10] Jia, Y., Liu, T., Yang, Y., et al. (2022). The relationship between real-life social support and internet addiction among the elderly in China. Frontiers in Public Health, 10, 981307. https://doi.org/10.3389/fpubh.2022.981307.

[11] Yang, Y., Liu, T., Jia, Y., et al. (2022). The impact of interaction with children on internet addiction in older adults: A moderated mediation model. Frontiers in Psychology, 13, 989942. https://doi.org/10.3389/fpsyg.2022.989942.

[12] Jin, Y. A., Liu, W. L., Zhao, M. H., et al. (2021). The use of short video platforms and the lives of middle-aged and elderly people: An exploratory study based on a special survey (Duanshipin yingyong pingtai de shiyong yu zhonglaonian qunti shenghuo: Jiyu zhuanxiang diaocha de tansuo xing yanjiu) [J]. Population Research (Renkou Yanjiu), 45(3), 31–45.

[13] Wang, D., Liu, X., Chen, K., et al. (2024). Risks and protection: A qualitative study on the factors for internet addiction among elderly residents in southwest China communities. BMC Public Health, 24(1), 531. https://doi.org/10.1186/s12889-024-17453-x.

[14] Deng, M. (2023). Study on the influencing factors of short video addiction among middle-aged users (Zhongnian yonghu duanshipin chenyin yingxiang yinsu yanjiu) [Master's thesis]. Ningxia University, Xining.

[15] Wang, B. (2020). A study on the influencing factors of internet use among Chinese elderly from a multi-dimensional explanatory perspective (Duowei jieshi jiaodu xia zhongguo laonianren hulianwang shiyong de yingxiang yinsu yanjiu) [J]. Population and Development (Renkou yu Fazhan), 26(3), 98–106.

[16] Jia, Y., Liu, T. Y., Yang, Y. (2023). Trapped in mobile phones: Intergenerational relations and internet addiction among the elderly (Kun zai shouji li: Daiji guanxi yu laonianren wangluo chenyin) [J]. Journalism Bimonthly (Xinwen Daxue), (10), 31–45, 120–121.

[17] Song, M. J., Lin, H. H. (2024). Social integration and emotional patch: A study on the short video usage patterns of the elderly group (Shehui rongru yu qinggan buding: Laonian qunti duanshipin shiyong moshi yanjiu) [J]. Information Technology and Management Application (Xinxijishu yu Guanli Yingyong), 3(1), 68–77, 98.

[18] Zhou, Y. Q. (2018). The rise of digital vulnerable groups: A study on the influencing factors of WeChat adoption and use among the elderly (Shuzi ruoshi qunti de jueqi: Laonianren weixin caina yu shiyong yingxiang yinsu yanjiu) [J]. Journalism & Communication (Xinwen yu Chuanbo Yanjiu), 25(7), 66–86, 127–128.

[19] Wang, F., Wang, C. J., Yang, S. Q. (2020). A study on smartphone use, addiction status and cognitive function of the elderly (Laonianren zhinengshouji shiyong, chenyin xianzhuang ji renzhi gongneng yanjiu) [J]. Modern Communication (Xiandai Jiaoji), (10), 38–40.

[20] Dai, B., Zhang, P. J., Yang, Z. G. (2022). Research progress on the influencing factors and consequences of excessive social media use (Shejiao meiti guodu shiyong de yingxiang yinsu ji houguo yanjiu jinzhan) [J]. China Journal of Health Psychology (Zhongguo Jiankang Xinlixue Zazhi), 30(10), 1582–1590.

[21] Shi, Y. N., Zhang, N., Yuan, Q. J. (2020). Foreign research on social media addiction: Measurement tools, theoretical models and behavioral impacts (Guowai shejiao meiti chenyin yanjiu: Celiang gongju, lilun moxing yu xingwei yingxiang) [J]. Journal of Modern Information (Xiandai Qingbao), 40(8), 166–177.

ISSN: 3079-6601

[22] Kayis, A. R., Satici, S. A., Yilmaz, M. F., et al. (2016). Big five-personality trait and internet addiction: A meta-analytic review. Computers in Human Behavior, 63, 35–40. https://doi.org/10.1016/j.chb.2016.06.046.

[23] Guo, Y., Chen, H., You, X., et al. (2024). Relationship between parenting style and internet addiction: Interpersonal relationship problem as a mediator and gender as a moderator. Heliyon, 10(2), e23973. https://doi.org/10.1016/j.heliyon.2024.e23973.

[24] Parmaksız, İ. (2022). The mediating role of personality traits on the relationship between academic self-efficacy and digital addiction. Education and Information Technologies, 27(6), 8883–8902. https://doi.org/10.1007/s10639-022-11183-0.

[25] Celik, E., Yesilyurt, E., Korkmaz, O., et al. (2014). Internet addiction as predictor and predicted from the perspective of loneliness and cognitive absorption. Eurasia Journal of Mathematics, Science and Technology Education, 10(6), 581–594. https://doi.org/10.12973/eurasia.2014.1097a.

[26] Thomas, M., Kelly, F., Rayman, D. M. (2017). Cognitive patterns of information addiction [C]//Proceedings of AMCIS 2017. Boston: AMCIS.

[27] Samarraie, H. A., Bello, K. A., Alzahrani, A. I., et al. (2022). Young users' social media addiction: Causes, consequences and preventions. Information Technology & People, 35(7), 2314–2343. https://doi.org/10.1108/ITP-04-2021-0229.

[28] Michie, S., van Stralen, M. M., West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science, 6(1), 42. https://doi.org/10.1186/1748-5908-6-42.

[29] Hua, W. Z., Liu, S. S., Zhu, D. Q. (2016). Development and application progress of the theoretical domains framework (Lilun yuluo kuangjia de fazhan ji yingyong jinzhan) [J]. Chinese Nursing Research (Zhonghua Huli Yanjiu), 30(18), 2177–2179.

[30] Rosário, F., Santos, M. I., Angus, K., et al. (2021). Factors influencing the implementation of screening and brief interventions for alcohol use in primary care practices: A systematic review using the COM-B system and theoretical domains framework. Implementation Science, 16(1), 6. https://doi.org/10.1186/s13012-021-01167-8.

[31] Xia, Z. J., Lü, N. (2024). Research on the impact of social interaction supported by intelligent systems on improving the public's information screening ability (Zhinenghua xitong zhichi xia shejiao hudong dui tisheng gongzhong xinxi zhenbie nengli de yingxiang yanjiu) [J]. Information and Documentation Services (Qingbao Ziliao Gongzuo), 45(5), 41–50.

[32] Xia, A. Q., Li, J., Yue, L., et al. (2021). Application of the Montreal cognitive assessment scale in community-dwelling elderly in China (Mengtelier renzhi pingjia biaoge zai zhongguo shequ laonianren zhong de yingyong) [J]. Journal of Shanghai Jiaotong University (Medical Science) (Shanghai Jiaotong Daxue Xuebao (Yixue Ban)), 41(12), 1662–1667, 1661.

[33] Howlett, N., Schulz, J., Trivedi, D., et al. (2019). A prospective study exploring the construct and predictive validity of the COM-B model for physical activity. Journal of Health Psychology, 24(10), 1378–1391. https://doi.org/10.1177/1359105318811894.

[34] Moody, L., Wood, E., Needham, A., et al. (2022). Identifying individual enablers and barriers to the use of digital technology for the self-management of long-term conditions by older adults. Journal of Medical Engineering & Technology, 46(6), 448–461. https://doi.org/10.1080/03091902.2022.2092228.

[35] Inui, Y., Ogawa, T., Tanaka, Y., et al. (2022). Relationship between exercise motivation and social support in a support facility for persons with disabilities in Japan. Annals of Medicine, 54(1), 820–829. https://doi.org/10.3390/annmed54010070.

[36] McDonagh, L. K., Saunders, J. M., Cassell, J., et al. (2018). Application of the COM-B model to barriers and facilitators to chlamydia testing in general practice for young people and primary care practitioners: A systematic review. Implementation Science, 13(1), 130. https://doi.org/10.1186/s13012-018-0820-8.

[37] Seligman, M. E. P. (1999). The president's address. American Psychologist, 54(8), 559–562. https://doi.org/10.1037/0003-066X.54.8.559.

ISSN: 3079-6601

[38] Luthans, F., Luthans, K. W., Luthans, B. C. (2004). Positive psychological capital: Beyond human and social capital. Business Horizons, 47(1), 45–50. https://doi.org/10.1016/S0007-6813(03)00138-6.

[39] Luthans, F., Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. Organizational Dynamics, 33(2), 143–160. https://doi.org/10.1016/j.orgdyn.2004.01.002.

[40] Przybylski, A. K., Murayama, K., DeHaan, C. R., et al. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. Computers in Human Behavior, 29(4), 1841–1848. https://doi.org/10.1016/j.chb.2013.05.016.

[41] Jiang, X., Meng, Q. L., Xu, X. H., et al. (2021). Antecedents of knowledge acquisition in user participation in crowdsourcing innovation from a bilateral perspective and its impact on innovation performance (Shuangbian shijiao xia yonghu canyu zhongbao chuangxin de zhishi huode qianyin ji qi dui chuangxin xiaolv de yingxiang) [J]. Operations Research and Management Science (Yunchou yu Guanli Kexue), 30(2), 225–231.

[42] Cheng, Y., Sun, J. J., Zhang, M. (2011). An empirical study on the influencing factors of information literacy based on structural equation modeling (Jiyu jiegou fangcheng moxing de xinxi suyang yingxiang yinsu shizheng yanjiu) [J]. New Technology of Library and Information Service (Tushu Qingbao Gongzuo Xinxijishu), (12), 9–14.

[43] Choe, Y. M., Lee, B. C., Choi, I. G., et al. (2020). MMSE subscale scores as useful predictors of AD conversion in mild cognitive impairment. Neuropsychiatric Disease and Treatment, 16, 1767–1775. https://doi.org/10.2147/NDT.S261362.

[44] Huang, Y. Y., Qian, S. X., Guan, Q. B., et al. (2021). Comparative study of two Chinese versions of Montreal cognitive assessment for screening of mild cognitive impairment. Applied Neuropsychology: Adult, 28(1), 88–93. https://doi.org/10.1080/23279095.2020.1778003.

[45] Ma, Y. Y., Wang, T. N., Dong, X. Y. (2021). Research on the purchase intention of social commerce users from the perspective of technology affordance (Jishu keyongxing jiaodu xia shejiao shangwu yonghu goumai yiyuan yanjiu) [J]. Information Science (Qingbao Kexue), 39(4), 92–98, 128.

[46] Cheng, R., Wang, Y. F. (2012). Relationship between depressive symptoms and personality traits, social support in college students (Daxuesheng yiyuyu zhengzhuang yu renge tezhi he shehui zhichi de guanxi) [J]. Chinese Journal of Public Health (Zhongguo Gonggong Weisheng), 28(10), 1271–1273.

[47] Wilson, J. M., Colebaugh, C. A., Flowers, K. M., et al. (2022). Social support and psychological distress among chronic pain patients: The mediating role of mindfulness. Personality and Individual Differences, 190, 111551. https://doi.org/10.1016/j.paid.2022.111551.

[48] Chen, W., Huang, C. Y., Mao, T. X., et al. (2016). SEM analysis of convergent and discriminant validity of multidimensional assessment tools: Taking the perceived social support scale as an example (Duowei ceping gongju julian he qufen xiaodu de SEM fenxi: Yi lingwu shehui zhichi liangbiao wei li) [J]. Journal of Southwest China Normal University (Natural Science Edition) (Xinan Shifan Daxue Xuebao (Ziran Kexue Ban)), 41(2), 136–140.

[49] Li, Z. Q. (2023). Study on the influencing factors and action path of return-to-work readiness of middle-aged and young stroke patients based on the COM-B model (Jiyu COM-B moxing de zhongqingnian naozhong huanzhe chongfan gongzuo zhunbei du de yingxiang yinsu ji zuoyong lujing yanjiu) [Master's thesis]. Soochow University, Suzhou.

[50] Li, L., Liao, X. M. (2012). Positive psychological capital: Measurement and its relationship with coping styles (Jiji xinli ziben: Celiang ji qi yu yingdui fangshi de guanxi) [J]. Heilongjiang Researches on Higher Education (Heilongjiang Gaodeng Jiaoyu Yanjiu), 30(9), 37–40.

[51] Zhang, K., Zhang, S., Dong, Y. H. (2010). Positive psychological capital: Measurement and its relationship with mental health (Jiji xinli ziben: Celiang ji qi yu xinli jiankang de guanxi) [J]. Studies of Psychology and Behavior (Xinli yu Xingwei Yanjiu), 8(1), 58–64.

[52] Song, X. K., Zhao, Y. X., Zhang, X. H. (2017). Construction of the fear of missing out (FoMO) scale for users in the mobile social media environment (Yidong shejiao meiti huanjing xia yonghu cuoshi jiaolv zheng (FoMO) liangbiao goujian) [J]. Library and Information Service (Tushu Qingbao Gongzuo), 61(11), 96–105.

ISSN: 3079-6601

[53] Young, K. S. (1996). Internet addiction: The emergence of a new clinical disorder. Cyber Psychology and Behavior, 1(3), 237–244. https://doi.org/10.1089/cpb.1996.1.237.

[54] Chen, S. H. (2003). The development and psychometric properties of the Chinese internet addiction scale (Zhongwen wangluo chenyin liangbiao zhi bianzhi yu xinli jiliang texing yanjiu) [J]. Chinese Journal of Psychology (Zhonghua Xinlixue Kan), 45(3), 279–294.

[55] Wang, W. T., Tang, S. J., Qian, P. B., et al. (2023). Construction and empirical study of the information addiction measurement scale (Xinxi chenyin celiang liangbiao goujian yu shizheng yanjiu) [J]. Library and Information Service (Tushu Qingbao Gongzuo), 67(23), 99–110.

[56] Zhou, M., Wu, J. J., Shi, L. P. (2020). Research progress and enlightenment of elderly health information literacy under the background of "internet +" ("Internet +" beijing xia laonian jiankang xinxi suyang yanjiu jinzhan ji qishi) [J]. Chinese Journal of Gerontology (Zhongguo Laonianxue Zazhi), 40(15), 3357–3359.

[57] Dhir, A., Chen, S., Nieminen, M. (2015). Predicting adolescent internet addiction: The roles of demographics, technology accessibility, unwillingness to communicate and sought internet gratifications. Computers in Human Behavior, 51, 24–33. https://doi.org/10.1016/j.chb.2015.06.038.

[58] Krause, N. (1986). Social support, stress, and well-being among older adults. Journal of Gerontology, 41(4), 512–519. https://doi.org/10.1093/geronj/41.4.512.

[59] Karas, H., Küçükparlak, İ., Özbek, M. G., et al. (2023). Addictive smartphone use in the elderly: Relationship with depression, anxiety and sleep quality. Psychogeriatrics, 23(1), 116–125. https://doi.org/10.1111/psyg.12732.

[60] Zhang, Y. L., Li, S., Yu, G. L. (2021). The relationship between social media use and fear of missing out: A meta-analysis (Shejiao meiti shiyong yu cuoshi jiaolv de guanxi: Yiyuan fenxi) [J]. Acta Psychologica Sinica (Xinli Xuebao), 53(3), 273–290.

[61] Shi, H. (2013). A study on the psychological capital of the elderly and its relationship with social support and life satisfaction (Laonianren xinli ziben ji qi yu shehui zhichi he shenghuo manzu du guanxi yanjiu) [Master's thesis]. Soochow University, Suzhou.

[62] Liu, M. R., Ren, P., Liang, F. C., et al. (2022). Overview of the COM-B model and its application status (COM-B moxing gai shu ji qi yingyong xianzhuang) [J]. Chinese General Practice Nursing (Zhonghua Zonghe Huli), 20(1), 44–48.

[63] Jiang, S., Jiang, C. X., Ren, Q. (2022). Digital integration, social capital and elderly mental health: An empirical study based on the China longitudinal aging social survey (Shuzi rongru, shehui ziben yu laonian xinli jiankang: Jiyu zhongguo laonian shehui zongxiang diaocha de shizheng yanjiu) [J]. Governance Studies (Zhiliao Yanjiu), 38(5), 25–34, 125.