

Mapping Self-Care Behaviours Adopted by Family Caregivers During the COVID-19 Pandemic: A Scoping Review

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Abstract

Self-care behaviours are health-promoting activities adopted by family caregivers to maintain and sustain their well-being. Given the impact of COVID-19 on family caregiving, this article presents findings from a scoping review (2020–2023) examining the self-care behaviours adopted by family caregivers (FCGs) to cope with caregiver stress during the pandemic. The review was guided by the Arksey and O'Malley framework. It adopts the two-stage screening process to determine the eligibility of articles. From 4 679 articles initially screened, 10 were included in the review. From these, content related to self-care behaviours, activities, methods, interventions, models and strategies adopted by family caregivers during the COVID-19 pandemic was extracted and analysed. The findings revealed that family caregivers participated in health promotion activities and disease prevention training sessions during the pandemic. These measures offered caregivers COVID-19-related guidance on supporting their sick or elderly relatives as well as strategies for managing their own stress, anxiety and depression. They also adopted psychological and mental health behaviours and activities, including physical exercise, healthy eating and other lifestyle changes. This study highlights the need for policymakers in family nursing and elderly care to develop policies that promote the use of technology-driven self-care activities, recognising that the health and well-being of family caregivers is essential for providing effective care to elderly and sick relatives. The review found a lack of studies conducted in resource-limited settings, such as in Africa, suggesting that future research should focus on including populations from these regions.

Keywords: self-care activities; activities of daily living; family caregivers; older



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persons; COVID-19 pandemic; caregiver stress

Introduction

Globally, the coronavirus disease 2019 (COVID-19) pandemic negatively affected people with existing chronic health conditions and exacerbated the stress of family caregivers (FCGs) due to their needing to provide care under strict infection control conditions and social isolation (Robinson-Lane et al. 2022). In this review, FCGs are defined as males or females, 18 years or older, who provided voluntary, unpaid care to a sick, disabled or elderly relative with whom they live. The care consisted of activities of daily living as well as procedures requiring some form of expertise such as giving medication, including administering insulin and dressing wounds (Rose et al. 2019).

The COVID-19 pandemic highlighted the important role of FCGs, the challenges they faced in providing care during this public health crisis and the broad range of self-care activities they adopted to maintain their physical, social and psychological health (Lightfoot et al. 2021). The pandemic made it more challenging for FCGs to provide care due to enforced isolation and limited access to health and social care services, leading to increased anxiety and stress levels (Masoud et al. 2022; Russell et al. 2023). Studies also revealed that many FCGs struggled to balance their caregiving responsibilities with other obligations, such as work and household duties, resulting in an increased risk of negative health consequences, thereby hindering their overall well-being (Fieselmann et al. 2022; Masoud et al. 2022). Caring for a sick relative with chronic conditions increased strain on caregivers' physical and mental health, as they provided intensive care under strict infection control measures.

Findings from studies indicated that care-recipients with cognitive decline often experienced increased anxiety and stress during the quarantine period, which negatively affected the emotional and physical stress of the FCG (Dellafiore et al. 2022). The carers also experienced stress in relation to the lengthy duration of caregiving, reduced time for respite and a lack of access to physical and social activities during the pandemic, when movement and contact were restricted (Daley et al. 2022). Lack of access to medical facilities and equipment made caring for their sick relatives a challenge (Chiesa et al. 2021; Lightfoot et al. 2021) with 45.5% of FCGs being unable to access social support and 75.3% unable to navigate the healthcare system, book appointments and access care, leading to increased stress levels (Archer et al. 2021; Rahimi et al. 2021). In addition, the boundaries between work and caregiving became increasingly blurred during the pandemic, presenting new challenges for FCGs; the requirement to work from home resulting in their always being available to undertake care duties (Dellafiore et al. 2022; Phillips et al. 2020).

According to Lightfoot et al. (2021), the main changes to caregiving resulting from the pandemic included restrictions on social and physical interactions, shifts in caregiving duties, a decrease in available services and support and an increased emphasis on safety

and vigilance. In response, caregivers implemented various adjustments, such as maintaining connections with loved ones, finding ways to keep those they were caring for engaged, seeking support and services through unconventional means and taking steps to manage their own stress levels. While these activities appear to be beneficial, it is important to explore them further to enable FCGs to identify and adopt appropriate strategies during public health crises, such as the COVID-19 pandemic.

The ways in which FCGs were affected by the COVID-19 restrictions resulted in changes in their self-care behaviours and in finding new ways to manage the challenges of caregiving. Various distressing circumstances, such as social isolation and loneliness, which are often unintentional, can be challenging for both caregivers and care-recipients, resulting in their being hesitant to seek outside help due to concerns about the risk of bringing infection into their homes (Todorovic et al. 2020).

According to Orem (1991), the self-care model focuses on actions or behaviours that individuals initiate and perform to maintain their life, health and overall well-being. The COVID-19 pandemic brought attention to the importance of self-care measures to control the spread of the disease and preserve lives. These measures included individual actions, such as wearing masks and practising physical distancing, as well as implementing self-care interventions on a national scale, such as washing hands and avoiding crowded areas. This highlights the importance of undertaking self-care actions to enhance the quality of life and well-being of FCGs (World Health Organization 2022).

Self-care behaviours are health-promoting activities adopted by FCGs to maintain and sustain their well-being. These pre-COVID-19 activities helped them cope during difficult times and included exercise, participation in support groups, meditation, self-care (Masoud et al. 2022), getting enough sleep and rest and avoiding smoking and alcohol consumption (Oliveira et al. 2019). FCGs who adopt limited, or no self-care behaviours often experience caregiver stress, mental and emotional health issues, and unmet needs, which can have negative consequences on their overall health and quality of life.

Self-care behaviours adopted by FCGs during the COVID-19 pandemic have received little research attention, suggesting the need to examine the impact of the associated restrictions and health implications and how they coped with the stress (Masoud et al. 2022). This will assist in identifying their self-care practices, which can enhance the health and well-being of FCGs in similar situations (Budnick et al. 2021). Findings from this scoping review will contribute to the body of knowledge on self-care strategies and inform research, practice and policy in health promotion aimed at improving the quality of life for FCGs (Todorovic et al. 2020). The aim of this scoping review was, therefore, to detail the available information regarding the types of self-care behaviours adopted by FCGs to manage their stress during the COVID-19 pandemic.

Types of Sources

This scoping review considered various types of studies, such as qualitative cross-sectional retrospective designs, prospective mixed methods, web-based behavioural interventions, experimental and quasi-experimental studies (including randomised and non-randomised controlled trials, before-and-after studies and intervention studies), as well as mixed-method feasibility studies and qualitative reflexive analytical studies.

Methods

This scoping review was based on the methods outlined in the framework proposed by Arksey and O'Malley and extended by Levac et al. (Arksey and O'Malley 2007; Levac et al. 2010). The findings are reported according to the Preferred Reporting Items for Systematic Review and Meta-Analyses for Scoping Reviews (PRISMA-ScR) (Moher et al. 2009) (Fig. 1). The review was prospectively registered with the Open Science Framework at <https://osf.io/bdfx3>.

Research Questions

The following questions informed the research:

- What are the publication trends and how is the available literature on self-care behaviours adopted by family caregivers distributed?
- What types of study designs were used to explore this phenomenon?
- What types of self-care behaviours were adopted by family caregivers?
- What reported outcomes were measured?

Search Strategy

The search strategy included studies published in English between January 2020 and December 2023 and employed a three-step approach. Firstly, a limited search of MEDLINE (PubMed) and EBSCOhost was performed to identify relevant articles on the topic. The words in the titles and abstracts of relevant articles, as well as the index terms used to describe the articles, were then used to develop a search strategy, which included the names of the relevant databases and information sources (Box 1). Secondly, this strategy included all identified keywords and index terms and was tailored to each database. Thirdly, the reference lists of all the sources of evidence included were screened for additional studies. A subject librarian helped define the keywords and their combinations using an iterative process to develop a search strategy, which was applied to five search engines: MEDLINE (PubMed), CINAHL, EBSCOhost, Embase, PsycINFO and Web of Science. A search of grey literature and hand-searching of key articles were conducted to supplement the results of the bibliographic database search.

Box 1: Search terms used in identifying relevant articles

The following keywords were used in the EBSCOhost advanced search interface: (resilience OR resiliency OR resilient OR strengths OR coping OR hardiness OR adaptation) OR (coping strategies OR coping skills OR coping OR cope OR coping mechanisms) AND (family caregivers OR informal caregivers OR relatives OR family) AND (COVID-19 OR coronavirus OR 2019-nCoV OR SARS-CoV-2 OR COV19). The search excluded terms related to patients and children: NOT (patients OR clients OR client OR patient) and NOT (children OR kids OR youth OR child OR childhood OR school age). Filters applied included the publication date, language, document type and databases searched.

Table 1: Inclusion and exclusion criteria

Population: male and female adults, 18 years and older, identified in literature as family caregivers including unpaid family members, family carers, informal caregivers, significant others, spouses, relatives and adult children living with a parent or relative who has a chronic medical condition and helping them with activities of daily living and medical tasks
Concept: self-care activities, behaviours, practices and interventions, including health-promoting self-care strategies etc. adopted by family caregivers that helped reduce their stress, manage their health and enhance their overall well-being while serving as caregivers
Context: the home of the sick person where the family caregiver is providing care
<p>Inclusion criteria:</p> <ul style="list-style-type: none"> • Literature published between January 2020 and December 2023, after the World Health Organization declared COVID-19 a pandemic in March 2020 • Published and unpublished articles that reported on self-care behaviours, activities, methods, interventions, models, strategies adopted by FCGs during the pandemic • Article published in English • Systematic, scoping and rapid reviews, meta-analyses, qualitative and quantitative studies, pilot studies, guidelines, reports, letters and peer-reviewed journals • Grey literature sources, such as documents from government and non-governmental organisations, academic dissertations and theses

Study Selection and Data Extraction

After the search, all identified references were compiled and imported into Rayyan AI, a web tool that organises, manages and accelerates collaborative literature reviews (Ouzzani et al. 2016). Duplicates were automatically removed by the software. An independent reviewer then screened the titles and abstracts for relevance, based on the inclusion criteria. The Blind-On feature was activated to ensure the selection process was free from bias. Any discrepancies were resolved through mutual agreement between the reviewers. The selected sources were assessed and their full text imported into a specified folder on Rayyan AI. All included articles were also saved in the EndNote Reference Manager for easy access and reference.

The primary author and an independent reviewer assessed full texts against the inclusion criteria, recording reasons for exclusion. The search and selection results are presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review (PRISMA-ScR) flow diagram (Fig. 1). Background information was extracted using a numerical summary and narrative synthesis, following the Population, Concept and Context (PCC) framework (Table 1) to address the research questions. The following information was extracted: source of evidence, article location, study aim, participant details, study settings, sample size, design, types of self-care activities, behaviours, methods and outcome measures.

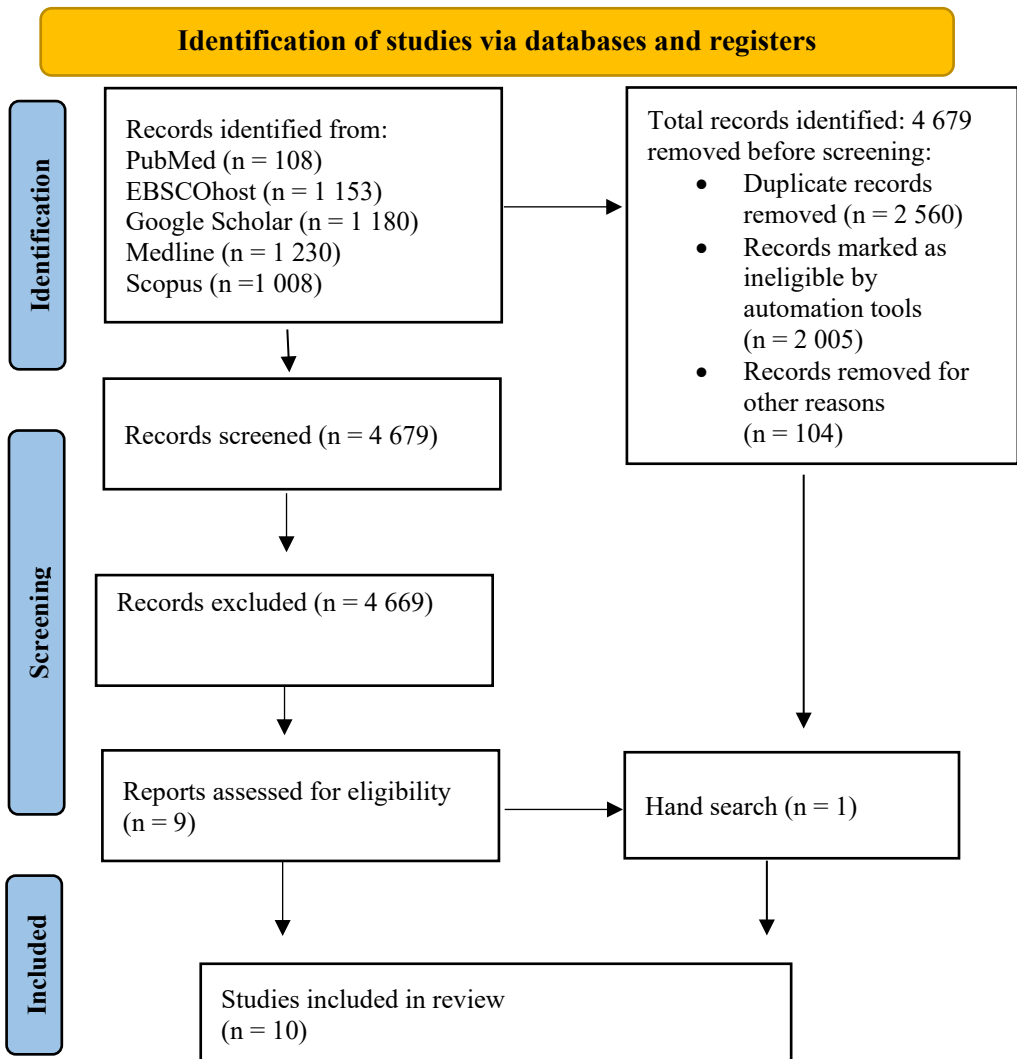


Figure 1: PRISMA-ScR flow diagram of article search and selection process

Results

The two-level screening, both electronic and hand searches yielded 10 articles for inclusion in this review.

Study Trends and Distribution

The results for Question 1 indicated that the publication trends and the distribution of the available literature on self-care behaviours originated from Australia (Tulloch et al. 2021), Canada (Lake et al. 2022), Iran (Nia et al. 2022; Rad et al. 2023; Rezaalizadeh et al. 2023), Singapore (Chan et al. 2022), Spain (González-Fraile et al. 2021), the United Kingdom (Danby et al. 2023) and the United States of America (Disabato et al. 2022; Qian et al. 2023). All the articles describing self-care behaviours were published from 2021–2023, the majority ($n = 4$) being published in 2022–2023 (Table 2), with most aiming to evaluate the outcome of an intervention study (Chan et al. 2022; Disabato et al. 2022; Lake et al. 2022; Nia et al. 2022; Rad et al. 2023; Rezaalizadeh et al. 2023). One study assessed the creative and novel ways in which FCGs adapted their caregiving styles under pandemic conditions (Tulloch et al. 2021), while another explored the lived experience of resilience in rural dwellings among cancer caregivers (Qian et al. 2023). The aim of another study was to understand how FCGs managed changes caused by COVID-19 restrictions and how they adjusted to the lifting of restrictions (Danby et al. 2023), with a systematic study being one of the articles reviewed (González-Fraile et al. 2021). Participants were adult male and female aged 18 and older and were either spouses, adult children or significant others.

Study Design

Regarding Question 2, as depicted in Table 2, the majority of studies used randomised clinical trials ($n = 6$). One study each employed a qualitative cross-sectional retrospective design, a qualitative reflexive thematic analysis, a cross-sectional multi-stakeholder qualitative method and a systematic review. In addition, seven studies evaluated and compared the effectiveness of multiple self-care behaviour models or empowerment-oriented interventions (Chan et al. 2022; Disabato et al. 2022; González-Fraile et al. 2021; Lake et al. 2022; Nia et al. 2022; Rad et al. 2023; Rezaalizadeh et al. 2023). Three studies investigated the lived experiences of families and explored how they managed changes caused by COVID-19 pandemic restrictions. The sample size ranged from 14–550, with most studies ($n = 9$) collecting data virtually through platforms such as Zoom, Skype, WhatsApp, SMS messages and telephonically. One study conducted a face-to-face interview with FCGs who were providing care at the hospital to which their sick relative had been admitted.

Types of Self-Care Behaviours

The results of Question 3 are indicated in Table 2, which presents an overview of the various types of self-care behaviours and activities adopted by family caregivers during

the pandemic. The number of self-care behaviours identified per study ranged from three (González-Fraile et al. 2021) to 12 (Nia et al. 2022). Three studies identified five behaviours each (Chan et al. 2022; Danby et al. 2023; Qian et al. 2023), two identified six (Disabato et al. 2022; Lake et al. 2022) and one study identified seven (Tulloch et al. 2021). Most self-care behaviours focused on seeking and receiving support, empowerment through knowledge sharing and training and promoting infection prevention strategies and caring activities (Rad et al. 2023; Rezaalizadeh et al. 2023). The most common personal care behaviour included activities such as healthy eating, exercise, sleep and relaxation, a healthy lifestyle, engaging in a hobby, meditation, talking online with friends and family (Disabato et al. 2022) and compliance with medicine. The second most common item was improving relationships including respecting personhood, appreciation, improving caregiver-care-recipient relationship dynamics, interpersonal relationship dynamics, social relations, seeking and receiving support, increasing time spent with a supportive person and connecting with personal virtues and values (Tulloch et al. 2021). Infection prevention strategies such as the washing of hands, abiding by quarantine rules and disease prevention strategies, disinfecting surfaces and shopping items, donning masks and undertaking training on the nature of the disease, formed part of the activities to enhance quality of life. Two studies (Disabato et al. 2022; Lake et al. 2022) addressed the mental well-being of FCGs to empower them with the skills necessary to access psycho-social support interventions that could help them manage caregiver stress.

Reported Outcomes

The findings for Question 4 indicated that all studies reported on outcomes associated with the various types of self-care behaviours adopted by FCGs. A study found that family caregivers (FCGs) developed stronger bonds with their care recipients due to the increased time spent together as a result of enforced isolation, leading to more positive caregiving experiences (Qian et al. 2023; Tulloch et al. 2021). Other studies indicated improvements in dealing with caregiver depressive symptoms, anxiety and stress (Nia et al. 2022), an increased sense of satisfaction and self-efficacy (Rezaalizadeh et al. 2023), enhanced self-efficacy and well-being (Lake et al. 2022) and improved coping overall (Danby et al. 2023). Two studies reported that the training addressed FCGs' needs, improved their knowledge of the disease condition and self-efficacy (Chan et al. 2022; Lake et al. 2022) and slightly reduced their caregiver burden (González-Fraile et al. 2021).

Table 2: Characteristics of included studies

Source of evidence (citation)	Article location	Aim of the study	Participants (sex and age)	Sample size	Setting	Study design	Types of self-care activities/behaviours	Outcomes
Tulloch, K. McCaul, T. Scott, T. L. (Tulloch et al. 2021)	Australia	To determine positive experiences arising from COVID-19, including the creative and adaptive ways in which informal caregivers (ICs) were able to adapt their caregiving style under pandemic conditions, the strengths on which they drew and any benefits that may have arisen from this experience of caregiving	Male or female informal caregivers (ICs) 18 years and above	26	At home via telephone or video conferencing software e.g. Zoom or Skype	Qualitative cross-sectional retrospective design	Range of themes are based on: Pre-pandemic care: <ul style="list-style-type: none"> • Focusing on the care-recipient • Working together During pandemic care: <ul style="list-style-type: none"> • Respecting personhood • Connecting with virtues and values • Improving relationships • Seeking and receiving support • Prioritising self-care • Being protective and proactive • Making practical changes Post-pandemic care: <ul style="list-style-type: none"> • Strengthening commitment to the care-recipient • Looking after caregiver's own needs • Considering practical requirements 	Participants reported positive caregiving experiences, and the enforced isolation produced deeper connections for some caregivers. Caregivers also benefitted from resources facilitating adaptive care
Qian, Y. (Qian et al. 2023)	United States of America	To illuminate the lived experience of resilience in rural-dwelling North Carolinian cancer caregivers at the intersection of cancer and the COVID-19 pandemic	Women and spouse 20 years and above Caregivers and care-recipients of rural dwellers	24	Hospital setting	Cross-sectional, multi-stakeholder, qualitative study	<ul style="list-style-type: none"> • Appreciation • Caregiver-care recipient dyad relationship dynamics • Interpersonal relationship dynamics • Faith • Personal growth 	Open conversations between spouses and other family members Connection with existing social networks through sharing caregiving duties Establishment of beneficial connections

Source of evidence (citation)	Article location	Aim of the study	Participants (sex and age)	Sample size	Setting	Study design	Types of self-care activities/behaviours	Outcomes
Danby, A. Benson, T. Garip, G. (Danby et al. 2023)	United Kingdom	To understand how family caregivers of people with dementia managed changes caused by COVID-19 restrictions and how they adjusted to the lifting of restrictions	11 females 3 males 18 years and above providing care to people with dementia	14 caregivers and care-recipients	Online	Qualitative reflexive thematic analysis	<ul style="list-style-type: none"> • Outlets to cope with lockdown • Not all doom and gloom: a silver lining amid COVID-19 • Optimism helps foster resilience • Challenges and joys of reopening • Caregiving towards a new normal 	Family caregivers reported coping well overall, experiencing optimism and positive aspects while providing care during the lockdown
Nia, M. N. (Nia et al. 2022)	Iran	To examine the influence of family-centred empowerment model on depression, anxiety and stress among family caregivers of patients with COVID-19 in Iran	18 years and above Male and female	70 family caregivers were randomly assigned to the intervention (FCEM) (n = 35) and control groups (n = 35)	Online via WhatsApp	Randomised clinical trial	<p>Training sessions on the following:</p> <p>Step 1:</p> <ul style="list-style-type: none"> • Increase knowledge of the perceived threat through awareness of the nature of the disease, quarantine procedures, medication, prevention of disease transmission, and other significant factors, such as nutrition, hygiene (bathing), disinfection and disease control. <p>Step 2: Problem-solving and skill acquisition</p> <ul style="list-style-type: none"> • Present the problems • Engage in problem- solving process • Offer suggestions • Select the best solution • Improve skills and self-efficacy <p>Step 3: Educational participation</p> <ul style="list-style-type: none"> • Training content and materials were provided to patient and family caregivers • Followed by virtual content analysis <p>Step 4: Evaluation</p> <ul style="list-style-type: none"> • Intervention groups were assessed for comprehension of the nature of the disease and the proposed care 	The result showed that the anxiety, stress and depression scores decreased in the intervention group

Source of evidence (citation)	Article location	Aim of the study	Participants (sex and age)	Sample size	Setting	Study design	Types of self-care activities/behaviours	Outcomes
Lake, J. K. (Lake et al. 2022)	Canada	To evaluate a virtual course for family caregivers, focused on supporting the mental health and well-being of adults with Intellectual and Development Disabilities (IDD) and their families during COVID-19	Patients with IDD and their family caregivers Adult male and female 18 years and above providing care	126	Online	Intervention study	<ul style="list-style-type: none"> Healthcare communication Mental health assessment and treatment Grief and loss Healthcare planning Decision-making Caregiver mental health 	Participants reported improved self-efficacy and well-being post-course, with these improvements being maintained at follow-up
Rezaalizadeh, N. Sheykhali Shahi, A. Nikrafi, F. (Rezaalizadeh et al. 2023)	Iran	To investigate the effect of the post-discharge training programme on the satisfaction and self-efficacy of family caregivers of patients with COVID-19	Adults male and female caregivers Intervention group: Male 16 Female 18 Control group: Male 22 Female 12	68 caregivers randomly divided into two groups: intervention and control groups	Online via WhatsApp	Randomised clinical trial	Training areas include: <ul style="list-style-type: none"> Nature of the disease Methods of preventing transmission and washing hands How to use the mask correctly Patient care (1) Patient care (2) Nutrition Disinfecting surfaces and washing clothes Go out shopping Disinfect shopping Special training for each family 	Providing post-discharge support and education to family caregivers of patients with COVID-19 improves the caregivers' experience through increased satisfaction and self-efficacy
Rad, M. Dizavandi, F. R. Dizavandi, A. R. (Rad et al. 2023)	Iran	To determine the effect of education through telenursing on the caregiver burden among family caregivers of COVID-19 patients	Adult male and female family caregivers	66 caregivers randomised to intervention and control groups, with 33 in each group	Online	Randomised clinical trial	Disease prevention strategies <ul style="list-style-type: none"> Attention to quarantine rules Social relations Medicine and diet Stress control Sleep and relaxation in quarantine Healthy lifestyle Outpatient care Psychosocial support 	Training and telenursing led to decreased caregiver burden among family caregivers of COVID-19 patients
Chan, E. Y. (Chan et al. 2022)	Singapore	To examine the feasibility of carer matters in a tertiary hospital	Above the age of 21, able to converse in either English or Mandarin and willing to have their interviews audio recorded	550 caregivers	Hospital-to-home online training programme	Feasibility study	<ul style="list-style-type: none"> CARERS (Coaching, Advocacy, Respite, Education, Relationship, Simulation) programme How to Care at Home programme Understanding dementia Problem-solving techniques 	Training courses were effective with majority of caregivers agreeing that the courses addressed their needs (99%) and improved their

Source of evidence (citation)	Article location	Aim of the study	Participants (sex and age)	Sample size	Setting	Study design	Types of self-care activities/behaviours	Outcomes
							<ul style="list-style-type: none"> • Self-care techniques • Caregiving essentials • Public forums/seminars 	knowledge of the relevant disease conditions
Disabato, D. (Disabato et al. 2022)	United States of America	To test how self-care behaviours and emotional experiences relate dynamically to one another during the stressful context of the COVID-19 pandemic	Adult family caregivers, national representative in terms of age, sex and education	289	Online	Randomised trial/ Intervention study	<ul style="list-style-type: none"> • Healthy eating, • Exercise, • Engaging in a hobby • Relaxation or meditation • Time spent with a supportive person • Talking online with friends/family 	Self-care behaviours had mental health benefits during stressful environments such as the COVID-19 pandemic and stay-at-home orders
González-Fraile E., Ballesteros J., Rueda J. R., Santos-Zorroza B., Solà I., McCleery J. (González-Fraile et al. 2021)	Spain	To assess the efficacy and acceptability of remotely delivered interventions aiming to reduce burden and improve mood and quality of life of informal caregivers of people with dementia	Informal caregivers of people with dementia receiving care at home, aged 18 or older, of either sex, and of any ethnic or geographical origin	36 studies involving 2 367 participants 14 studies included 1 423 participants as the intervention group 12 studies involving 944 participants as the control group	Remotely delivered intervention study	Systematic review	<ul style="list-style-type: none"> • Information interventions included two key elements: (i) the provision of standardised information, and (ii) the caregiver's passive role. • Training interventions focused on equipping caregivers with practical skills to manage care. • Support interventions promoted interaction with others (professionals or peers) 	Remotely delivered interventions appear to reduce caregiver burden slightly and improve caregiver depressive symptoms

Discussion

This scoping review documents the self-care behaviours adopted by family caregivers (not defined by the diagnosis of their care-recipients) to maintain a healthy living during the COVID-19 pandemic. The findings regarding the trends and distribution revealed that while self-care activities relating to FCGs have been published in both developed and developing nations, none were published in China and other Asian countries, the region where the pandemic was first reported. Although the COVID crisis led to a significant increase in publications, with many researchers shifting their focus to related studies, few have published on non-COVID related issues, such as the adoption of self-care activities among FCGs during the pandemic.

In addition, no studies on self-care behaviours were found to have been conducted in Africa, which aligns with the general lack of information from the continent regarding morbidity and mortality, healthcare and other support measures associated with the pandemic (Antonio et al. 2020). The studies available from Africa suggest that research staff and resources were focused on COVID-19 and that the already heavy reliance on FCGs in Africa may have led to limited attention to this cohort, who have traditionally cared for their ill, disabled or aged relatives (Harper et al. 2020).

FCGs in this review were mainly adult females, most being spouses, adult children and significant others who were providing care, either for the first time or had been caregivers for many years. Female caregivers are vulnerable to health issues due to the cumulative demands of managing household responsibilities and providing intensive care to their ailing or elderly family members, highlighting the importance of prioritising their own self-care (Gräler et al. 2022; Raemdonck et al. 2022). Adequate support, such as respite care and opportunities to engage in physical and social activities must be provided to alleviate the caregiving burden for women in particular, given their multiple roles in the home.

During the pandemic, many countries introduced measures to control the spread of the virus, requiring most people to remain at home, which limited caregivers' direct access to on-site support interventions that they may have benefitted from, such as family help with care activities. As a result, access to self-care interventions remotely became the only viable option, with caregivers having to take the initiative regarding what they did based on their available time and resources. However, there can be significant obstacles to this method, particularly for older caregivers who may struggle with sensory impairment or other challenges that make it difficult to use the necessary technology, including knowing where to look and what to look for. Caregivers might also lack the confidence to use these technologies and place a high value on personal contact, being unfamiliar with seeking support from online communities (González-Fraile et al. 2021).

The COVID-19 pandemic triggered a significant shift towards the digitalisation of healthcare with an increasing reliance on telecommunication technologies to deliver

care and services (Chan et al. 2022). Digital technology, including telehealth, online platforms and messaging applications connected family caregivers to healthcare services and transformed how home-health interventions were delivered (González-Fraile et al. 2021). Additionally, studies have reported that individuals are more likely to adopt home healthcare interventions as they offer flexibility, ease of use, accessibility regardless of time or location, improved privacy and reduced costs (Nia et al. 2022). Further research is, however, required to incorporate evidence-based digital health interventions into innovative healthcare models (Sakur et al. 2022).

Regarding the study design, eight studies employed randomised clinical trials (RCTs), while the remaining two were qualitative and entailed interviews or discussion. RCTs were one of the most appropriate designs for data collection during the pandemic as data could be obtained remotely. Although RCTs are undertaken to evaluate the effectiveness of various interventions, this approach presents ethical challenges, particularly when beneficial treatments are withheld from control groups (Zabor et al. 2020). Qualitative design is valuable when evaluating self-care behaviours, as it focuses on subjective experiences and explores human realities rather than the tangible realities of objects (Erlingsson and Brysiewicz 2013).

Types of Self-Care Behaviours

FCGs adopted various types of self-care activities to improve their health and well-being and relieve the stress associated with caregiving during the pandemic. Knowledge of disease prevention strategies along with interventions addressing mental health issues, self-efficacy and physical and emotional skills, as well as adjusting to life during the COVID-19 pandemic, were some of the health-related measures that appeared to be beneficial in relieving caregiver stress. Studies show that health information is essential for managing diseases and reducing the burden associated with caregiving (Ong-Artborirak et al. 2023; Rezaalizadeh et al. 2023).

Consistent with other studies, FCGs who cared for frail or elderly people were highly vulnerable to severe illness caused by and associated with the COVID-19 virus, particularly in the early phase of the pandemic when vaccines were not yet accessible (Pouresmali et al. 2022; Zhang et al. 2024). They managed their health by having nutritious diets to improve their immunity, exercising regularly, following their medication schedules and participating in health-promoting activities to maintain optimal health and well-being, in line with the recommendations of the Centre for Disease Control and Prevention (Centre for Disease Control and Prevention 2020).

The majority of the self-care activities identified in this review focused on empowering FCGs with information on infection prevention and control (IPC) guidelines and observing quarantine rules, this being appropriate during the pandemic (Chan et al. 2022; Lake et al. 2022; Nia et al. 2022; Rad et al. 2023; Rezaalizadeh et al. 2023). Studies highlighted the importance of controlling the spread of COVID-19 when the

care-recipients were infected, with stringent measures limiting contact between those living in close-proximity, including FCGs.

Improving relationships, social connections and seeking and receiving support were other self-care activities that promoted the quality of life for FCGs (Qian et al. 2023; Tulloch et al. 2021), this having been found to be appropriate during the enforced isolation. Those who experienced positive relationships were less likely to experience stress, anxiety or depression during the pandemic. However, many self-care training modules developed and implemented during the pandemic were not subjected to scientific scrutiny with most of the studies that did base their interventions on scientific evidence not conducting post-intervention follow-up assessments to evaluate participants' experiences.

Additional challenges emerged for FCGs regarding contracting the virus, with most experiencing anger associated with the fear of death and dying, which increased their anxiety and depression and reduced their self-care activities (Czeisler et al. 2020; Mattos et al. 2021; Morelen et al. 2022). As the world prepares for the next global health crisis, it is important that FCGs are aware of the self-care activities available to enable them to select those appropriate for their context and resources.

Reported Outcomes

Regarding the outcome of the self-care behaviour, psychological well-being was found to be the most represented across the studies, with improvements in stress, anxiety and depression being reported. Psychological well-being also contributed to improved relationships between FCGs and care-recipients leading to decreased levels of anxiety, stress and depression (Qian et al. 2023; Tulloch et al. 2021). Although the disruptions and difficulties associated with the COVID-19 pandemic increased the emotional burden of caregiving, mental health-related activities appear to have been beneficial to FCGs' health and well-being (Disabato et al. 2022).

FCGs who were well-informed about the disease progression and possible outcomes were more likely to implement health promotion strategies than those who lacked such knowledge. A high level of health literacy helps individuals understand health-related issues and enables them to effectively care for themselves and those around them in the face of a severe health crisis (Amin et al. 2022). Studies highlighted that health promotion programmes led to a reduction in anxiety and depression, as well as increased satisfaction and self-efficacy for FCGs (Nia et al. 2022; Rezaalizadeh et al. 2023). However, some authors reported that FCGs experienced disorientation from conflicting information obtained through various social media platforms (Zhao and Zhou 2020).

This review also reported that FCGs found relief through self-care activities, such as healthy eating, exercise, hobbies, gardening, walking or having a pet. At the beginning of the COVID-19 pandemic, stay-at-home restrictions encouraged healthier eating, as

people prepared their own meals rather than eating at restaurants or bars, which they could no longer visit (Disabato et al. 2022). Studies documented that, as lockdown restrictions were relaxed, FCGs engaged more in outdoor exercise, which had a positive impact on caregivers' well-being (Lee et al. 2022; Nugroho et al. 2021).

Summary Statement of Implications for Practice

How could the findings be used to influence policy, practice, research or education?

Implications for research

This study provides limited evidence on the self-care activities practised by family caregivers during the COVID-19 pandemic. Further research is needed to explore self-care practices identified in the literature as helpful during times of crisis. Additional studies are recommended to examine the self-care strategies used by caregivers in relation to the diagnoses of their care recipients.

Research across countries in Africa and Asia is needed to gain deeper insight into the implications of resource limitations. Research is also required among older care-recipients to understand their needs under such circumstances, what they feel their caregivers should be aware of, and how the well-being of their caregivers affects their own sense of well-being.

Implications for practice

This study highlights the need for policymakers in family nursing and elderly care to develop policies that promote the use of self-care activities, recognising that the health and well-being of family caregivers is essential for providing effective care to elderly and sick relatives. This needs to be followed by the development of tools that are accessible through various means and available in different formats to enable their wide applicability across different cultures and languages.

The findings also emphasise the need to allocate sufficient resources for research into tools and support systems that can alleviate the burden on caregivers, ensuring they have easy and continuous access to well-being activities without the need to seek them out.

The review found a lack of studies conducted in resource-limited settings, such as in Africa, suggesting that future research should focus on including populations from these regions.

What does this research add to existing knowledge in gerontology?

The quality of care provided to older people is closely linked to the well-being of their caregivers, a connection that becomes critical during a public health crisis. In such circumstances, older people depend on their carers not only to protect them from life-threatening infections, but also to maintain their physical, mental, social, psychological

and spiritual well-being, especially when access to their usual support networks is limited.

What are the implications of this new knowledge for nursing care with older people?

Given the millions of older people who are cared for by relatives at home, this study highlights the need to formalise measures that ensure the well-being of caregivers and to conduct research on how these measures are accessed, implemented and assessed over time.

Limitations

A few limitations may have affected this study. One limitation is that the articles included in this scoping review were published between 2020 and 2023, and excluded those published in 2024, which might have resulted in the omission of more recent findings. In addition, only articles written in English were included. The very small sample size of 10 articles could have affected the outcomes.

Conclusion

Many families around the world rely on family caregivers to care for elderly, ill and disabled relatives. This responsibility often falls on women, who may also be expected to care for other family members, manage household duties and work outside the home. As a result, they are already stretched thin, with their caregiving role demanding additional tasks that increase their stress and challenge their ability to balance multiple responsibilities. Finding time to take care of themselves is important, making it necessary to optimise the limited time available through self-care behaviours that support their overall well-being.

The enforced isolation and limited access to support interventions during the COVID-19 pandemic required FCGs to adopt more focused self-care behaviours to meet their changed circumstances. These measures increased their knowledge of infection prevention and health promotion, enabling them to protect themselves and their care-recipients or to manage their care if they became infected. Additionally, they supported their psychological well-being, especially in the absence of their usual support structures.

This study provided useful insights into what FCGs regard as important to ensure their own well-being. Access to accurate information helped them feel confident in their caregiving, thereby reducing their stress. They also recognised the importance of looking after themselves and found activities that they could access or perform, such as exercises, online support and contact with family members. Understanding the needs of FCGs under restrictive circumstances can help in providing them with relevant information in accessible formats and platforms. This insight also supports health

promotion efforts by enabling targeted advice on self-care measures, ensuring caregivers can access it when and where it's most convenient for them.

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