

R E V I E W S

The impact of COVID-19 pandemic on family caregivers' mental health: a rapid systematic review of the current evidence

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Abstract. *Background and aim of the work.* Older adults, especially in isolation and with cognitive decline/dementia, can become more anxious and stressed during the quarantine. All these symptoms negatively affect the psycho-physical health of their caregivers. This study aimed to synthesize the current evidence on the impact of the COVID-19 pandemic on caregivers' mental health. *Methods.* A rapid systematic review was conducted using the following databases: Pubmed/Medline, CINAHL, Scopus, and PsycInfo (PROSPERO registration number: CRD42020215485). The 'PRISMA' flow chart guided the selection of articles. The search was entirely performed up to September 15th, 2021. *Results.* The narrative synthesis has brought out two main themes that represent the current debate in literature: "Family caregivers COVID-19 related stress", and "(Mal)adaptive strategies to the "new" normality". *Conclusions.* This study provides an evidence synthesis of the negative mental health impact experienced by caregivers of older adults during the COVID-19 pandemic. (www.actabiomedica.it)

Key words: Caregiver, Chronic illness, Mental health, COVID-19, Rapid systematic review

Introduction

The novel coronavirus disease (COVID-19) pandemic has disrupted people's lives across the world due to its rapid spread, high mortality rate, a complete change of social habits, and its uncountable economic impact (1). Various psychological negative effects, including stress, anxiety, depression, frustration, and uncertainty, are common among people exposed to any infectious disease outbreak (2). In the specific situation of the COVID-19 pandemic, additional worries require to be considered in the general framework of mental health: healthcare systems appear to be overwhelmed

and, consequently, the delivery of adequate medical care for frail patients, especially the older adults with chronic conditions, could be undermined by postponed visits, test, routine access to services (3).

It is reasonable to suppose that the negative mental health implications of the COVID-19 pandemic on the general population could endure beyond its acute phase (4), especially for the most vulnerable groups (5,6). The COVID-19 pandemic has significantly affected people's health and is expected to exacerbate existing health disparities (7,8). These disparities could be highly prevalent when considering mental health outcomes. In this scenario, informal family caregivers

of older adults with chronic or degenerative conditions may face additional challenges than the psychological burden and physical problems they have been often experienced due to their caring role (9).

Previous studies highlighted that there are multiple reasons family caregivers may experience higher than usual stress, fatigue, and emotional burden during COVID-19 emergency (10). Indeed, during the pandemic, caregiving tasks may be more challenging to accomplish than in the past. Canceled appointments and increased challenges in reaching the healthcare staff may interrupt communication and coordination with healthcare providers (11). Family caregivers may be unable to rely on their usual network of formal and informal supports and face escalating challenges in accessing needed in-home care. Additionally, support programs, such as adult day health care, may not be available, hospitalized patients may be discharged home sooner and sicker than before, and post-acute care options may be more limited (11).

Notably, family caregivers have to handle the COVID-19 risk of being infected with concomitant increased concerns about their self-care and health and the activities for assisting their older relatives with chronic conditions. This situation could lead to stressful experiences when family caregivers are burdened by the care activities for their loved ones' care needs (10,12–14). It is critical to acknowledge and understand the family caregiver populations' unique vulnerabilities to provide equitable mental health interventions that reach these highly at-risk groups reporting increased demands due to COVID-19 pandemic trauma and social isolation measures (15). More precisely, an adequate understanding of family caregivers' mental health needs during and following the COVID-19 pandemic is pivotal to address current and future challenges given by those factors associated with negative mental health outcomes. Accordingly, evidence-grounded interventions could be rapidly employed to prevent or address mental health concerns, especially for the groups considered the "invisible backbone" of every healthcare system, such as informal family caregivers of older adults (16–18).

There is currently an urgent call for more attention given to public mental health and policies to assist family caregivers through this challenging time: The

health of family caregivers deserves urgent attention (19). In this regard, recent literature seems to pay initial attention to this issue. Some authors described the caregivers' burden during the COVID-19 outbreak, especially in neurological clinical settings, highlighting the negative impact on the mental health and wellbeing of informal caregivers of chronic disease patients. However, a synthesis of the evidence on this topic is not yet available, potentially undermining the implementation of tailored care delivery to support caregivers' healthcare needs. Therefore, this study aimed to summarize the current evidence on the impact of the COVID-19 pandemic on family caregivers' mental health outcomes and their lived psychological experiences. Specifically, we would like to provide an overview of the mental health impact of the COVID-19 pandemic on family caregivers for identifying possible strategies to prevent caregivers of older adults from experiencing additional burdens besides the one related to their caring tasks.

Methods

Study design

A rapid systematic review was performed to summarize the current evidence on the impact of the COVID-19 pandemic on family caregivers' mental health (PROSPERO registration number: CRD42020215485). The systematic review methodology used to meet the needs of the researchers and stakeholders prompt answering a new and emerging research question and ensuring the principals' components of the systematic review process (20–22). Indeed, both scientific rigor, transparency, reproducibility, and clear statement of the objectives, eligibility criteria, and systematic presentation and synthesis of results are performed during a rapid review and promptly summarized for scientific dissemination to increase the likelihood of organizational responses to address the issues emerging from the narrative synthesis of the included studies (22). Moreover, the process adopted could not require a full systematic review of the literature, but it could be limited to a specific short period (21).

Additionally, this rapid systematic review was conducted according to the 'Preferred Reporting Items for Systematic Reviews and Meta-Analyses' (PRISMA) statement and PRISMA flow chart (23). The PRISMA statement provides rigor of systematic searches on broad and heterogeneous literature, decreasing selection bias, while the PRISMA flowchart identifies four phases guiding the choice of articles, namely: identification, screening, eligibility, and inclusion (24) (Figure 1).

Search Strategy and Selection Criteria

The first phase of the PRISMA flowchart (Figure 1) included the full search strategy, and it refers to the identification of records in the databases. A systematic search was conducted in Pubmed/Medline, Scopus, CINAHL, and PsycInfo, until September 15th, 2021, using keywords combined with Boolean operators. In particular, the search was structured using the SPIDER's approach for systematic searches (Sample,

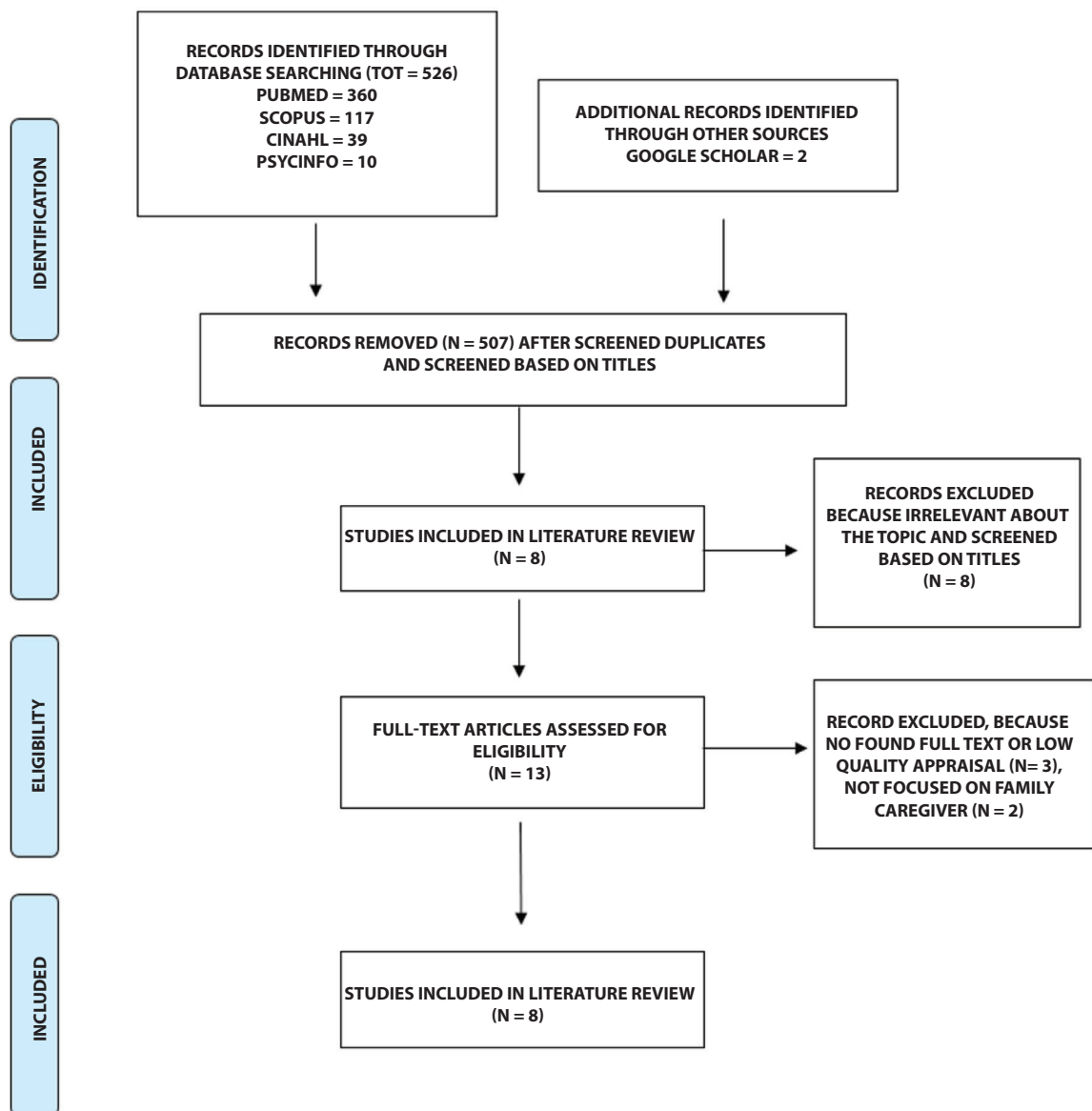


Figure 1. Flow Diagram for rapid systematic review.

Phenomenon of Interest, Design, Evaluation, Research type) (25), where: Sample= caregivers or family caregiver; Phenomenon of Interest= covid-19, or novel coronavirus or SARS-CoV-2; Design=every study design; Evaluation= mental health or psychosocial outcomes; Research type=quantitative, qualitative, mixed-method, and 'other', such as commentaries. Further, according to the SPIDER's framework, the search strategy was guided by the following questions: 'What is family caregivers' psychosocial experience during COVID-19 outbreak? What is the impact of COVID-19 outbreak on family caregivers' mental health?'

These questions guided the creation of the foreground queries (Table 1), and the following inclusion criteria for retrieving articles were used: (a) focus on the caregivers of adult patients and their psychological outcomes; (b) during the COVID-19 period; (c) published in English. Articles with the unavailability of full-text and low-quality appraisal of papers (i.e., phase 3 of the PRISMA flow chart, as described below) were excluded. No temporal limits were adopted in the search strategy. Finally, an open search was conducted on Google Scholar, and a check of the reference lists (citation chasing) of included studies for the identification of additional studies was carried out (26).

Figure 1 described the four phases of the search strategy's development: the identification phase retrieved 528 records, and 507 have been eliminated after screening the records for duplicates and following the evaluation of titles. After that, 21 papers were screened by evaluating abstracts, and eight papers were removed

as their content was not focused on the research questions (phase two, i.e., screening). Thirteen papers were retrieved in full-text and assessed using the critical appraisal checklist "Joanna Briggs Institute Qualitative Assessment and Review Instrument" (JBI-QARI) (27), as described below (phase three, i.e., eligibility). After the quality appraisal, five papers were excluded. Therefore, eight papers were finally included in this review (phase four). The overall selection process was conducted independently by two reviewers (TN and FD) by searching on the database and reading the title and abstract. The paper's quality appraisal was evaluated by SB and RC independently, and the entire research team was involved in the final consensus discussion.

Quality appraisal

The articles' critical appraisal allowed ensuring the quality of the eligible papers. This phase aims to exclude studies exhibiting low methodological quality, which could compromise the validity of the review's recommendations and identify eligible studies' strengths and limitations (28). The 13 papers that were subjected to this step (phase three) showed a high heterogeneity of methods. So, the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI) was adopted to evaluate diverse methodologies (27). Precisely, the JBI-QARI evaluates the quality appraisal considering the rationale, research design, and reliability, and it develops an overall score of appraisal

Table 1. Search syntax for bibliographic database searching.

Database	Query	Data of final search	Number of papers
Pubmed	("caregiver"[Title/Abstract] OR "famil"[Title/Abstract]) AND (((("psychologic"[All Fields] OR "psychological"[All Fields] OR "psychologically"[All Fields] OR "psychologization"[All Fields] OR "psychologized"[All Fields] OR "psychologizing"[All Fields]) AND ("outcome"[All Fields] OR "outcomes"[All Fields])) OR ("mental health"[MeSH Terms] OR ("mental"[All Fields] AND "health"[All Fields]) OR "mental health"[All Fields]) OR "psycologic"[All Fields]) AND ("covid"[Title/Abstract] OR "SARS-CoV-2"[Title/Abstract] OR "coronavirus"[Title/Abstract])	15 September 2021	360
Scopus	TITLE-ABS-KEY (covid-19 AND caregiver AND psycholog*)	15 September 2021	117
Cinhal	covid-19 AND caregiver* AND psycholog*	15 September 2021	39
PsycInfo	Advanced research 'COVID-19' AND 'Caregivers'	15 September 2021	10

grading based on the sum of positive items (28). The final assessment is reported as high, medium, or low quality (28). Overall, three papers were excluded in this phase as from the reading of the full-texts emerged that they were not focused on the impact of COVID-19 on family caregivers' mental health. Conversely, the remaining eight papers showed moderate or satisfactory quality and were included in the fourth phase, i.e., inclusion (Figure 1).

Data abstraction, analysis, and synthesis

Table 2 summarizes the results of eight articles that emerged from this rapid systematic review, using the following format: (a) first author and publication year, (b) aim, (c) study design, (d) population and setting, and (e) results. After that, the results brought out from each article were the subject of narrative synthesis, according to Greenhalgh's methodology (29), by two

authors independently (IV and SR). Initially, a narrative approach was used to obtain a free coding of the primary studies' results (line-by-line codings); then, the obtained codings represented the basis for a descriptive synthesis of the results, which was carried out using the thematic aggregation of the line-by-line codings. Accordingly, the codings were grouped into representative units of their meanings, developing descriptive themes. Finally, the authors discussed and interpreted the descriptive themes, using a narrative approach, and generating rapid systematic review results. Precisely, the following themes clustered the previous categories: (a) Family caregivers COVID-19 related stress, and (b) (Mal) adaptive strategies to the "new" normality.

Results

The results of this rapid systematic review derived from studies conducted in different worldwide settings.

Table 2. Description of eight articles emerged from the rapid systematic review

First author and publication year	Aim	Study design	Population and setting	Main results
<i>Aledo-Serrano A. (2020)</i>	To explore the impact of the COVID-19 pandemic in patients with genetic developmental and epileptic encephalopathies (DEEs) and their caregivers.	A cross-sectional survey	277 caregivers of DEEs patients in Spain.	Patients with DEEs and their caregivers acknowledge that the COVID-19 pandemic caused important consequences on the path of care, depending on the type of epilepsy and health system barriers. These factors increased the burden of caregivers.
<i>Cohen G. (2020)</i>	To explore how the obligatory social isolation affected the stress and burden of care of family members caring for subjects with dementia.	A cross-sectional survey	80 family caregivers of adults with Alzheimer's disease or related dementia in Argentina.	Due to COVID-19, social isolation has increased caregiver stress levels, regardless of the stage of assisted patient dementia. Besides, caregivers assisting people with severe dementia showed more COVID-related stress than caregivers assisting people with mild dementia.
<i>Consonni M. (2020)</i>	To estimate the impact of COVID-19 on ALS patients and their caregivers.	A longitudinal observational study	29 caregivers of patients with amyotrophic lateral sclerosis, in Italy.	During the COVID-19 pandemic, caregivers' vulnerability emerged, which showed higher levels of anxiety and loneliness, related to the increased time of patients' care with ALS during increased by the longer time spent at home due to lockdown.

Table 2. (Continued)

First author and publication year	Aim	Study design	Population and setting	Main results
<i>Guo L. (2020)</i>	To estimate the depression and anxiety levels among caregivers of patients with eating disorders (ED).	A cross-sectional baseline study followed by a longitudinal study.	254 caregivers of patients with eating disorder, in China.	In comparison between caregivers of patients with Eating Disorders (ED) and non-ED caregivers, the first one has significantly higher levels of depression and anxiety. The levels of depression and anxiety have not decreased despite the conduct of an online education program.
<i>Park SS (2020)</i>	To examine differences in the American population's mental and physical health during the early stages of the COVID-19 pandemic among the caregivers and non-caregivers.	A cross-sectional study	4,784 adults divided into three groups: non caregivers (N= 3,433), short-term caregivers (1 year or less; N= 689) and long-term caregivers (greater than 1 year; N= 662), in USA.	Caregivers belonging to the 3 groups show psychological distress. However, long-term caregivers report important symptoms such as headaches, body pain, and abdominal discomfort, compared to short-term caregivers and non-caregivers. The study also suggests that the physical and mental state also depends on the characteristics of the caregivers.
<i>Prasad S. (2020)</i>	To investigate the perceptions and implications of COVID-19 in patients with PD and their caregivers.	An observational cross-sectional study	100 caregivers of patients with Parkinson's Disease, India.	The difficulties reported and attributed to the COVID-19 pandemic have been the slowdown of follow-up and, therefore, access to health care and drug supply.
<i>Salva Y. (2020)</i>	To examine caregivers' primary appraisal of pandemic-related stressors, secondary appraisal of resources, and use of coping strategies as predictors of their adjustment to caregiving during the stay-at-home phase of the pandemic.	Mixed-method study, using structured survey items and open-ended questions.	53 family caregivers of persons with dementia from rural, in Virginia.	In relation to the objectives, the results showed: <ul style="list-style-type: none"> - 62% of caregivers expressed concern about the pandemic; - 59% of caregivers rated care services sufficient while 41% reported external assistance decreased; - 68% of caregivers received help with expenditure or support through telephone and video calls; - 57% of caregivers used active coping strategies, 43% used passive approaches; - 47% of caregivers reported a high overload of their role in care.
<i>Vaiteswaran S (2020)</i>	To describe the experiences and needs of caregivers of persons with dementia.	A qualitative study	31 caregivers of subjects with dementia, in India.	The caregivers described the change of the role in the pandemic situation and the crucial tasks concerning the assisted persons.

Specifically, one in Spain (12), one in Argentina (14), one article in Italy (13), another study coming from China (30), two articles from the USA (10,31), and two authors from India (32,33). Furthermore, the majority of the included studies adopted a cross-sectional study design (10,12,14,32), one longitudinal observational study (13), one mixed-method study (31), and one study using a qualitative design (33). Accordingly, the narrative synthesis allowed to aggregate results into two main interpretative themes – namely, the first one “Family caregivers COVID-19 related stress”, and the second one “(Mal)adaptive strategies to the “new” normality”, summarizing the current evidence on the impact of COVID-19 on family caregivers’ mental health.

Family caregivers COVID-19 related stress

Firstly, the main theme derived from the rapid systematic review focused on informal caregivers’ adverse and stressful effects due to the COVID-19 pandemic. Informal caregivers play a significant role in the diagnostic process, treatment, and recovery of patients with chronic disease, but they also reported increased anxiety, depression, and burden during the COVID-19 emergency. The literature recognizes that these feelings characterize caregivers’ experience with chronic illness; however, these negative feelings have been increased due to the COVID-19 outbreak (12).

Five articles resulted are developed in a neurology clinical setting. Caregivers of epileptic patients described that their main difficulties caused by the COVID-19 outbreak were inability to achieve their neurologist using telemedicine resources, living in houses without a terrace or courtyard, economic problems, avoiding seeking medical advice for serious health problems in the emergency room due to fear of COVID-19 and cancelling essential medical appointments (12). These difficulties lead to an increased likelihood of experiencing symptoms of anxiety or depression (12). This situation seems to worsen the behaviors of those adults living with epileptic encephalopathies, which would consequently increase caregivers’ burden, as in a vicious cycle (12). Cohen and colleagues studied 80 family caregivers of patients with Alzheimer’s disease or related dementia, showing that

the increasing stress caregiver due to the COVID-19 pandemic does not depend on the dementia stage, but it seems related to the overall severity of the illness. Caregivers’ concerns were found in severe dementia cases, the possibility of the paid caregiver’s absence, and performing instrumental examinations in the hospital (14). According to Consonni and colleagues’ study, 29 caregivers of patients with Amyotrophic Lateral Sclerosis demonstrated a mental condition to develop distress, a higher level of anxiety, and a feeling of loneliness (13). Savla and colleagues have explored the main difficulties in 53 family caregivers of dementia patients, that have experienced concerns about the pandemic (62%) for many reasons: patients were frustrated from staying home, the services they were receiving as sufficient (59%), caregivers expressed weariness because their care aids had reduced days or hours or stopped coming 41% (31). Prasad and colleagues investigated the perceptions and implications of COVID-19 in 100 caregivers of patients with Parkinson’s disease. The difficulties reported and attributed to the pandemic have been the slowdown of follow-up and access to health care and drug supply. In this article, different questions emerged on caregivers’ knowledge about the COVID-19 and the higher risk perception of being infected (32).

Moreover, Guo and colleagues estimated the levels of depression and anxiety among 254 caregivers of patients with various eating disorders (ED) in China and compared them to a control group. Caregivers showed the highest levels of depression and anxiety than groups of non-ED patients’ caregivers with the following measures, highlighting that caregivers showed the highest levels of depression and anxiety than groups of non-ED patients’ caregivers. Additionally, results showed caregivers who had elderly patients not living with them were more likely to reduce their levels of depression while caregivers of patients with a longer disease duration had less possibility to reduce their levels of anxiety (30). Long-term caregivers were more likely to report headaches, body aches, and abdominal discomfort than both short-term caregivers and non-caregivers (30).

Finally, the findings from a qualitative study (33) complement previous quantitative results. The description of experiences and needs during quarantine of 31

caregivers showed two sets of needs during the pandemic. The first set of needs has been related to the role change because the only point of reference has become the caregiver in the pandemic situation. In contrast, the second set of needs did not relate directly to their caregiving role but to their crucial tasks concerning the assisted persons, such as protecting them from infection, maintaining their hand hygiene, using a facemask, and keeping social distancing norm (33).

(Mal)adaptive strategies to the “new” normality

The second theme emerging from the results highlighted the physical and emotional weight that caregivers often assume when giving up their space and care to follow their patients (formal and non-formal caregivers). However, the included studies highlighted that caregivers were able to implement numerous positive coping strategies, considering the quarantine as an opportunity to recover some time with their family. Additionally, the COVID-19 crisis had further demonstrated the essential role of caregivers in delivering care.

For example, Park and colleagues described how the physical load of activities could directly affect the caregiver's physical health, and the management of a complex patient can limit the time available to caregivers to manage their health (10). Consonni and colleagues described loneliness as a factor that plays an important role in fear of contracting the infection. It could be hypothesized that families accustomed to managing degenerative diseases are more resistant to change (13). Prasad reported that television is the main source of information to explain and follow preventive measures. Sometimes the health system barriers worried the caregivers, thus influencing socio-psychological and economic burdens (12,14). With the onset of the pandemic and the lockdown, many family caregivers have been unable to access these support sources. This situation had a significant impact on their responsibility as a caregiver. Caregivers reported that they faced many problems due to the blocking and implementation of some policies, mainly travel restriction and healthcare services availability (10).

However, most of the articles showed different adaptation strategies adopted by family caregivers

during the lockdown period. Uncertainty in the restrictive measures' duration has exacerbated caregivers' stress, but different coping strategies have emerged to cope with isolation. They have been divided into active and passive coping mechanisms: the active coping includes taking time for yourselves and taking care of the own health; engaging in outdoor activities in their yard or garden; take care of the house; make masks for loved ones; while the passive coping includes being on the phone, watching social networks, engaging with videogames (31).

For the caregivers, who continued to receive social and psychological support, even at a distance, via video calls or telemedicine, this helped alleviate the burden and anxiety in caregivers related to assistance. Even just a consultation with a specialist or a telephone adjustment of drug therapy has often helped reduce states of anxiety or worry (31). Many have benefited from online programs, which aimed to keep subjects busy in play activities that stimulate them, decreasing the patient's boredom and frustration and the caregiver's burden (33). Even caregivers of Eating Disorders patients have decided to go through a full online learning program, integrating new skills to help their children or adolescents with Eating Disorders, get psychological support, and feel more confident about their children or teenagers. Ultimately, all of them were willing to participate in similar programs in the future (30).

Additionally, 11,3% of caregivers in the study of Savla considered the quarantine as an opportunity to recover some time, take care of the house, and finish jobs previously left in suspense. Besides, those who had seen all kinds of work suspended had reported that they had taken the opportunity to spend more time in the company of their loved ones with dementia and take care of them, which before were not able to do with constancy (31). Results demonstrate that most family caregivers grew psychologically under pressure. Family caregivers partook in self-reflection of their values and found positive forces such as expressing more appreciation for health and family and gratitude for social support.

The caregiver's role in the care path is crucial because they constitute a relevant reference point for the patient. Some of the included articles showed that the caregiver's role is full of responsibilities shared with

the healthcare system. During the pandemic, all responsibilities have been often shifted to the caregiver, from protecting the individual from SARS CoV-2 infection, managing the patient if they needed to be hospitalized or isolated, coping with changes in daily routine/activity for the patient with dementia, looking after the patient's health and wellbeing, managing psychological behaviors and symptoms in dementia BPSD (33). In fact, some caregivers have not benefited from these online programs, reporting difficulties in using the technology or accessing such software. They are mainly those living in rural areas where access to services is particularly complicated, or those with family members with dementia, perhaps in an advanced state, which are unable to interface effectively with these therapy methods. Besides, many have expected that online programs helped increase the knowledge of caregivers' specific conditions of the family member and that this represents a help, even in the future, to take care of their loved ones (30).

Discussion

This study summarized through rapid systematic analysis of the current evidence regarding psychological experiences of family caregivers during the COVID-19 pandemic and their outcomes related to mental health, discovering two main themes that represent the current debate on this topic: "Family caregivers COVID-19 related stress" and "(Mal) adaptive strategies to the 'new' normality". To our knowledge, this is the first review to explore the point of view of family caregivers' during the COVID-19 pandemic, providing an initial and in-depth understanding of the psychological experience of caregivers exposed to the COVID-19's challenges.

During the COVID-19 pandemic, we found that family caregivers' positive and negative emotions against the epidemic interweave and coexist with the emotional and practical challenges related to the caregiving tasks. Self-coping mechanisms and psychological growth are essential for family caregivers to maintain mental health. Thus, our results could provide fundamental data for further psychological intervention dedicated to family caregivers, considered

strategic and key actors, although often invisible, in the healthcare system. Indeed, numerous authors had argued the positive impact of caregivers' presence on patients' outcomes, especially in chronic illness (34–36), but the increased responsibilities in caring for patients during the COVID-19 pandemic are until little explored. Additionally, an overall perspective on the evidence is not yet available, making it difficult for multidisciplinary healthcare teams to refer the supportive resources to significantly burdened caregivers during a crisis' period.

Family caregivers experienced exceptional fatigue and discomfort due to COVID-19 pandemic. This result is coherent with the studies carried out when MERS-CoV and Ebola spread out (37). Various pessimistic feelings that characterize mental health, such as fear, anxiety, and helplessness, aroused in family caregivers when they felt physically weakened, excluded by psychological support, and without any competences at the time of the epidemic disease, as reported by different studies (38). Hence, it is highly recommended to provide early psychological assistance to family caregivers during an epidemic (39). It is essential to plan early stress assessment and organize efficient, adaptable, and continuous psychological interventions to improve these caregivers' mental health and emotional release (40). Simultaneously, it is crucial to establish trustful relationships with healthcare through early support systems to promote family caregivers' adaptation to their chores, especially under the pandemic threat (41).

Developing and maintaining trusting interpersonal relationships between older adults, caregivers, and members of the care team are an essential focus primarily for the high proportion of socially disadvantaged older adults who are hospitalized with COVID-19, many of whom lack trust in the healthcare system (42). Of critical importance is clinicians' role who is the consistent point person in communications with family caregivers and their loved ones (43).

Moreover, our study showed that the epidemic constituted an important occasion for a family caregiver for self-growth and valuing many things in their own life experience. Studies have shown that positive emotions play an essential role in recovering and adjusting to psychological trauma (44). Optimism and

self-awareness have a protective effect on psychological trauma under disasters and can promote the psychological rehabilitation of post-traumatic stress symptoms. Therefore, in the process of the psychological intervention of family caregivers in an epidemic, strengthening multi-dimensional social support, guiding positive coping styles, and stimulating positive emotions are crucial to promoting the mental health of caregivers (45).

The COVID-19 pandemic has spotlighted caregivers' critical role in assuring that older adults' complex post-hospital care needs are addressed during care continuum (46). Additionally, restrictions for avoiding visits during patients' hospitalizations have negatively influenced the possibility to educate caregivers during the in-hospital period that they cared ones spent for assessing conditions or treating exacerbation of illnesses (47). In-person contact with home health-care teams, primary care providers, or care managers who generally provide similar guidance is limited (48). Thus, much of the preparation being provided to family caregivers is being delivered using telehealth strategies. Caregivers confront the same set of challenges in receiving support through this mechanism as do older adults. Once again, family caregivers' rapid engagement and preparing them to identify their relatives' needs and support them during these challenging times are essential (4, 40).

Limitations

Given the rapid and evolving nature of the coronavirus outbreak and the need for guidance to support family caregivers in these circumstances, this rapid review was limited to peer-reviewed primary data publications without searching grey literature. It is necessary to note that this review is not exhaustive and may have missed relevant articles, for instance, in the case of publications in languages other than English or Italian. However, we performed specific searched on the reference lists to identify articles that may not have been found in the initial search and engaged multiple team members in the screening process to improve methodological rigor besides the form quality assessment of the included articles.

Conclusion

This study identified two main themes as the synthesis of the current evidence on the impact of the COVID-19 pandemic on family caregivers' mental health: 'Family caregivers COVID-19 related stress', and '(Mal)adaptive strategies to the "new" normality'. Specifically, for the first time, our results offered a systematic picture of the negative mental health impact of caregivers during the COVID-19 pandemic, carried out from eight primary types of research on this critical but underestimated issue. As a consequence of the profoundly modified healthcare scenario during the COVID-19 pandemic, the family caregivers are becoming more than ever key pillars for ensuring adults' care with chronic illnesses. Family caregivers experienced additional physical and emotional burdens in managing their duties during the COVID-19 pandemic.

Our results pointed out that it is critical to acknowledge and understand the family caregivers' unique vulnerabilities to provide equitable mental health interventions that reach these highly at-risk groups. Additionally, our results could provide some useful insights to decision-makers and clinicians for orienting their policies to design actions for supporting family caregivers' mental health during this and future health emergencies.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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