The Effects of Internet Use on Mental Health Among Older Adults Caring for Aging Parents: The Mediating role of Social Adaptation

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Abstract: Based on the 2018 and 2020 China Longitudinal Aging Social Survey (CLASS), multiple linear regression analyses and mediation effect tests were used to explore the effects of whether or not to use the internet and the specific uses of the internet on the social adaptation and mental health of older adults caring for their aging parents, with a focus on the mediating role of social adaptation. The results show that internet use can enhance the social adaptation and mental health in this population; social adaptation mediates the relationship between internet use and the mental health. In terms of internet use, both survival-oriented internet use (e.g.,instant messaging, news browsing) and utilitarian internet use (e.g. information seeking, online shopping, internet-mediated cultural and recreational engagement) enhanced the mental health of older adults caring for their parents, and social adaptation partially mediates the relationship between the utilitarian internet use and mental health. Efforts should be made to encourage older adults caring for aging parents to comprehensive utilization of diverse internet functionalities, thereby leveraging their positive role in enhancing family-based care arrangements where older individuals provide care for even older family members.

Keywords: Internet Use, Older Adult Caring for Aging Parents, Mental Health, Social Adaptation

1 Introduction

The phenomenon of intergenerational elderly caregiving—where older adults caring for their aging parents(aged 80+)—has become increasingly prevalent worldwide, particularly in aging societies such as China, Japan, and European nations. This trend is driven by demographic shifts, including rising life expectancy, declining fertility rates, and the growing proportion of individuals aged 80+ who require intensive care. The mental health burden on elderly caregivers, especially those providing care to their even older parents, has emerged as a critical public health concern.

Empirical data reveal that octogenarians and beyond exhibit the most pronounced care dependency ratios. Compared to younger adult caregivers, elderly caregivers providing care for aging parents experience disproportionately heavier burdens due to caregiving responsibilities, compounded by age-related physiological decline and limited coping resources. This dual vulnerability renders them particularly susceptible to detrimental effects on psychological well-being, predisposing them to elevated risks of depressive symptomatology (Sun et al., 2023). Given this context, addressing the mental health challenges faced by old adult caregivers constitutes an urgent public health priority, necessitating targeted support programs and evidence-based policy interventions.

2 Theoretical and literature foundation

The relationship between internet use and mental health among older adults has garnered significant global attention amid rapid population aging and digital transformation. United Nations data shows the number of people aged 65 or over worldwide is set to more than double, from 761 million in 2021 to 1.6 billion in 2050, between 2020 and 2050, the number of people aged 80 and above is projected to triple, reaching 426 million. According to public data from the National Bureau of Statistics and the China Internet Network Information Center, by the end of 2022, China's total population aged 60 and above reached 280 million, of which 153 million older adults engaging in online activities, from social networking to health information seeking. This indicates that at least one in two older adults has engaged with the internet. Existing studies highlight the significant impact of internet use on older adults' daily lives, yet research findings regarding its relationship with Mental Health remain inconsistent.

One perspective posits that internet use enables older adults to expand their social networks and acquire enhanced social support, thereby improving their social adaptability (Heo et al., 2015) , which contributes to maintaining physical and mental health (Jin & Zhao, 2019), mitigating depressive symptomatology (Feng et al., 2024), cross-national research involving 87,559 older adults across 23 countries demonstrated that frequent internet users exhibited lower depression rates and higher life satisfaction, particularly in regions with limited mental health resources(Luo et al., 2055).

Conversely, countervailing research suggests that digital engagement may displace face-to-face interactions in physical spaces (Hage et al., 2016), potentially exacerbating loneliness and depression risks (Kraut et al., 1998). Passive entertainment activities (e.g., short video browsing) may displace offline social interactions among older adults, thereby eroding real-world interpersonal relationships. This behavioral shift contributes to reduced participation in community activities and heightened loneliness. Excessive engagement in video browsing or social media has been linked to circadian rhythm disruptions (e.g., delayed sleep onset, fragmented sleep architecture), Such physiological dysregulation indirectly exacerbates risks of anxiety and depressive symptoms through neuroendocrine pathways (Shelia et al., 2022).

Empirical investigations attribute these contradictory findings to the heterogeneity in internet usage purposes (Xu et al., 2017). For instance, information acquisition-oriented internet use (e.g., news browsing, multimedia content consumption, digital mobility management) and interpersonal communication-oriented internet use (e.g., text-based communication, voice interaction, and video-mediated communication) exhibit distinct mechanisms in mitigating loneliness among older adults (Tang et al., 2022). Additionally, studies reveal significant heterogeneity in the mental health effects of internet use across gender, age, and urban-rural disparities (Wang et al., 2024; Li et al., 2021). While structured tele-education programs and psycho behavioral interventions led by professionals demonstrate efficacy in reducing depressive symptoms among caregivers of

cancer, dementia, and chronic disease patients (Blom et al., 2015), the psychosomatic impacts of routine internet use on adult caregivers (those caring for their aging parents) remain underexplored. This knowledge gap necessitates longitudinal mixed-methods research to disentangle the complex mediation pathways involving social adaptation processes.

The Parallel Process Model (Lawton et al., 1991) proposes that the interaction between care recipients' needs and caregivers' coping resources generates distinct subjective evaluations of caregiving experiences—either positive or negative. Caregivers' coping resources encompass internal traits (e.g., physical health, income, educational attainment, psychological resilience) and external resources (e.g., cultural context, familial relationships, social support networks). This framework suggests that positive caregiving outcomes are primarily mediated by internal traits, whereas negative outcomes are more strongly influenced by limitations in external resources.

Internet technology has emerged as a critical tool for informal caregivers, enabling them to overcome temporal, geographical, and transport barriers inherent in accessing traditional caregiving support systems (Lewis et al., 2010). By facilitating access to remote coping resources (e.g., online health communities, telemedicine, and virtual social networks), digital connectivity may mitigate the psychological strain associated with caregiving. Accordingly, we put forward the research hypothesis 1.

Hypothesis 1: Internet use exerts a significant positive effect on the mental health of older adults caring for aging parents.

Social adaptation refers to an individual's proactive capacity to maintain optimal physical and psychological states through self-regulatory strategies, such as learning, in response to environmental changes (Kosic et al., 2006). Higher levels of social adaptation are conducive to preserving and enhancing the psychological and physical well-being of older adults (Chen et al., 2010). Activity Theory posits that active social engagement enables older adults to maintain societal connections, thereby enhancing their social adaptation capacity—a dynamic process of adjusting cognitive appraisals and coping strategies to manage stressors like parental caregiving while sustaining physical and mental well-being. The internet, with its inherent social connectivity attributes, facilitates robust communication and information exchange. Proactive and sustained digital participation strengthens older adults' integration into the digital society, fostering positive self-perception and adaptive responses during digital transformation. Empirical studies corroborate that internet use enhances subjective social inclusion and adaptation, though the magnitude varies significantly across usage types (Du et al., 2023). Higher social adaptation levels are positively associated with improved mental and physical health outcomes (Chen et al., 2010).

Building on this framework, we propose that social adaptation capacity may serve as a mediating mechanism in the relationship between internet use and the Mental Health of older adults caring for their aging parents. Additionally, Heterogeneous associations may exist between distinct purposes of internet usage patterns and both social adaptation capacity and mental health outcomes among old adults caring for their aging parents. Accordingly, we propose hypothesis 2.

Hypothesis 2: Social adaptation mediates the effects of Internet use on the mental health of older adults caring for aging parents.

Building upon this foundation, the present study employs data from the China Longitudinal Aging Social Survey (CLASS) to examine the relationships between mental health, internet use, and social adaptation among older adults caring for their parents. This investigation aims to provide empirical evidence for developing targeted mental health interventions and optimizing policy frameworks to support intergenerational elderly caregiving within families.

3 Research method

3.1 Data Source

This study utilizes data from the 2018 and 2020 waves of the China Longitudinal Aging Social Survey (CLASS), a nationally representative survey employing a stratified multistage probability sampling method. Data were collected through face-to-face household interviews with adults aged 60 and older. Rigorous quality control measures, including on-site supervision, remote data analysis, and telephone verification, were implemented to ensure data reliability. The survey covered 462 villages/neighborhood committees across 28 provinces/municipalities/autonomous regions in China.

From the 2018 and 2020 CLASS datasets, 1,340 respondents reported providing care for their own or their spouse's parents in the preceding month. After excluding cases with missing values in key variables, the final analytical sample comprised 1,303 older caregivers, including 665 internet users and 638 non-users.

3.2 Variable Definitions

Dependent Variable: Mental Health. Mental Health was operationalized using depressive symptoms, a common indicator for assessing mental well-being in older adults. The CLASS survey utilized a shortened 9-item version of the Center for Epidemiological Studies Depression Scale (CES-D) to evaluate the frequency of depressive symptoms experienced by older adults in the past week. The scale ask the frequency of "Feel in a good mood", "feel lonely", "feel sad or distressed", "feel that life is good", "lack appetite", "experience poor sleep", "feeling useless", "feel having nothing to do", "feeling fun in life". Each item is rated on a 3-point Likert scale based on symptom frequency:(1 = never, 2 = occasionally, 3 = frequently). Items 1, 4, and 9 are reverse-scored (i.e., higher scores indicate greater depressive severity). Total scores range from 9 to 27, with elevated scores reflecting heightened depressive symptoms. Following Cong et al. (2008), a score of ≥14 was used to define the presence of clinically significant depressive symptoms.

Independent Variable: Internet Use. Internet use was operationalized through two dimensions. First, general internet use was categorized as a binary variable based on self-reported usage via digital devices: non-users (0 = never use the internet) and users (1 = daily, weekly, monthly, or yearly use). Second, specific types internet use was derived from responses to the question "What do you generally do online?" and classified into two types using latent class analysis (Kim et al., 2024): (1) Survival-oriented Internet use, characterized by high engagement in instant messaging and news browsing, and (2) Utilitarian Internet use, characterized by high engagement in extends activities such as information seeking, online shopping, internet-mediated cultural and recreational engagement.

Mediating Variable: Social Adaptation. Social adaptation was assessed using Chen's (2010) Social Adaptation Scale for Older Adults, comprising 8 items measuring psychocultural adaptation and personal development adaptation. The items include "Proactive Participation in Community Service", "Desire to contribute meaningfully to society", "Enjoyment of learning new knowledge or skills", "Perception of oneself as socially useful" , "Difficulty adapting to rapid societal changes", "Resistance to accepting novel perspectives", "Struggle to embrace new policies or regulations", "Perception that societal changes disproportionately disadvantage older adults". Responses were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). with items 5–8 reverse-coded. Total scores ranged from 8 to 40, with higher scores indicating better adaptation.

Control Variables: Demographic and socioeconomic covariates included gender (0 = female, 1 = male), age (categorized as 0 = 60–69 years, 1 = ≥70 years), education (ranging from 1 = illiterate to 4 = college or above), marital status (0 = without spouse, 1 = with spouse), self-rated health (1 = very good to 5 = very poor), household registration (0 = agricultural hukou, 1 = non-agricultural hukou), and individual annual income (categorized by national per capita disposable income thresholds: 2018 = ¥28,228, 2020 = ¥32,189; 0 = low-income, 1 = high-income).

Descriptive Analysis: As shown in Table 1, elderly caregivers providing care for aging parents exhibited a mean depression score of 14.66 (±3.41), indicating pronounced mental health challenges in this population. Over 50% of caregivers reported internet use, with the proportion increasing from 45.84% in 2018 to 55.65% in 2020 (a 9.81 percentage-point rise). Notably, the prevalence of basic survival-oriented internet use surged from 18.43% in 2018 to 31.16% in 2020, reflecting rapid adoption of essential online services. It indicates that the proportion of old adult caregivers (those caring for their aging parents) using the internet has significantly increased, with a more pronounced growth observed among survival-oriented Internet use. Therefore, building upon existing research concerning the impacts of internet use on social adaptation and mental health among old adult caregivers (those caring for their aging parents), it is imperative to comprehensively investigate the differential effects of specific internet use on these outcomes. In the subsequent analysis, we shall focus on examining: (1) the effects of internet use versus non-use on caregivers' mental health; (2) the heterogeneous influences of distinct internet usage patterns; and (3) the mediating mechanisms through which social adaptation operates within these relationships.

Table 1. Descriptive Statistics by Survey Year

Variable	Category/Indicator	2018	2020	Total
Depression score	Mean (SD)	14.54 (3.43)	14.77 (3.40)	14.66 (3.41)
Social Adaptation	Mean (SD)	25.81 (4.82)	25.67 (4.62)	25.74 (4.72)
Internet Use (%)	Users	45.84	55.65	51.04
	Non-users	54.16	44.35	48.96
Internet Use Types (%)	Non-users	54.16	44.35	48.96
	Survival-oriented Internet use	18.43	31.16	25.17
	Utilitarian Internet use	27.41	24.49	25.86
Gender (%)	Female	50.08	49.71	49.88
	Male	49.92	50.29	50.12
Age (%)	≥70 years	18.76	21.16	20.03
	60–69 years	81.24	78.84	79.97
Household Registration (%)	Agricultural Hukou	45.68	45.94	45.82
	Non-agricultural Hukou	54.32	54.06	54.18
Marital Status (%)	With spouse	85.15	86.96	86.11
	Without spouse	14.85	13.04	13.89
Education	Mean (SD)	2.52 (0.96)	2.61 (1.01)	2.57 (0.99)
Self-Rated Health	Mean (SD)	2.42 (0.87)	2.46 (0.88)	2.44 (0.88)
Individual Annual Income (%)	High-income	28.55	20.58	24.33
	Low-income	71.45	79.42	75.67
Sample Size		613	690	1,303

3.3 Analytical Methods

This study utilized multiple linear regression models to examine the effects of internet use on social adaptation and mental health among older adults caring for their aging parents, as well as the heterogeneous impacts of different internet usage purposes on these outcomes. To assess the mediating role of social adaptation in the relationship between internet use and mental health, we conducted bootstrap mediation analysis (5,000 resamples, 95% confidence intervals) using the SPSS PROCESS macro (Hayes, 2018). Control variables, including demographic and socioeconomic factors, were incorporated into all models to ensure robust estimation. Statistical significance was determined at $p < 0.05$.

4 Data analysis and results

4.1 The Effect of Internet Use on the Mental Health of Older Adults Caring for Aging Parents

Table 2 presents the results of multiple linear regression analyses examining the effects of internet use on social adaptation and depressive symptoms among older adults caring for aging parents. Model 1a (dependent variable: social adaptation; independent variable: general internet use) demonstrates that internet use significantly enhanced elderly caregivers' social adaptation ($\beta = 1.571^{***}$, SE = 0.294) after adjusting for covariates. Model 1b (dependent variable: depressive symptoms; independent variable: internet use) further reveals that internet use substantially reduced elderly caregivers' depressive symptoms ($\beta = -1.375^{***}$, SE = 0.205). Building on this, Model 1c introduces social adaptation as a mediator into Model 1b, showing that while the direct beneficial effect of internet use on elderly caregivers' depressive symptoms remained significant ($\beta = -1.176^{***}$, SE = 0.204), social adaptation partially mediated this relationship ($\beta = -0.126^{***}$, SE = 0.019). The results demonstrate that social adaptation capacity plays a partial mediating role in this relationship. Specifically, internet use directly alleviates depressive symptoms among elderly parental caregivers, while also mitigating such symptoms indirectly by enhancing their social adaptation capacity. This dual pathway indicates that improved social adaptability—manifested through strengthened social networks, adaptive coping strategies, and perceived self-efficacy—serves as a critical mechanism through which digital engagement reduces psychological distress in caregiving contexts.

Table 2. Multiple Linear Regression Results of Internet Use on Depressive Symptoms Among Older Adult Caregivers

	Model 1a (Social Adaptation)	Model 1b (Depressive Symptoms)	Model 1c (Depressive Symptoms)
Internet Use	1.571***(0.294)	-1.375***(0.205)	-1.176***(0.204)
Social Adaptation	—	—	-0.126***(0.019)
Controls	Yes	Yes	Yes
Constant	24.930***(0.719)	16.485***(0.500)	19.637***(0.683)
Sample Size	1,303	1,303	1,303

Notes: ***$p<0.001$, **$p<0.005$, *$p<0.01$

Bootstrap mediation analysis (Table 3) confirmed the partial mediating role of social adaptation. Both the indirect effect ($\beta = -0.199$, SE = 0.055, 95% CI: [-0.313, -0.102]) and direct effect ($\beta = -1.176$, SE = 0.204, 95% CI: [-1.576, -0.777]) were statistically significant, as their confidence intervals did not include zero. Figure 2 illustrates this mediation mechanism.

Table 3. Bootstrap Test of the Mediating Effect of Social Adaptation

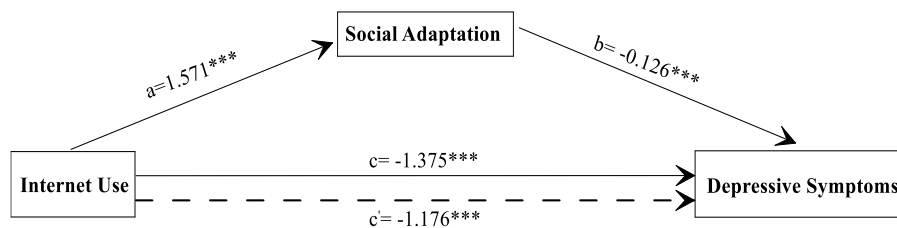| Effect Type	B	SE	95% LLCI	95% ULCI
Direct Effect	-1.176	0.204	-1.576	-0.777
Indirect Effect	-0.199	0.055	-0.313	-0.102

Figure 1. Mediation Mechanism of Social Adaptation in the Relationship Between Internet Use and Depressive Symptoms Among Older Adults Caring for Aging Parents

4.2 The Effect of Specific Types Internet Use on Social Adaptation and Mental Health

Table 4 further analyzes the effects of specific types internet use on social adaptation and depressive symptoms among older adults caring for aging parents. Model 2a (dependent variable: social adaptation) demonstrates that utilitarian internet use (e.g., information seeking, online shopping, internet-mediated cultural and recreational engagement) significantly improves caregivers' social adaptation ($\beta = 3.002$***, SE = 0.351) after controlling for covariates, while basic survival-oriented internet use (e.g., instant messaging, news browsing) shows a statistically non-significant association ($\beta = 0.501$, SE = 0.325). Model 2b (dependent variable: depressive symptoms) reveals that both survival-oriented internet use ($\beta = -0.838$***, SE = 0.228) and utilitarian internet use ($\beta = -2.092$***, SE = 0.247) significantly reduce depressive symptoms compared to non-users. Specifically, caregivers engaged in survival-oriented internet use reported a 0.838-unit decrease in depressive symptoms, while those adopting utilitarian internet use experienced a 2.092-unit reduction. Model 2c, which introduces social adaptation as a mediator into Model 2b, shows that the coefficient for utilitarian internet use decreased by 0.334 units (from $\beta = -2.092$*** to $\beta = -1.758$***, SE = 0.250) but remained statistically significant, indicating that social adaptation partially mediates this relationship.

Table 4. Effects of Specific Types Internet Use on Social Adaptation and Depressive Symptoms

Variable	Model 2a (Social Adaptation)	Model 2b (Depressive Symptoms)	Model 2c (Depressive Symptoms)
Survival-oriented Internet use	0.501 (0.325)	-0.838***(0.228)	-0.782***(0.226)
Utilitarian Internet use	3.002***(0.351)	-2.092***(0.247)	-1.758***(0.250)
Social Adaptation	—	—	-0.112***(0.019)
Controls	Yes	Yes	Yes
Constant	25.205***(0.706)	16.347***(0.496)	19.160***(0.690)
Sample Size	1,303	1,303	1,303

Notes: ***$p<0.001$, **$p<0.005$, *$p<0.01$

Table 5 confirms the partial mediating role of social adaptation in the relationship between utilitarian internet use and depressive symptoms. For utilitarian internet use, both the indirect effect (β = -0.335, SE = 0.092, 95% CI: [-0.524, -0.162]) and direct effect (β = -1.758, SE = 0.251, 95% CI: [-2.249, -1.267]) were statistically significant, as their confidence intervals excluded zero. In contrast, for basic survival-oriented internet use, the indirect effect was non-significant (95% CI: [-0.135, 0.010]), while the direct effect remained significant (β = -0.782, SE = 0.226, 95% CI: [-1.225, -0.340]). These results indicate that social adaptation partially mediates the psychological benefits of utilitarian internet use but does not play a mediating role in the effects of survival-oriented Internet use, which operates through alternative pathways.

Table 5. Bootstrap Test of Mediation Effects for Specific Types Internet Use

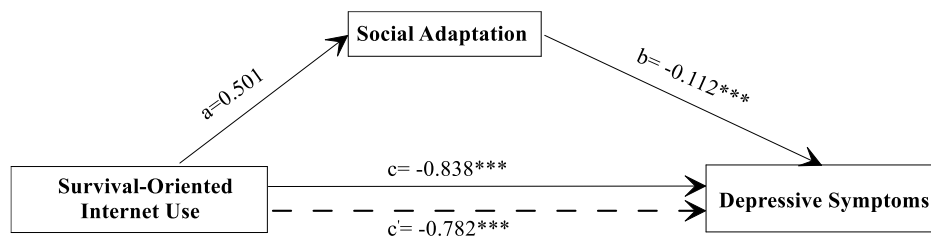| Effect Type	B	SE	95% LLCI	95% ULCI
Survival-oriented Internet use				
Direct Effect	-0.782	0.226	-1.225	-0.340
Indirect Effect	-0.056	0.037	-0.135	0.010
Utilitarian Internet use				
Direct Effect	-1.758	0.251	-2.249	-1.267
Indirect Effect	-0.335	0.092	-0.524	-0.162

Figure 2. Mediation Mechanism of Social Adaptation in the Relationship Between Survival-Oriented Internet Use and Depressive Symptoms.
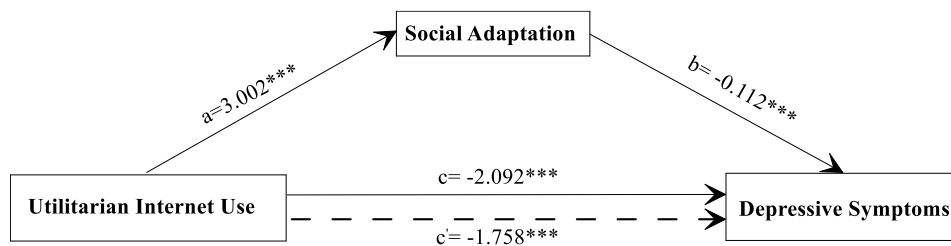
Figure 3. Mediation Mechanism of Social Adaptation in the Relationship Between Utilitarian Internet Use and Depressive Symptoms.

5 Conclusion

Drawing on two waves (2018 and 2020) of the China Longitudinal Aging Social Survey (CLASS) and guided by the Parallel Process Model, this study investigates the impact of internet use on mental health among elderly caregivers providing care for their aging parents. The research further investigates the mediating role of social adaptation in this relationship, while clarifying the effects of daily internet use behaviors on both social adaptation and mental health outcomes among this caregiving population. These findings enhance our understanding of the "intergenerational elderly caregiving within families" phenomenon in the digital society. The main conclusions are summarized as follows.

Our findings demonstrate that utilitarian internet use exerts significant positive effects on mental health of older adults caring for their aging parents. This aligns with evidence that internet technologies enable family caregivers to remotely access coping resources, with internet-based caregiving support effectively alleviating caregiver burden (Sherifali et al., 2018), while extending it by revealing the protective role of routine internet engagement in preserving mental health among elderly caregivers. This protective effect may stem from internet-mediated activities—including information seeking, online cultural

recreation, and e-commerce—which mitigate constraints on in-person social interactions and leisure participation imposed by intensive caregiving responsibilities (Cotten et al., 2012), while fulfill elderly caregivers' critical needs for informational access, daily-life management, and emotional support. These findings empirically validate the propositions of the Parallel Process Model, indicating that utilitarian internet-based functionalities provide effective social supports or elderly parental caregivers. Specifically, these digital tools empower elderly caregivers to acquire external resources, enhance perceived competence in managing caregiving stressors (Jin et al., 2019), and thereby buffer the psychological toll of parental care provision.

Notably, utilitarian internet use also improves mental health indirectly by enhancing social adaptation of elderly caregivers providing care for their aging parents. Existing research demonstrates that internet engagement significantly enhances social adaptation levels among older adults, with those exhibiting comprehensive utilization of internet functionalities deriving the greatest psychosocial benefits (Du et al., 2023). This benefit gradient underscores the cumulative advantage of multifunctional digital participation in mitigating age-related social disengagement, and our results further reveal that improved social adaptation significantly mediates depressive symptom reduction of elderly caregivers providing care for their aging parents. These findings substantiate the postulates of Activity Theory, demonstrating that older adults' active engagement with daily-life-oriented internet functionalities—include information seeking, internet-mediated cultural and recreational engagement, online shopping—enhances socio-environmental adaptation in digital societies. Specifically, such digital participation strengthens caregivers' capacity to manage life stressors like parental care provision through improved adaptive competencies. Social adaptation levels reflect elderly caregivers' agentic capacity to modify cognitive appraisals and coping strategies when confronting caregiving pressures, thereby maintaining psychosomatic equilibrium (Chen et al., 2010). Enhanced social adaptation through internet-mediated engagement significantly improves mental health outcomes in this population.

These findings underscore three critical policy imperatives: (1) implementing targeted digital literacy interventions to enhance elderly caregivers' technological proficiency, (2) fostering proactive adaptation to digitally integrated lifestyles through community-based education programs, and (3) strategically leveraging the comprehensive utilization of internet-enabled living tools—including information retrieval systems, digital entertainment platforms, and e-commerce services—as empirically validated mental health promotors for caregiving populations.

In contrast, while survival-oriented internet use (e.g., instant messaging and news browsing) exerts significant positive effects on the mental health of elderly parental caregivers, yet demonstrates nonsignificant impacts on their social adaptation. This discrepancy may stem from the technological sophistication of contemporary digital ecosystems—while basic digital engagement facilitates online social interactions and informational updates to enhance psychological well-being, it proves insufficient for substantially improving seniors' participatory integration or agentic adaptive capacity within evolving socio-technological environments. This suggests that a comprehensive and dialectical analysis should be adopted to examine the differential impacts of distinct internet usage patterns on the mental health and social adaptation of older adults engaged in parental caregiving. Targeted interventions must guide these caregivers toward healthy and balanced utilization of diverse internet functionalities, while strategically amplifying the enabling role of internet technologies in optimizing elderly-to-elderly caregiving dynamics within multigenerational households.

This study acknowledges two critical limitations rooted in data constraints. First, while we examined the binary internet use (users vs. non-users) and categorical usage patterns (survival-oriented vs. utilitarian-oriented) in relation to mental health outcomes among elderly parental caregivers, the analysis did not incorporate temporal dimensions of digital engagement—specifically, differential effects associated with usage duration. Second, although our proposed typological framework (categorizing internet functionalities into survival-oriented and utilitarian-oriented) provides initial analytical utility, the precise mechanisms through which specific online activities influence caregivers' psychological well-being require finer-grained operationalization in future investigations.

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