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Social media and caregivers' well-being: A scoping review and future research directions

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ABSTRACT

Caregivers' well-being has become a major social concern, given the growing demand for long-term care support to meet the challenges of an aging society. As social media becomes substantially pervasive in daily life, the impacts of social media on caregivers' well-being are increasingly gaining public attention. Although research activities are active, studies on social media and caregivers' well-being lack consolidation and receive limited attention from researchers. To bridge the gaps, this study aims to consolidate the existing knowledge through a scoping review (with four databases: PubMed, Web of Science, Scopus, and CINAHL) and call for research on caregivers from the perspective of social media and well-being. Review results from forty eligible papers indicate that impacts of social media use on caregivers' well-being are not always positive, which encourages future research to provide more understanding of how to achieve positive effects and avoid adverse effects simultaneously. We also further discuss the findings and suggest future investigation opportunities.

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Introduction

A caregiver refers to a person who provides care on an ongoing basis for another in need.¹ Caring for others is stressful and challenging, potentially harming the caregiver's well-being.^{1–3} Compared with the general population, research has confirmed that caregivers usually report higher stress levels and more behavioral psychological problems (e.g., anxiety, reduced socializing, and insomnia).^{4–6} Furthermore, caregivers' well-being has become a major social concern with the growing demand for long-term care support to meet the challenges of aging societies.^{2,7,8} In this case, the well-being of caregivers has become an essential topic for geriatric nursing and related areas.

Thus, many studies, including the research on geriatric nursing, explore approaches to increasing the well-being of caregivers (e.g., Guo et al⁹; Li et al¹⁰; Liu et al¹¹; Quinn and Toms¹²; Williams et al¹³; Young et al¹⁴). Some research uses measures and interventions to reduce negative aspects of caregiving (e.g., stress, burden, depression) to help caregivers maintain their well-being.^{13–15} In contrast, other studies examine the rewards, benefits, and other positive

aspects of caregiving for caregivers' well-being enhancement.¹² However, these studies rarely consider the role of digital media, such as social media, in the well-being enhancement of caregivers. The increasing popularity of social media widely advocates its application in caregiving because of the potential benefits for caregivers' well-being.^{16,17} In the geriatric nursing context, research indicates that both professional nurses and nursing students actively utilize social media for purposes such as staying connected, seeking information, and cultivating a professional identity.^{18,19} This trend underscores the changing landscape of healthcare communication and the growing integration of digital platforms (e.g., social media) into the geriatric nursing.

The growing integration of digital platforms (e.g., social media) into the geriatric nursing makes social media has also become a prevalent tool for caregivers of older people communicating, networking, accessing valuable resources related to geriatric care. Therefore, more recent studies, including those on geriatric nursing, have begun to focus on social media to gain an understanding of the impacts of its use on caregivers' well-being.²⁰ For example, some research explores the use of social media as an effective tool for caregivers' well-being by obtaining social support (e.g., Warner et al²¹; Zhao et al²⁰), emotional regulation (e.g., Zang et al²²), and so on. Furthermore, other studies consider various social media applications in their research, such as online social network sites, for instance Facebook

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(e.g., Choi²³), and content-sharing platforms, for instance YouTube (e.g., Cauty et al²⁴). Moreover, research, including research on caregivers of older people, also identifies the potential problems of social media use that are directly associated with the caregiver and caregiving situation, such as, believing misleading information, misinformation that may give false hope about treatments and lead to misunderstanding, uncomfortable socialization in the caregivers' groups due to privacy concerns, and so on (e.g., Balkhi et al²⁵; Stock et al²⁶; Talbot et al²⁷).

Due to the diversity of research foci of social media applications, various perspectives regarding well-being interpretation, potential problems of social media use, as well as a lack of an updated comprehensive overview on the research of social media and caregivers' well-being, it is challenging for current research activities, including the geriatric nursing, to consistently facilitate the further advocacy of social media effectiveness among caregivers.^{28,29} Moreover, studies on social media and caregiver well-being from multiple fields and perspectives have made it difficult for academics and practitioners to comprehend the current state of knowledge.³⁰ Also, despite the increasing research on social media activities and their impacts on caregivers' well-being, information systems (IS) and geriatric nursing research pays limited attention to this emerging topic that potentially contributes to an important research area called digital healthcare (or healthcare IS). Currently, IS and geriatric nursing research of digital healthcare focuses on care recipients' well-being (i.e., patients) who receive care from caregivers.^{31,32}

Given the increasing concerns about social media for caregivers' well-being and the diversity and fragmentation of the current research regarding this topic, a scoping review combining social media and caregivers' well-being was necessary to systematize and consolidate the existing knowledge. Furthermore, a scoping review can improve understanding of the phenomenon and provide instrumental value for future IS and geriatric nursing investigations of the socially relevant issue of IT use.³³ Therefore, to help researchers and practitioner, especially in the field of geriatric nursing, obtain a clear picture of current research on social media and caregivers' well-being and to understand future research directions, this paper conducted a scoping review on social media and caregivers' well-being. Accordingly, two research objectives were set:

- 1) To summarize the findings of research on social media use and caregivers' well-being.
- 2) To propose research opportunities through discussion about the findings.

Key concepts

Social media and its influences

Social media is defined as the internet-based application facilitating interactions between users by providing them with action possibilities to exchange and share information, opinions, and interests.³⁴ As an internet-based technological application, social media enables the creation and exchange of user-generated content while facilitating interaction and collaboration³⁵. Social media has fundamentally changed the ways of communication, collaboration, and consumption and has become crucial today.³⁶ IS and nursing research on social media and users usually falls into the categories of attitudinal change, such as satisfaction (e.g., Agnihotri et al³⁷; Jarman et al³⁸), behavioral change, such as intention to continue and engagement (e.g., Shen et al³⁹; Zhao and Wagner⁴⁰), or performance change, such as work performance (e.g., Song et al⁴¹). Recently, increasing research is interested in the impact of social media on users' well-being variance.

These studies investigate the effects of social media on general users' well-being (e.g., Ostic et al⁴²) or specific groups' well-being, such as youth or older people (e.g., Boer et al⁴³; Cotten et al⁴⁴). Some research has also studied the separated components of well-being to understand the impacts of social media on depression (e.g., Chhatwani et al⁴⁵) and life satisfaction (e.g., Choi²³). Additionally, some literature also suggests investigating the impacts of social media characteristics on users' well-being, such as the impacts of social media affordance on basic psychological need satisfaction (e.g., Karahanna et al⁴⁶) and the influences of social media content and sender characteristics on well-being and ill-being.⁴⁷ Thus, the research outcomes related to social media and its influences are affluent with various perspectives. This also indicates the research diversity of social media studies that focus on the users, including caregivers as users.

Well-being of caregivers

Looking after others is challenging and stressful, potentially negatively affecting caregivers' well-being.^{2,48,49} In this case, how to understand, maintain, and enhance well-being is often underscored among caregivers, especially among informal caregivers such as family members.⁵⁰

Well-being can be classified into two aspects: hedonic and eudaemonic.⁵¹ Subjective well-being represents the hedonic well-being,⁵² which is defined as an individual's personal feelings and thinking about his or her life being desirable.^{53,54} Subjective well-being involves global evaluations of emotion and life quality.⁵⁵ Following this definition, subjective well-being involves two dimensions: (1) the affective dimension regarding positive emotion and negative emotion, which indicates the affective balance that is important for an individual to develop subjective well-being; and (2) the cognitive dimension, which is the evaluation of individuals' lives.⁵⁶ Happiness is usually included in the subjective well-being assessment and discussion (e.g., Diener et al⁵⁷).

While subjective well-being represents the hedonic aspect, psychological well-being focuses on the eudaemonic aspect, which means optimal human functioning.^{51,58} Psychological well-being is explicitly concerned with the development and self-realization of the individual^{59,60} and indicates self-perceived functioning in six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth.⁵⁹ Specifically, self-acceptance, purpose in life, and personal growth indicate the eudaemonia as a type of "meaningful" happiness.⁶¹ Besides, literature has identified that the satisfaction of individuals' basic psychological needs, such as competency (the need to feel competent in something) and relatedness (the need to feel connected with others), are critical factors for achieving psychological well-being.⁶²

Subjective and psychological well-being are important dimensions of well-being for caregivers. The demanding caregiving tasks usually take a toll on caregivers' subjective well-being.⁶³ However, personal growth, gain, and even the perceived positive aspect of caregiving usually contribute to caregivers' psychological and subjective well-being.⁶⁴ Thus, in the research on caregivers' well-being, subjective well-being and psychological well-being are both important constructs involved in the relevant studies. For example, some studies focus on caregivers' subjective well-being (e.g., Cheng et al⁶⁵; Kuchinka⁶⁶), and others center on caregivers' psychological well-being (e.g., Chen et al⁶⁷; Li et al⁶⁷). Despite being two conceptual constructs, subjective well-being and psychological well-being are usually empirically correlated⁶⁸. In research on caregivers, many studies confirmed the important effect of social support on the caregivers' well-being development. Also, the research promotes self-care and self-esteem as the specific idea of self-kindness to caregivers as researchers found beneficial effects of self-kindness on caregivers' well-being.⁶⁹ Self-kindness is defined as being warm and

understanding toward ourselves when we suffer, fail, experience pain, or feel inadequate.⁷⁰

Method

To capture the extant knowledge on social media and caregivers' well-being, a scoping review was performed by searching articles that address relevant issues regarding social media, caregivers, and well-being. Our specific protocol was drafted using the checklist of Preferred Reporting Items for Systematic Reviews and Meta-analysis Protocols for Scoping Review (PRISMA-ScR).⁷¹ The final checklist is available upon request, and the final version of the protocol was registered on the Open Science Framework (<https://osf.io/7jfds/>).

Research questions formulation

This scoping review aimed to provide a descriptive overview of existing research on social media and caregivers' well-being through identifying (1) key variables applied to social media and caregivers' well-being in the research and (2) impacts of social media use on caregivers' well-being. Thus, two research questions were formulated to guide the scoping review:

- 1) How does relevant literature investigate social media use among caregivers and caregivers' well-being?
- 2) What are the impacts of social media use by caregivers on their well-being?

Inclusion and exclusion criteria

Inclusion and exclusion criteria were applied to screen and check the eligibility of articles identified in the literature search phase. Studies with empirical data (excluding intervention and technical design research) that explored the association between social media use and caregivers' well-being will be considered in the review identification process. Specifically, Inclusion and exclusion criteria were applied as follows.

Papers included if:

- A. Samples of interest involved caregivers, including formal and informal caregivers
- B. Study centered on social media and related platforms and technologies
- C. Paper explored associations of social media with caregivers' well-being and/or related constructs (e.g., psychological well-being, subjective well-being, emotional status, affect, happiness, and so on).

Papers excluded if:

- A. Focus was on care recipients rather than caregivers
- B. Focus was on the social media use pattern analysis but less on impact/meanings of social media

- C. Social media was not the focal information technology in the study
- D. Study presented in the paper was intervention, technical, design science, or protocol study

These criteria were discussed and confirmed among the authors, and the first author conducted the paper screening and eligibility check. Specifically, each paper should be carefully reviewed to ensure it meets all inclusion criteria and does not fall under any exclusion criteria. If a paper meets even one exclusion criterion, it should be excluded from the review. In cases of ambiguity, reviewers should discuss and reach a consensus based on the spirit of these criteria. For inclusion criterion C, the focus should remain on the association of social media with caregivers' well-being and related constructs rather than just describing usage patterns or technical aspects of social media platforms or discussing social media and well-being separately. For example, the paper should examine social media use among family caregivers and its potential associations (e.g., negative and/or positive impacts, negative and/or positive correlations) with well-being and the related constructs (related constructs as listed in the criterion statement and was dynamically adjusted during the review process informed by the reviewed papers). To reduce bias, the judgment results were confirmed by the second author.⁷²

Literature identification

After consulting with the University's librarian about the search terms and database selection, we confirmed the keyword pool and databases. This literature identification process then began with an automated electronic search based on the keyword pool and included four online databases: PubMed, Web of Science, Scopus, and CINAHL. The search was conducted on January 3 and 4, 2024.

As displayed in Table 1, a broad range of keywords representing "social media," "caregiver," and "well-being" were used for the keyword-based search to ensure no relevant paper was missed.⁷³ This search was limited to peer-reviewed journal articles published in English. All publication years were accepted, and the identified articles were stored in the Endnote 20.0 to check for duplicates.

Details of the keyword-based search and the follow-up literature filtering are displayed in Fig. 1. The four stages of the process led to confirming the studies for the final review.

- 1. Identification: Using the search terms, we retrieved literature records from four databases. After removing the repeated papers using Endnote 20.0, 1,295 studies were found to match the topic.
- 2. Screening: We screened the retrieved literature based on the predetermined exclusion and inclusion criteria. After the screening, 1,219 papers were excluded and seventy-three papers were selected for the next stage of examination.
- 3. Eligibility: We read the full text of the literature to further confirm eligibility for the final review. The eligibility examination was also based on the predetermined exclusion and inclusion criteria. We performed the eligibility examination for 76 papers shortlisted in the previous stage.

Table 1
Search terms used in literature search.

Themes	Keywords used in the literature search
caregiver	carer*, caregiver*, family care, care giver*, care-giver*
social media	social media, online communit*, social networking, online social network*, communication technology, ICT, content communit*, virtual communit*, Facebook, WeChat, TikTok, Twitter, Instagram, SNS, instant message, WhatsApp, Tumblr, Myspace, Snapchat
well-being	well-being, wellbeing, satisfaction*, emotion*, affect, happiness, mood, joy, elation, affection, ecstasy, guilt, shame, sadness, anxiety, worry, anger, stress, depression, envy

Note: "*" captures variants of the keyword.

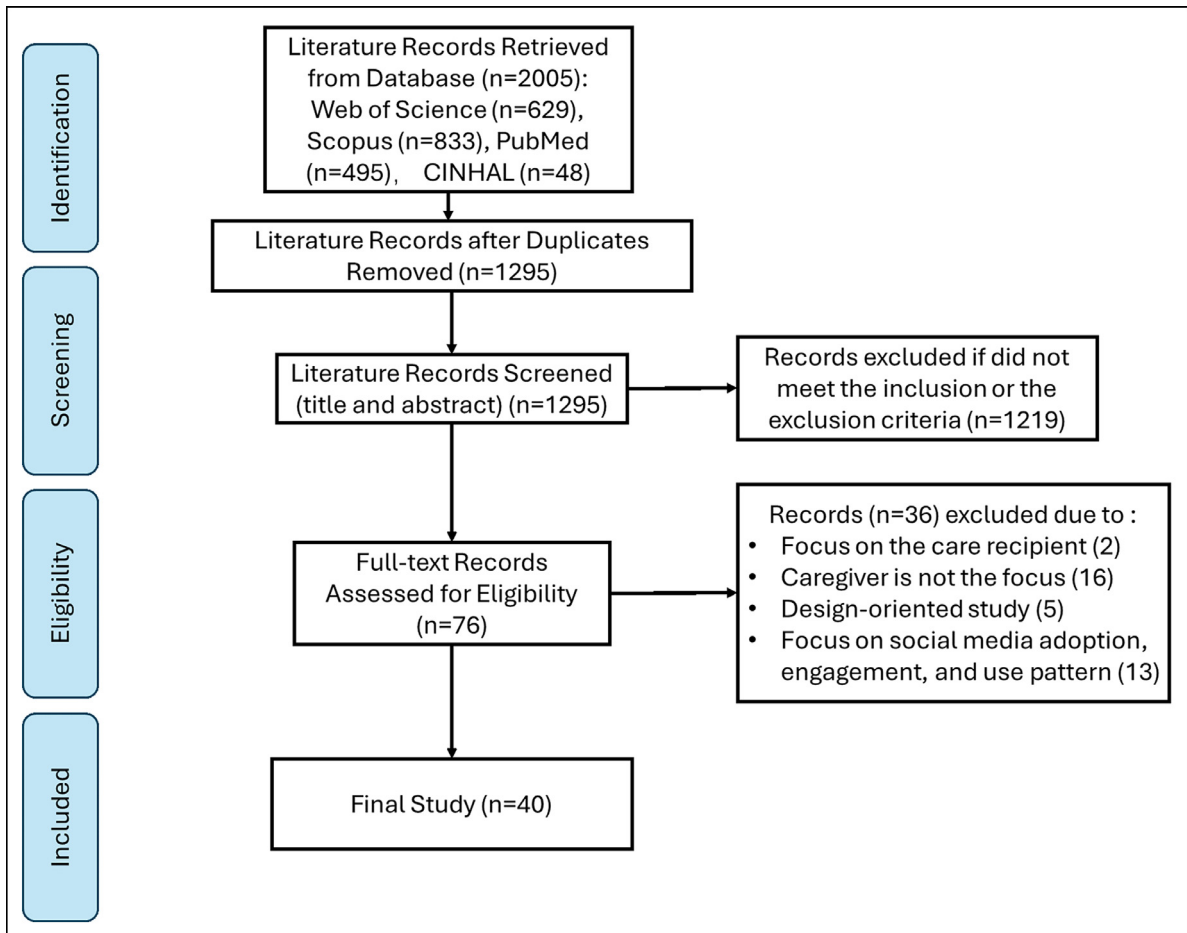


Fig. 1. Literature selection process.

4. Included: As a result of the eligibility examination, we obtained 40 eligible papers for final review.

Data Extraction

The first author and the second author discussed and confirmed the data extraction plan for answering the proposed research questions. Specifically, the paper's title, research context of each paper, social media Platforms utilized by each paper, theory applied in the paper, social media activities described in the paper, marker of well-being used in the paper, and the summarized association of social media with well-being by the paper are organized in the data extraction table. In this case, the final data extraction table summarizes each study's contexts, indicators of well-being, theories applied, key findings, and so on (due to the page limitation, Data Extraction Table that is available upon request). The data extraction from the papers was performed by the first author, and the second author examined and confirmed the data extracted from the 40 eligible papers. The authors resolved any disagreements on data extraction by discussion and consensus.

Analysis strategies

Content analysis (qualitative) was selected as the primary analytic method for analyzing the 40 eligible papers. This method provided an approach to systematically and objectively illustrate, classify, and summarize factors into the same categories when they share the same meaning.⁷⁴

The first author conducted the content analysis for presenting the synthesis of the results in the following section. The second author worked with the first author to check and confirm the results of the content analysis. Any disagreement or conflict was addressed via discussion.

Results

Social media in the literature: context, platform, and use

From the perspective of caregivers' roles and the care recipients' needs and health considerations, we analyzed and categorized the caregiving contexts of the 40 eligible papers. In this classification, a single paper only fell into one category defined by the caregivers' role and the care recipients' care recipient' needs and health considerations as reported in the paper.

As displayed in Table 2, from the perspective of care recipients' issues, the most common context in the identified literature was the care recipient living with cancer (twelve hits), followed by individuals managing chronic conditions or complex care needs (eight hits) and people experiencing Alzheimer, dementia, or recovering from stroke (five hits). From the perspective of caregiver roles, parents as caregivers were the most common cases, followed by family members, such as grandparents, as caregivers (e.g., Du et al⁷⁵). In most cases of these two contexts (parents as caregivers and family members as caregivers), the caregivers were usually the young adult, and the care recipients were children or teenagers (e.g., Brady and Gueirin⁷⁶; Judd-Glossy et al⁷⁷). Within our reviewed literature, limited

Table 2
Caregiving contexts in the literature¹.

Care Recipient's Needs and Health Considerations	Caregiver Role							Hits
	Parent	Family ²	Informal ³	Not Specified	Spouse	Offspring	Mixed ⁴	
People living with cancer	79–82	83,84	21,85–87		88	89		12
Individuals managing chronic conditions or complex care needs	25,77,90–92	93		94,95				8
People experiencing Alzheimer, dementia, or recovering from stroke		75	96	97,98	99			5
Individuals on the autism spectrum	100,101	102,103						4
General care needs and support for military veterans	76	104					105	3
End-of-life care and support			106				107	2
Individuals living with microcephaly or cleft lip and/or palate	26,108							2
Perioperative care and recovery support				24			109	2
Individuals living with schizophrenia		22						1
People adapting to spinal cord injury		110						1
Hits	14	9	6	5	2	1	3	40

Note:
¹ one paper only fell into one category defined by the caregivers' role and the care recipients' needs and health considerations as reported in the paper.
² Family includes parent, grandparent, and other relative as stated by the identified literature
³ Informal indicates other caregivers, such as friends
⁴ Mixed indicates a combination of professional and informal caregivers.

Table 3
Social media platforms in the literature.

Types of platforms		Examples in the literature	References
General Platforms	Chat Group with specific topics	Private Facebook Groups, WhatsApp Group, QQ Group	26,77,90,92,102
	Single Forum and Community with specific topics	Facebook Page, Douban Group, Yahoo! Groups, Sina Weibo Group	79,80,89,94,95,98,101,107
	Personal Account	Blog, Instagram, WeChat	22,93,108
Specific Platforms	Multiple general platforms	Facebook plus other general platforms, Twitter and blog	21,24,81,83,84,88,91,100,103,105,109,110
	Specific Topic platforms	Type 1 diabetes forums on various platforms, Cancer-specific discussion boards, Advance care planning-specific forums	25,85,106
	Forum and Community	CaringBridge, ALZConnected.org, Irish Parenting Website, Online web forum for older caregivers	75,76,86,87,96,97,99
Mixed Platforms		Military Veteran Caregiver Network and General Community, Facebook plus Cancer-specific forums	82,104

literature focused on caregiving for individuals experiencing later life stages or on caregivers who are themselves in their later years, despite the increasing number of social media users across all age groups³⁰ and the growing need for care among people as they age.⁷⁸ Table 3 summarizes the social media platform types discussed in the identified literature. Among the social media platforms found were those developed for specific topics, such as CaringBridge dedicated to the cancer topic and ALZConnected.org dedicated to the Alzheimer's topic (e.g., Bloom et al⁸⁶; Du et al⁷⁵). Chat groups, forums, or communities organized for specific topics built on general platforms (e.g., Hao et al⁹⁸) were also common in the identified literature. This indicates that current literature has focused on the caregivers' social media engagement with purposes related to the care recipients' needs and health considerations.

Based on this analysis, it became apparent that most identified research merely focused on the caregivers' social media engagement related to their caregiving life, such as involvement in a group that focuses on a specific disease. However, the increasing adoption of various social media applications affords individuals a repertoire of uses in work, social, and personal situations.³⁶ This indicates social media have permeated into many aspects of individuals' daily lives. Thus, the investigation of caregivers' social media engagement, including their life beyond caregiving, would also be meaningful to obtain a comprehensive understanding of the relationship between caregivers' social media use and their well-being. For example, one could explore how informal caregivers' use of social media in their workplace (i.e., social media use at work) impacts their well-being, which is more suitable for informal caregivers who still have full-time jobs.

Based on the content analysis, five social media uses were identified in the examined literature: Public Communication (posting, comments, etc.), Viewing, Activities in Group, Personal Communication, and Overall Use (see Table 4). First, some studies focused on caregivers' public posting and commenting in the platforms of Instagram or Facebook, that is, the public page and the post can be searched and viewed by all platform users (e.g., Hansen et al⁹³). Thus, we categorized this type of interaction investigated by these studies as Public Communication. Second, as some studies (e.g., Lauckner⁸⁵) focused on scenarios of caregivers' information viewing (e.g., reading a message or post), we placed these into the Viewing category. Some

Table 4
Social media use in the literature.

	Human Subject	Non-Human Subject	Both
Public Communication (posting, comments, etc.)	1,2,3	79,80,84,87,91,96,97,101,106–109	21,75,76,86
Viewing	83,85,93		
Activities in Group ¹	77,92,102	89,90,100,104	26,98
Personal Communication ²		99	
Overall Use ³	22,81,82,103,105,110	24	94,95

Note:
¹ Activities in Group indicates the paper focused on the caregivers' social media use in a specific group chat or online community
² Personal Communication indicates the paper focused on one-on-one communication of caregivers with others
³ Overall Use indicates the comprehensive social media use of caregivers related to the caregiving life, which usually covered at least two types social media use categories.

studies (e.g., Cole et al¹⁰²) focused on the caregivers' social media interaction with others in a specific online group or community, which was categorized as Activities in Group. One study (i.e., Solli et al⁹⁹) focused on the caregivers' private communication on social media; this social media interaction was labeled as Personal Communication. The last category, Overall Use, indicates the comprehensive social media use of caregivers related to the caregiving life. This category was necessitated by the fact that some studies focused on broad social media interaction types or did not specify the social media interaction (e.g., Zang et al²²).

Most papers focused on one social media use interpretation, while some involved multiple social media use interpretations (e.g., Hansen et al⁹³). As for social media use interpretation in the identified literature (see Table 4), most studies targeted the caregivers' public communication, content viewing, and engagement in online groups (e.g., Miller et al⁸²; Warner et al^{84,88}).

Of the 40 identified papers, eighteen used only non-human subjects as the unit of analysis, such as SNS posts and tweets (e.g., Bloom et al²⁰²¹⁸⁷; Meyer–Macaulay et al¹⁰⁹). These studies used text-based data (e.g., posts, comments, and messages) or meta social media data (e.g., number of likes or number of tweets) to understand social media use. The studies that used only non-human subjects could cover active use behaviors, namely content generation related to social media use, such as writing comments and publishing posts. However, the passive use, namely content viewing, could not be investigated by studies using non-human subjects. Thus, 14 papers that studied human subjects (i.e., caregivers as social media users) covered the passive use of social media (e.g., Lauckner⁸⁵; Miller et al⁸²). The remaining eight studies involved social media users and their generated content as the analysis units, which centered on the public communication context.

Impacts of social media use on caregivers' well-being markers

Table 5 shows the specific conceptual perspectives (i.e., markers of well-being) that were examined in the identified literature. Also, the overall impacts of social media on these specific conceptual perspectives of caregivers' well-being are summarized.

Social media use facilitates social support among caregivers in various contexts. Based on our content analysis, we confirmed that social support is the most popular conceptual perspective (thirty papers adopted this perspective). The extant literature focused on overall social support (e.g., Bloom et al⁸⁶) or specific types of social support (e.g., Saha and Agarwal¹⁰⁰). It is worth noting that most research of social media conceptual perspective highlighted emotional support (e.g., Bloom et al⁸⁷; Stock et al²⁶). Thus, we purposely displayed emotional support as an individual dimension from the conceptual perspective of social support to be a concrete marker of caregivers' well-being in Table 5. With this perspective, researchers study whether social media use can facilitate caregivers to obtain sufficient social support, which is beneficial for their well-being.

Thirty identified studies imply that social media use facilitates caregivers' well-being by helping them receive various types of social support. Among them, Public Communication and Activities in Group are the two most common social media use types that help caregivers receive various social support in diverse caregiving contexts.

Social media use displays dichotomous impacts on caregivers' affective balance. Affective balance was the second most frequent conceptual perspective taken by studies as a marker of well-being (18 papers). This perspective mainly investigates a critical aspect of subjective well-being, the affective dimension.¹¹⁴ These studies aimed to understand the impact of using social media on caregivers' emotional variance (positive and/or negative) in their caregiving contexts (e.g., Bloom et al⁸⁶).

Table 5
Markers of Well-being in the literature and social media impacts.

Perspective	Explanation	Specific reflection in literature	References	Social media impacts
Social Support	As the interaction process between people regarding emotional concern, instrumental aid, information, or appraisal, ¹¹¹ social support has a positive relationship with well-being (psychological well-being and subjective well-being).	<ul style="list-style-type: none"> • Social Support as a whole • Informational support • Esteem support • Emotional support 	21,22,75,76,79–81,84,86–92,96,98,100–103, 106–108,110 21,24,26,75,77,80,81,84,87–93,96–98, 100–102,106,107	Positively facilitating social support seeking
Affective Balance	As the important component for subjective well-being, affective balance highlights two factors of affect: positive affect and negative affect. ⁵⁶	<ul style="list-style-type: none"> • Positive affect • Negative affect 	82,85,86,93,108,109 22,25,81–83,85,86,88,104,105,108,109	Increasing caregivers' positive affect Dichotomous impacts (increasing and decreasing) of social media on the negative affect
Basic Psychological Need	Relatedness: An individual's innate psychological need to interact, be connected to, and experience caring for others. ¹¹² This is closely related to psychological well-being. Competency: An individual's innate psychological need of being effective in dealing with the environment in which a person finds oneself. ¹¹² This is closely related to psychological well-being.	<ul style="list-style-type: none"> • Sense of belonging • Social isolation • Companionship • Connectedness • Familiar relationship • Self-efficacy • Empowerment 	21,24,26,76,77,88,93,99,104,108 83,92,99,109	Increasing caregivers' Relatedness need satisfaction Dichotomous impacts (increasing and decreasing) of social media on Competency need satisfaction
Eudaemonia	A kind of happiness, as a significant alternative approach to well-being (psychological well-being). ¹¹³	<ul style="list-style-type: none"> • Meaning • Spirituality • Rewarding feelings • Personal growth • Positive self-care • Self-esteem 	22,86,93,109	Increasing caregivers' eudaemonic happiness
Self-kindness	Being warm and understanding toward oneself when we suffer, fail, experience pain, or feel inadequate ⁷⁰ , which results in well-being (psychological well-being and subjective well-being). ⁶⁹		75,101	Facilitating caregivers' self-kindness awareness

Most studies in the 18 papers confirmed the positive impact of social media use (e.g., Public Communication and Viewing) on caregivers' affective status. However, based on our content analysis, we found that four papers uncovered negative impacts of social media use on caregivers' well-being. Specifically, these studies discovered that social media use led to an increase in the negative affect of caregivers. For example, Miller et al.⁸² found that social media use can lead to an increase in negative emotion (e.g., anxiety) because of misinformation within the online community. The common social media use behaviors shared by these four papers was the content viewing of unsound information or misinformation in cancer-related contexts.^{82,83,85,88} Thus, grounded in the extant literature, the content viewing of inappropriate information on social media may lead caregivers of people living with cancer to an increase in the negative affect.

Social media use displays dichotomous impacts on caregivers' basic psychological need satisfaction. The third perspective is basic psychological needs: relatedness and competency. The literature consistently confirmed that satisfying the basic psychological needs is critical for individuals to attain psychological well-being.¹¹⁵ Some literature also held that a positive relationship with others and a sense of competency are the two essential dimensions of psychological well-being.¹¹⁶ Thus, studies applied this conceptual perspective as the marker of caregivers' well-being to learn about the impact of social media engagement among caregivers. At the operational level, the identified literature used relatedness and competency closely related constructs to reflect this perspective (e.g., Canty et al.²⁴; Solli et al.⁹⁹).

Although some of the identified literature confirmed the positive impact of social media on relatedness, other of the identified literature indicated the dichotomous impacts of social media use on the need satisfaction of competency. For example, Gavrila et al.⁹² found that social media use facilitates competency, while one study published in 2021 (i.e., Warner et al.⁸³) discovered a negative impact of social media use on competency need satisfaction. This negative influence of social media use on competency was also related to the viewing of unsound messages in the context of caregivers of persons living with cancer. To sum up, based on the information of the reviewed literature, social media use usually displays positive impacts on caregivers' basic psychological need satisfaction, but in some specific caregiving contexts, such as caregivers of persons living with cancer, literature has identified the negative impact of social media use (content viewing) on caregivers' competency need satisfaction.

Social media use facilitates eudaemonic happiness among caregivers of persons living with diseases. The fourth perspective is called eudaemonia, which refers to the happiness derived from meaningfulness and seeking to develop the best in oneself.¹¹⁷ Eudaemonia is a critical foundation of psychological well-being.¹¹³ Specifically, four identified studies discussed the relationship between social media use and seeking meaning (e.g., Hansen et al.⁹³), spirituality (e.g., Bloom et al.⁸⁶), rewarding feelings (e.g., Zang et al.²²), and personal growth of caregivers (e.g., Meyer–Macaulay et al.¹⁰⁹), which encourage the individual to realize the positive aspect of caregiving.¹¹⁸ These four identified papers confirmed the positive impacts of social media use on eudaemonia development, which were examined in the social media scenario of Public Communication. Furthermore, the context of these four identified papers usually involved long-term caregiving for individuals living with chronic conditions, such as cancer and schizophrenia.^{22,86}

Social media use facilitates caregivers' self-kindness awareness. The final perspective is self-kindness. Two of the identified papers fell into this category. These papers investigated the use of social media and its impact on caregivers' self-care perception (i.e., Du et al.⁷⁵) and self-esteem development (i.e., Mohd Roffeel¹⁰¹). These

studies aimed to help caregivers care about themselves with social media, which increases self-worth feelings in caregivers, and reflects an important aspect of psychological well-being (i.e., self-acceptance).¹¹³ Also, self-kindness, especially self-care, is essential to promoting good health among caregivers, which benefits their well-being.³ Two of the identified papers confirmed the positive impacts of social media on self-kindness awareness, which were all found in the social media scenario of Public Communication. These two papers involved the caregiving context of autism spectrum disorders¹⁰¹ and Alzheimer disease,⁷⁵ which are the caregiving contexts usually resulting in significant challenge to caregivers.¹¹⁹

Discussion and conclusion

Discussion and future research opportunities

Mechanisms and rationales for media effect on caregivers' well-being

First, the literature analysis results indicated positive and negative impacts of social media use on caregivers' well-being (as displayed in Table 5). Specifically, most studies confirmed the positive effects of social media use on caregivers' well-being, with only four studies indicating negative impacts of social media use on caregivers' emotional conditions (e.g., Lauckner⁸⁵; Miller et al.⁸²) and one study on competency need satisfaction.⁸³ Further synthesis and analysis of these five studies indicated the negative impacts of social media use revealed a common social media use behavior involved in these studies, namely viewing information (e.g., Warner et al.⁸³). This might imply that information received through social media use is the fundamental source for the negative impact of social media use. These findings reinforce the confidence in effectiveness of the geriatric nursing practice related to social media and other digital media platforms for helping caregivers of older people achieve the well-being. Specifically, geriatric nursing practitioners could recognize the potential benefits of social media use for caregivers of older people and be mindful of the potential negative effect of social media if caregivers only using social media viewing information but without any interaction with others. However, most of the identified research is exploratory and seeks to uncover the positive or negative effects of social media on caregivers' well-being but does not investigate the rationale for the appearance of these effects. In this case, the mechanism for the emergence of social media's positive or negative impact is not clearly known, which us from explaining or verifying either type of impact with a solid theoretical foundation and strong empirical evidence. Thus, taking effective measures to help caregivers, including caregivers of older people, achieve the optimal benefits of social media engagement is challenging with the current limited and preliminary knowledge of the social media impacts on caregivers' well-being. Future empirical research, including geriatric nursing studies, on the antecedent mechanism and consequence of social media impact on caregivers' well-being would be helpful for applied health-care practitioners (such as geriatric nurses and caregivers) and policymakers to design specific measurement guides and to protect caregivers from unintended outcomes of social media use. As such, the first research opportunity is a causal mechanism for social media impacting caregivers' well-being. Sample research question 1 (SRQ1) is proposed:

SRQ1: *What are the theoretical rationales for the emergence of positive effect(s) of social media use on caregivers' well-being, such as basic psychological need satisfaction among caregivers of older people?*

Contextualization related to social media use and caregiving

Furthermore, according to analysis results (see Table 2), we found that the identified research contextually determined the caregiver

and the caregiving situation most often by two factors: what needs and health considerations of the care recipients are and what the relationship between the caregivers and care recipients is. However, few studies have considered the effect of these contextual factors or discovered other influential contextual factors that impact the caregivers' social media use and the consequences on their well-being. Context is the environmental domain that helps explain the phenomena by its relevance.¹²⁰ Even though we focused on a specific user group (i.e., caregivers) in this social media use research, caregiver/caregiving should not be the only sample pool for data collection. It should be a specific and essential phenomenon through which we could discover important insights into the nature of causality for explaining it.¹²¹ These insights are vital for understanding the unique and actual demands for caregivers using social media and the complex impacts of social media use on well-being in the specific contexts, such as geriatric nursing. For example, based on our content analysis of the identified literature, we found that the negative impact of social media usually happens in the context of caregivers of patients with cancer (e.g., Miller et al⁸²; Warner et al^{83,88}). However, we cannot provide reasons for why these negative influences of social media usually happened among the caregivers of patients with this disease. This is due to limited research efforts on contextual factors for explaining the impacts of social media use on caregivers' well-being. Therefore, contextualization, which considers the contextual factors in the research settings (e.g., theories, hypothesis development, and explanation) of the caregiver and caregiving in a study, is essential for further research development on social media and caregivers' well-being. This appears to be more pronounced in geriatric nursing research. Studies in this field have shown that technology use patterns among dementia caregivers are shaped by specific caregiving needs.¹²² Therefore, a research opportunity lies in exploring the contextualized aspects of caregiving in specific settings, such as geriatric caring. As such, the second research opportunity is the contextualized research of caregivers and caregiving, and sample research question 2 (SRQ2) is proposed:

SRQ2: *What are the contextual factors (e.g., the caregiving needs in the caring for older people) of caregivers and caregiving that influence the social media engagement of caregivers and their well-being, such as informational support seeking?*

Theory-driven research on social media use and caregivers' well-being

After reviewing the identified literature, we found that only six papers had a theoretical foundation (e.g., Warner et al^{83,88}); theories discovered are listed in the Data Extraction Table (the Table is available upon request). Furthermore, we found that no research implicitly or explicitly interpreted social media use by caregivers based on a theory. Without the guidance of theory, the extant literature usually regarded social media use as a "black box," which limits the understanding of the causal mechanism of social media use for caregivers' well-being. A theory broadly refers to conjectures, models, frameworks, or bodies of knowledge that constitute the scholarly realm's currency.^{123,124} The applicable theoretical thought and development would be beneficial for researchers to select a suitable epistemological approach to insightfully understand the phenomenon and advance knowledge,^{125,126} which is also true for the field of geriatric nursing. Furthermore, the practitioners of geriatric nursing could also benefit from theory-driven research by obtaining deeper understanding of the effectiveness of specific practices with the systematic framework provide by a theory. Thus, future studies, including research on geriatric nursing, are encouraged to consider compelling theories from different disciplines (e.g., medicine, nursing and healthcare, IS, media and communication, gerontology, and psychology) and evaluate their application, combination, and adaption in the

context of social media use and caregivers' well-being. The potential theories included the theories used by the review papers. We also suggested some theories that are also applicable for future studies, such as affordance theory,^{46,127} media system dependency theory,^{36,128} theory of attributed dignity,¹²⁹ and social service utilization framework.¹³⁰ Furthermore, the practitioner of geriatric nursing also benefits from this research direction as the theoretical development could server the systematic knowledge foundation for the practitioners to organize and plan the specific social media engagement in the daily caring practices. In addition, as social media contexts will differ from those researched in the current investigation, it may be that new theories will need to be developed.¹³¹ As such, the third research opportunity is theory-driven research, and we propose sample research question 3 (SRQ3):

SRQ3: *How can existing theories from multiple disciplines, such as nursing and healthcare as well as information systems, be applied, combined, or adapted to understand the impact of social media use on caregivers' well-being in geriatric nursing?*

Interdisciplinary research collaboration for caregivers' well-being

Finally, social media use and caregivers' well-being is a complex phenomenon, including not only technical components (i.e., social media), but also human components (i.e., caregivers) and even organizational components (i.e., social media platforms' operators and government). Because of the combination of these components, social media and caregivers' well-being could also be an IS research theme¹²⁶. Many IS journals have begun to pay more attention to the societal issues related to IS research, such as social justice¹³² and climate change.¹³³ The IS discipline is good at addressing IT-related societal issues and social factors-embedded IT phenomena from the socio-technical perspective.¹³⁴ Therefore, IS scholars can contribute to the theme by simultaneously considering the technical and social factors (i.e., socio-technical perspective). IS research involvement will further facilitate social media design for caregivers with more social understanding and a human-centric approach. Moreover, this also advocate the researchers on geriatric nursing to consider the inter-disciplinary collaboration with IS scholars to further develop the cohesion of social and technological factors for caregivers' well-being. As such, the fourth research opportunity is the interdisciplinary research collaboration with other research fields. For example, with the theoretical thought called socio-technical perspective¹³⁴, considering the interaction and cohesion between social factors (e.g., the needs and health considerations in the geriatric nursing) and technological factors (e.g., affordance of information technology) in the research of social media use and caregivers' well-being and sample research question (SRQ4) for geriatric nursing is:

SRQ4: *What would be the significant contribution of the interdisciplinary collaboration between geriatric nursing and IS scholars to the understanding of social media use and well-being caregivers of older people?*

Significance and contributions

This investigation primarily makes three contributions to research and practice.

First, a scoping review was performed to help researchers, including geriatric nursing scholars, comprehensively understand the current state of the research. This study took a timely snapshot for future research on social media use and caregivers' well-being by displaying the circumstances of the current research and summarizing the existing knowledge and insights. The summary of identified key variables, insights, and gaps from the literature also drew a holistic

picture for researchers, including the geriatric researchers, to quickly learn about what factors and perspectives prior studies have or have not examined. As Rowe¹³⁵ noted, “literature reviews should strive to identify thematic gaps and theoretical biases, propose some future research directions.” To sum up, by serving as a commencement and providing necessary information about what we already know and what we do not yet know about social media use and caregivers’ well-being, this study expects to enrich future research on social media use and caregivers’ well-being, which helps develop topics with significant societal, technical, and multidisciplinary implications.^{30,136}

Second, with the rapidly evolving permeation of various digital technologies into everyday human life, the central attribute of human life is now being digitalized.¹³⁷ This scoping review encourages researchers, including IS and geriatric nursing researchers to explore social media use among caregivers. This encouragement will further facilitate the development of disciplines and research in the digital era. Our review calls for understanding social media use and caregivers’ well-being. This understanding would provide valuable problem-portable knowledge for researchers from various disciplines interested in digital technology engagement phenomena among caregivers or other social collectives.

Finally, academic work can offer scholarly guidance, provide principles for best practices, and separate facts from fiction for practitioners.¹³¹ Benbasat and Zmud¹³⁸ have also noted, “Once a sizable body of literature exists regarding a phenomenon, it does become possible to synthesize this literature, e.g., as a state of the art review, to develop usable prescriptions.” Thus, a timely scoping review on social media and caregivers’ well-being can provide a feasible way for practitioners, including the geriatric nursing practitioners, to acquaint themselves with the up-to-date knowledge summarized in this literature review and hence become more understanding of and efficient in the relevant issues of social media use and caregivers’ well-being. This review provides insights for social media platform developers, policymakers, and geriatric nursing and applied health-care partitioners to formulate proactive measures that exert and amplify the positive effects of social media use on caregivers’ well-being.

Limitations

Two major limitations should be considered when interpreting and applying the findings of this investigation. First, this study is not shielded from the common limitations of literature review methods. The literature review (including the scoping review) is constrained to the pool of articles available in selected databases that satisfy the pre-determined keywords and inclusion/exclusion criteria. Despite the additional search remedy used in this review, it is still likely that important and relevant papers were ignored. Second, as this line of research is still emerging, the number of empirical studies remains insufficient and the conceptualization of some constructs is diverse, both issues prevent us from performing a meta-analysis or systematic review and narrow the literature review that we can conduct. As the domain further develops and knowledge accumulates, future research could address this limitation.

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Declaration of competing interest

None.

CRediT authorship contribution statement

Xiaobo Ke: Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Vivian W.Q. Lou:** Writing – review & editing, Supervision, Resources, Funding acquisition.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.gerinurse.2024.09.017.

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