

## REVIEW

# Psychological impacts and online interventions of social isolation amongst older adults during COVID-19 pandemic: A scoping review

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**Abstract**

**Aim:** To summarise the psychological impacts of social isolation amongst older adults during COVID-19 and review the benefits and limitations of online interventions used to combat social isolation.

**Design:** A scoping review was performed.

**Data Sources:** A systematic search was performed from October 2020 to January 2021 in seven electronic databases: China National Knowledge Infrastructure (CNKI), PubMed, EMBASE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsycINFO, Cochrane Library and Web of Science. A hand search of the reference lists of included papers and WHO publications was performed. Grey literature search was carried out from Scopus, ProQuest Dissertation and Google Scholar.

**Review Methods:** Studies were screened, appraised and extracted independently by two reviewers. Thematic analysis was used to synthesise data, which were presented in a descriptive manner and organised into categories and themes.

**Results:** Totally, 33 studies were included. Four themes and eight sub-themes emerged: (1) negative impacts and experiences of older adults during social isolation, (2) adopting coping behaviours in the midst of COVID-19, (3) online interventions to combat the consequences of social isolation, (4) barriers to online intervention.

**Conclusion:** The COVID-19 pandemic has taken an emotional toll on older adults' psychological wellbeing and has highlighted the untapped strengths of older adults facing isolation. Online interventions, which could be a new normal in the COVID era, were beneficial in combating social isolation. Strategies by various stakeholders were recommended to tackle the barriers of online interventions.

**Impact:** With the COVID-19 pandemic still in progress, this review provides insights on the psychological impacts of social isolation amongst older adults. Nurses in the community and long-term care facilities could adopt strategies and online intervention to better support the older adults, contribute to a stronger COVID-19 response and support system, and an overall better road to recovery from this crisis.

**KEYWORDS**

COVID-19, mental health, nurse or nursing, older adults, online interventions, pandemic, psychological impact, quarantine, scoping review, social isolation

## 1 | INTRODUCTION

Following a series of pneumonia cases in Wuhan, China on 31 December 2019, Chinese authorities identified the cause to be a novel coronavirus (2019-nCoV) on 7 January 2020. Since then, this virus had been declared a pandemic by the World Health Organization (WHO) due to its alarming levels of worldwide spread, severity of infection, and inaction by countries around the world (WHO, 2020). This global health crisis required policies of social distancing and quarantine to be strictly implemented to curb the spread of infections (Conejero et al., 2020).

Since the implementation of these measures, COVID-19 has revealed the challenges of an ageing population, including the emergence of adverse psychological effects amongst socially isolated older adults. Population ageing is a worldwide phenomenon where nearly all countries have experienced growth in the number and proportion of older adults in their populations. According to the United Nations (2019), individuals aged 65 years and above have increased over time, rising from 6% in 1990 to 9% in 2019. As the ageing population continues to live longer (Lunenfeld & Stratton, 2013), this silent epidemic of global ageing has become increasingly apparent against the background of social distancing policies during the current COVID-19 pandemic.

### 1.1 | Background

One of the more overlooked and prevailing social issues of an ageing population is the rise of older adults living alone in recent decades (Reher & Requena, 2018). They live alone either because they are widowed or have the desire for independence (Kaplan & Berkman, 2019). Due to the mandatory period of social distancing during the COVID-19 pandemic, older adults who live alone are less likely to be exposed to the contagion (Reher et al., 2020); however, this could give way to long term and more serious negative effects because of reduced social contacts and support (Armitage & Nellums, 2020). In addition, the natural concomitant effect of an ageing population has increased the number of older adults in long-term care facilities (de Medeiros et al., 2020). These older people face the risk of loneliness due to the initial move to nursing homes, which can be a very disorienting experience in a new environment (Botek, 2020). Social distancing inevitably reduces older adults' social contacts by restricting visiting and communal hours in long-term care facilities, which takes a toll on their emotional wellbeing and increases the loneliness they initially experienced. This is in line with the interactionist theory of loneliness as proposed by Weiss (1973) which states that loneliness is due to the combined effects of personality and situational factors (Skaff, 2007). In this situation, older adults who experienced loneliness were either living alone at home or in long-term care facilities. This loneliness loop is accompanied by feelings of stress, pessimism, anxiety, and low self-esteem that activates neurobiological and behavioural mechanisms that contribute to adverse health outcomes. (Hawkey & Cacioppo, 2010). However, the degree of loneliness and

psychological impacts among older adults varies, which depends on their personality, including their coping strategies or how they perceive their level of social network (Tan et al., 2021).

Since the start of social distancing measures during COVID-19, the reliance on technology has increased more than usual (De' et al., 2020; Wilson, 2020). For example, family chats have shifted to FaceTime, while WhatsApp messaging and social media platforms are now the standard medium to catch up with friends. Delivery of outpatient care has also changed, with providers moving over to telehealth (Chan et al., 2019; Mehrotra et al., 2020), particularly for patients with chronic health conditions (Cheng et al., 2019; Chudasama et al., 2020) and pre-existing mental illness (Bojdani et al., 2020). However, technology is an unfamiliar territory for most of the older generation who did not grow up with the digital world. According to Anderson and Perrin (2017), six out of ten older adults aged 65 years and above do not own a phone, indicating that most are probably disconnected from this digital age (Dennis, 2018). Older adults are often slower than their younger counterparts in adapting to new technologies (Vaportzis et al., 2017) and begin to feel more alone when they are left out of the digital world. However, older adults' readiness to uptake technologies very much depends on different factors ranging from individual characteristics to environmental factors (Peek et al., 2014). Besides older adult's internal motivations or learning abilities, other variables such as financial costs or digital training play a role in older adults' uptake of technology use (Knapova et al., 2020).

Social isolation can be defined as the objective measure of physical absence of social interactions, relationships and support from family, friends or even society (Coyle & Dugan, 2012). Loneliness is a perceived deficit between the individual's desired and actual level of social contact (Malcolm et al., 2019). Despite the acknowledged health impacts, the prevalence rate of both loneliness and social isolation has persisted over several decades (Victor et al., 2005), highlighting this growing and widespread phenomenon. Though these two concepts are different, they are also related as social isolation and loneliness can frequently co-occur during imposed quarantine, which can be an unfamiliar and unpleasant experience (Usher et al., 2020). The effects of social isolation and loneliness on mental health contributes to the overall psychological impact on an individual (Oliveira et al., 2013). The common psychological impact of older adults during social isolation include anxiety, boredom (Robb et al., 2020), depression and suicide (Troutman-Jordan & Kazemi, 2020).

Presently, there is a paucity of reviews on the psychological impact experienced by socially isolated older adults during this pandemic. Most of the published studies examined the clinical features and outcomes of COVID-19 in older adults. Current research mainly focused on the immediate and more pressing issues, such as the physiological presentations of COVID-19 for older adults (Gan et al., 2020; Liu et al., 2020; Neumann-Podczaska et al., 2020; Singhal et al., 2020). In comparison, literature about long-term mental health issues of socially isolated older adults in COVID-19 is relatively limited. While it is appropriate to prioritise the urgent physiological effects of COVID-19 in the acute setting, we should not neglect

the often insidious effect that social isolation has on older adults' mental health, especially those that are living in the community and long-term care facilities. Hence, this review focused on community-dwelling and long-term care for older adults. Furthermore, majority of the studies analysed the psychological effects experienced by healthcare workers or the general public in COVID-19 pandemic (Cabarkapa et al., 2020; Luo et al., 2020; Salari et al., 2020; Tan et al., 2020; Xiong et al., 2020). However, more focus needs to be placed on older adults since they are expected to be more severely affected, physically and mentally, by COVID-19 (Kessler & Bowen, 2020). Older adults also tend to be the main target group for lockdown restrictions due to their weaker immune systems (Wu et al., 2020), yet receive limited support, in terms of avenues for them to reach out to, for health care during isolation (de Mendonca Lima et al., 2013; Newman, 2017).

The COVID-19 pandemic is still in progress and problems that arise from social isolation will likely persist and carry on to the future. The unprecedented nature and scale of this virus may contribute to long-term mental health issues (Kathirvel, 2020) and ultimately additional stresses to health care systems, particularly the delivery of mental health services. Mental health nurses, community nurses, long-term care facilities nurses, who are usually involved in face-to-face interactions with patients might be the group most affected by the shift to remote technologies, which are likely to remain (Foye et al., 2021). Hence it is important that we also acknowledge the experiences and challenges that these nurses go through during COVID-19.

To compare COVID-19 with previous pandemics like the 2003 SARS outbreak, it is evident to be more virulent, which may lead to more stringent quarantine measures. With the reported symptoms of depression and anxiety during SARS (Brooks et al., 2020; Liu et al., 2012), a timely understanding of the psychological status amongst the affected older adults during COVID-19 is an urgent need. In this relatively new and emerging field, the lack of studies focusing on older adults' mental health is indicative of a knowledge gap that contributes to the rationale for conducting this scoping review (Munn et al., 2018).

## 2 | THE REVIEW

### 2.1 | Aim

This scoping review aims to synthesis the psychological impacts of social isolation amongst older adults during COVID-19 and +reviews the benefits and barriers of online interventions used to combat social isolation.

### 2.2 | Design

This scoping review followed a methodological framework developed by Arksey and O'Malley (2005) and refined by Levac et al.

(2010). The first stage involved identifying research questions, which guided the objectives of this review. The scoping review questions are as follows: What are the psychological impacts amongst socially isolated older adults during COVID-19? What are the existing online interventions provided for older adults during COVID-19?

### 2.3 | Search methods

The second stage involved identifying relevant studies. A systematic search was performed in the following electronic databases: China National Knowledge Infrastructure (CNKI), PubMed, EMBASE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Library, PsycINFO, and Web of Science. The research team collaborated with a librarian to develop a three-step extensive search strategy as recommended by the Joanna Briggs Institute (JBI) manual for evidence synthesis (Campbell et al., 2020).

The first step included an initial search using pre-specified keywords and Medical Subject Headings (MeSH) terms 'Social Isolation', 'Quarantine', Older Adult\*' and 'COVID-19' in PubMed. The additional keywords and relevant MeSH terms generated were used in the second step of the search according to the different syntax rules of the rest of the databases (Supplementary File S1). The third step involved performing a hand search from the reference lists of selected studies and World Health Organization (WHO) publications. An additional search of grey literature was carried out from Scopus, ProQuest Dissertation and Google Scholar.

Stage three involved compiling and uploading all identified citations into a reference manager, EndNote X9 (The EndNote Team, 2013). Duplicates were removed. Two reviewers (NR and CH) first screened the titles and abstracts independently based on the inclusion and exclusion criteria and later retrieved the full text to be assessed in detail. Disagreements in the process were discussed in the research team.

### 2.4 | Eligibility criteria

The inclusion criteria were (1) participants of any gender, aged 55 years old and above, living alone in the community or in long-term care facilities, or socially isolated, (2) participants can either be physically healthy or have any pre-existing medical conditions during the time of the study, (3) studies that state or evaluate the psychological impact experienced by the participants, (4) Interventional studies which address mental health issues in older adults during COVID-19, (5) studies that include the context of the COVID-19 pandemic in any geographical location, (6) study designs including qualitative, quantitative, mixed-method study, case study, review, commentary, discussion paper. Only studies published from January 2020 onwards were included. This scoping review considered sources of evidence from any existing literature that met the above inclusion criteria. Included articles were only limited to English and Chinese language.

The justifications for the inclusion and exclusion criteria were provided in Supplementary File S2.

## 2.5 | Quality appraisal

Seven JBI appraisal tools were selected based on the study design: JBI critical appraisal tool for case report, text and opinion paper, analytical cross-sectional studies, prevalence studies, qualitative research, quasi-experimental, and Randomised Controlled Trials (Joanna Briggs Institute, 2017). SANRA, the Scale for the Assessment of Narrative Review Articles, was used to assess the quality of the included narrative reviews (Baethge et al., 2019). Two reviewers (NR and CH) conducted the quality appraisal independently. Disagreements were settled in discussion with the third reviewer (XVW).

## 2.6 | Data extraction

In stage four, two reviewers (NR and CH) developed a data chart form based on the research questions. This draft charting table was piloted among five papers. After independently extracting the data, we compared contents before making revisions to the chart form. The final key items of information we extracted narratively from the included articles were the following: author(s), year of publication, research aim, design and data collection, sample characteristics, intervention, outcome measures, main findings.

## 2.7 | Synthesis

Finally, in the last stage, for quantitative studies, we looked at the findings and evaluated if it supported the aim of the study. For example, Gaeta and Brydges (2020) reported 56.4% of participants reporting feeling isolated and 36.0% reporting feeling lonely due to stay-at-home orders during the pandemic. These results were reviewed in the discussion and showed relevance to the sub-theme. While qualitative data were analysed thematically and presented in a descriptive manner under the following categories: (a) results of data extraction, (b) themes related to the psychological impact faced by socially isolated older adults, interventions to tackle social isolation and its barriers. Researchers used an inductive and semantic approach to familiarise with the texts from the different studies before identifying common patterns and themes directly from the information presented.

# 3 | RESULTS

## 3.1 | Search outcomes

The electronic databases search identified 2783 records, of which 1400 duplicated records were removed. A hand search of the

reference lists of the included papers and on WHO publications yielded additional ten records, bringing the total to 1393 articles for review using the inclusion and exclusion criteria. After 198 full texts were retrieved and screened, we identified the final 33 papers. The flow of articles was reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) as shown in Figure 1 (Tricco et al., 2018).

## 3.2 | Study characteristics

The 33 articles included a range of research designs as illustrated in Figure 1. The majority of studies were conducted in the United States ( $n = 13$ ), followed by Israel ( $n = 4$ ), Spain ( $n = 2$ ), the United Kingdom ( $n = 1$ ), Europe ( $n = 1$ ), Italy ( $n = 1$ ), Japan ( $n = 1$ ), Netherlands ( $n = 1$ ), Sweden ( $n = 1$ ), France ( $n = 1$ ) and Brazil ( $n = 1$ ). One of the commentaries included perspectives from China, Hong Kong, Italy and Australia while one of the narrative reviews included studies from Taiwan, England, Scotland, Canada, Australia, Sweden, Netherland and the United States. The remaining four articles did not mention where the studies were conducted as it was not relevant. Most of the papers ( $n = 29$ ) described older adults' experiences and feelings, specifically the adverse psychological turmoil and mental health issues they faced during social distancing measures. Eleven papers either proposed online interventions to combat social isolation amongst older adults or evaluated the benefits and barriers of those interventions. Out of the 33 articles, the sample of older adults was predominately from community settings, while only five articles reported older adults from long-term care facilities. Six articles reported samples from a mixture of long-term care facilities and community setting. Table 1 describes the detailed characteristics of the included studies.

## 3.3 | Quality appraisal

The overall appraisal of the articles was ranked based on the percentage of "yes" scores to the individual questions asked in each critical appraisal checklist. The risk of bias was ranked as high when the study reached up to 49% of 'yes' scores, moderate for 50 to 69% of 'yes' scores, and low for more than 70% of 'yes' scores (Melo et al., 2018; The Institute Joanna Briggs, 2014) (Supplementary File S3). Out of 33 articles, 60% are of low risk. About 15% are of moderate risk, while another 24% are of high risk. For the quality appraisal, agreement between reviewers was high (average kappa score = 0.86,  $p$ -value = <.00001). With COVID-19 as a relatively recent and new topic, time has been a heavily limiting factor for any experimental study to be conducted. Hence, text and opinion studies are a more common type of study design to research this emerging field. The elements of the appraisal tool for textual or opinion-based reviews focus on authenticity of the opinion, its source, and how both sides of the opinions are presented. These elements are more universal and general and are likely to be easily fulfilled, resulting in low risk

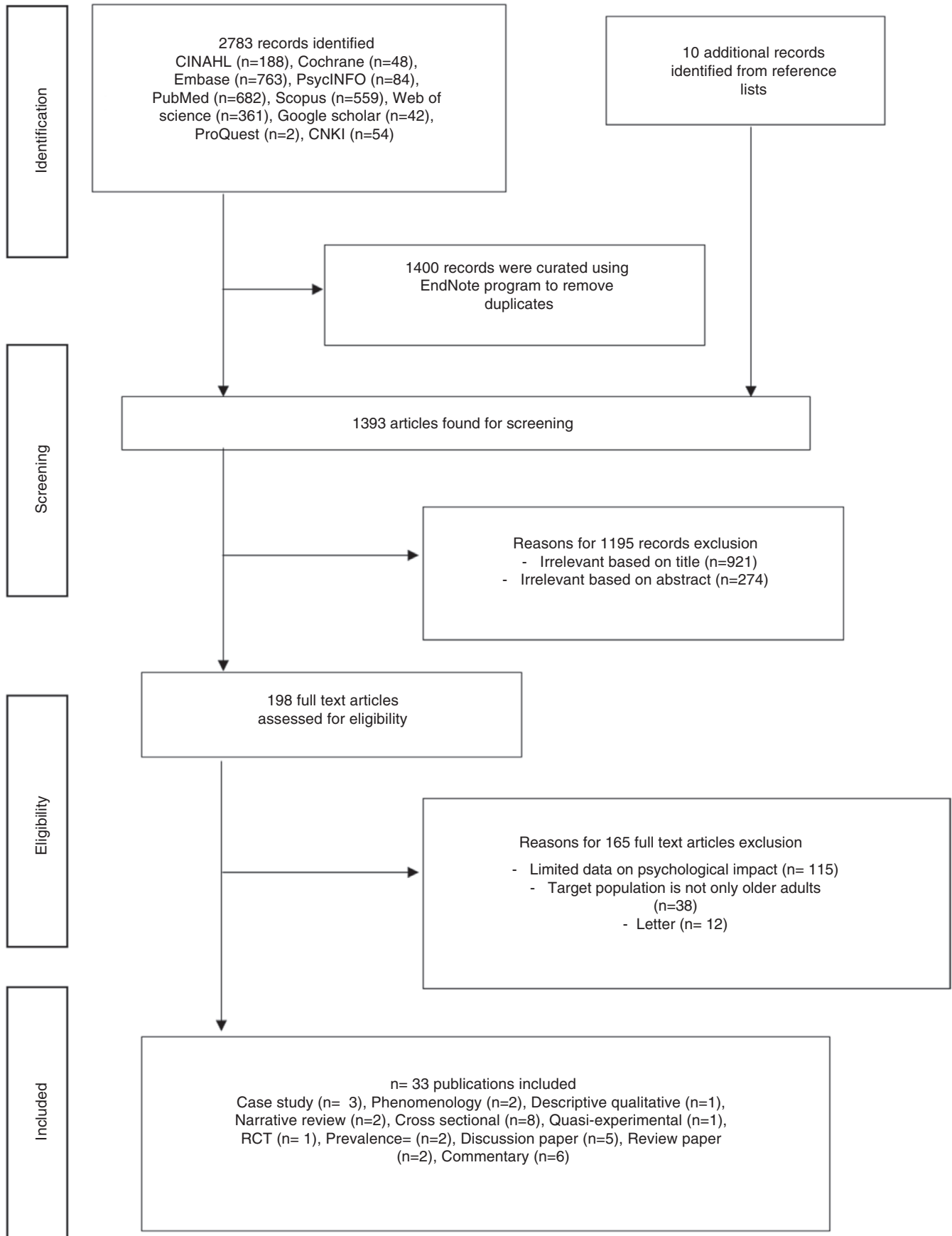


FIGURE 1 PRISMA diagram

TABLE 1 Characteristics of the included studies

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Banskota et al., 2020	Aim to find apps available to OAs on the Apple Store that could potentially facilitate health during times of social distancing and/or self-quarantines.	Narrative Review	Studies included >age 65 years, US, not mentioned	NA	NA	Social networking apps: provide solution to isolation by enhancing the connection with loved ones in a safe and easy way. Medical apps (telemedicine); provide temporary solution to facilitate care of older adults who have chronic health conditions during lockdown Medical apps (Medication-related apps): Reduces barriers to medication adherence. Health and fitness apps: decrease anxiety (through meditation /yoga) and combat sedentary behaviour in older adults
Bergman et al., 2020	Aim to examine the role of ageism in the connection between COVID-19 health worries and anxiety symptoms among older adults and exploring the moderating role of ageism to strengthen this connection.	Cross sectional, online questionnaire distributed across multiple social media (convenience sampling)	243 Jewish Israeli (mean age 69.75 years), Israel, community	NA	Covid-19 health worries, Anxiety symptoms (GAD scale)	The connection between COVID-19-related health worries and anxiety symptoms was stronger among individuals with high levels of ageism. Older adults with high ageism and COVID-19 worries meet the clinical threshold for mild anxiety.
Brooke & Clark, 2020	Aim to explore older people's initial experience of household isolation, social distancing and shielding, and the plans they constructed to support them through the COVID-19 pandemic	Inductive phenomenological study, Qualitative semi-structured interviews (non-probability convenience sampling)	19 participants (mean age 77 years), UK, Community	NA	Open-ended questions reflecting scales measuring loneliness, social isolation, social networks and support	Older adults adapted to household isolation, social distancing by using social media and neighbourhood resources. Nurses and other professionals can develop holistic care for older people by listening to their experiences of what works for them, helping them link to local and distant supports. AN important part of care planning is understanding the holistic life view of older people, including death anxiety.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Burlacu et al., 2020	Aim to identify and describe as many aspects as possible indirectly generated by the COVID-19 lockdown, which affect both the life and the quality of life of the elderly	Review paper	Defined as age 65 years and above, Europe, Community and nursing home	NA	Sociological aspects (anxiety, fear, loneliness)	Socially isolated people are positively correlated with lower levels of wellbeing. Social isolation affects the mental health of elderly, particularly those in institutionalised care. Fear of COVID-19 has led to various anxiety disorders and depressive states, maintained by incessant information about the virus. Difficulties in receiving medical services due to social distancing have led to mental relapses and uncontrollable behaviours telemedicine might meet the elderly's needs for disease management in isolation. However, service design must take into account that seniors are not entirely familiar with technology; some do not have internet access and, especially cognitively impaired/frail elderly people, have difficulties in using the necessary equipment. Various religious practices provide resources for coping with isolation/overcoming loneliness.
Callow et al., 2020	Aim to determine the relationship between the amount and intensity of physical activity performed by older adults and their depression and anxiety symptoms while under social distancing guidelines.	Descriptive cross sectional, social media and outreach infrastructure from laboratory and website to recruit volunteers (convenience sampling)	1046 older adults aged above 50 years old, US, Community	NA	Depressive symptoms (GDS questionnaire), cognitive/somatic/affective anxiety symptoms (GAS questionnaire)	Higher levels of physical activity ranging from as little as light to as much as strenuous may help further alleviate some of the negative mental health symptoms experienced by older adults. There was no significant relationship between physical activity levels and anxiety symptoms.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Carr et al., 2020	Aim to argue that COVID-related fatalities embody the attributes of a "bad death," making them particularly devastating for older adults whose grief may be compounded by their own social isolation, lack of support and high-stress living situations.	Discussion paper	Defined as age 65 years and above, US, Community	NA	Bereavement symptoms	Distress associated with bereavement is compounded by older adults' social isolation, co-occurring stressors, and loss of face-to-face mourning rituals. Virtual memorial services, telephone support groups, and other innovations may provide short-term support for survivors of COVID-19
Carriedo et al., 2020	Aim to examine older adults' psychological wellbeing during home isolation and investigate if meeting the WHO'S recommendations on physical activity is related to their resilience, affect and depressive symptoms.	Cross sectional, online questionnaire distributed through the press, television, and different social networks (snowball sampling)	483 older adults (mean age 65.49 years), Spain, Community	NA	Resilience (CD-RISC resilience scale), Affect (positive and negative affect schedule), Depressive symptoms (Kandel and Davies scale)	The results indicated that older adults who met the global recommendations on VPA and MVPA had higher levels of resilience (locus of control, self-efficacy, and optimism), higher positive affect, and lower depressive symptoms. These people might cope better with the demands of the shelter-in-place order.
Chen et al., 2020	Aim to explore the impact of the pandemic on daily life, preparedness, perceptions, and behaviour, information and technology use, and social impacts of the pandemic in regards to older adults.	Descriptive qualitative, 8 week long online focus group discussion (convenience sampling)	10 participants (mean age 75.3 years), US, Community	NA	Loneliness (3 item loneliness scale), Stress (Perceived stress scale), Quality of life (RAND-36)	Participants engaged in a range of preventive behaviours, and reported experiencing stress, anxiety, and worry due to COVID-19. Information and technology use kept participants informed and connected. Participants reported varying degrees of preparedness, which seemed to be related to factors such as perceived level of uncertainty and vulnerability. There was also a sense of responsibility and interest in helping others.

(Continues)



TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Chu et al., 2020	Aim to discuss about countermeasures to combat the social isolation faced among older adults in long-term care during COVID-19.	Discussion paper	Defined as age 80 years and above, US, Long-term care	NA	NA	Use of teleconferencing applications (Skype, Facetime, Zoom), mobile devices, written letters, conventional telephone calls to engage remotely with older adults. From a policy perspective, nurses are advocating for more staffing and appropriate resources to be diverted into LTC, ensuring homes can effectively respond to outbreaks while meeting the physical and psychosocial needs of residents. However many older adults lack the access (limited number of iPads in the LTC) and technical proficiency to use such devices (limited cognition).
Deguchi et al., 2020	Aim to report the case of an elderly woman who experienced her first episode of major depressive disorder (MDD) during the COVID-19 pandemic.	Case study	1 72-year-old woman, Japan, Community	NA	Depressive symptoms (Major Depressive Disorder based on DSM V)	Social isolation might lead to the onset of MDD, despite a patient having no history of mental disorders. Isolation, contributes to physiological changes, further triggering depression in vulnerable elderly individuals and mental disorders. A prevention and intervention strategy for elderly mental health is urgently required.
de Leo & Trabucchi, 2020	Aim to highlight some of the peculiarities manifested by older adults during COVID-19.	Commentary	Not mentioned, Italy, Community and nursing home	NA	Not mentioned	The negative effects of social isolation are worse for older adults or those with pre-existing mental illness. Their loneliness and risk for suicide in late life increases. Older adults also did not grow up in an internet-connected environment so are unlikely to use technology to stay connected. Older adults do not feel safe in their homes, increasing anxiety levels.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
de Maio Nascimento, 2020	Aim to understand if social isolation is impacting the physical and mental health of older adults, what are its consequences, and what strategies are being used by older adults to keep themselves informed about Covid-19.	Phenomenology qualitative, semi-structured interviews conducted through telephone (random sampling)	35 older adults (mean age 70.5 years), Brazil, Community	NA	Means of spreading information on covid-19, impacts of social isolation on mental and physical health (content analysis)	Older adults preferred obtaining information from radio, followed by TV, conversations and WhatsApp. Many older adults do not have access to technologies, cannot operate the devices or are technophobic. Older adults experienced sleep disorders and emotional changes due to anxiety generated by social isolation.
el Haj et al., 2020	Aim to evaluate the symptoms of depression and anxiety of those with Alzheimer's disease (AD) living in retirement homes during COVID-19.	Cross sectional, recruitment occurred by contacting colleagues who work in retirement homes (convenience sampling)	58 participants with a clinical diagnosis of probable AD (mean age 71.79 years), France, Retirement homes	NA	Depression and anxiety (Hospital anxiety and depression scale)	Participants reported higher depression and anxiety during than before the COVID-19 crisis.
Emerson, 2020	Aim to explore the impact of social distancing on loneliness, stress and behavioural changes amongst older adults.	Cross sectional prevalence study (convenience sampling)	833 older adults (aged 60–85 years), US, Community	NA	Loneliness, Stress (self-reported response), Range of behavioural and communication changes since social distancing	Nearly 1/3 stated an increase in loneliness during social distancing. Respondents reported engaging in more solitary activity, using email and text messages and spending more time on computers/tablet than usual. Approximately 2/3 reported using more social media than usual.
Flett & Heisel, 2020	Aim to illustrate the role of mattering in potentially protecting older adults from mental health problems during the current atypical times associated with the COVID-19 global pandemic.	Review paper	Not mentioned, Not mentioned, Community	NA	Not mentioned	Feelings of not mattering and feelings of isolation and social disconnection are well-founded. There is evidence regarding the role of mattering in reduced levels of depression. Qualitative findings from studies highlighted how mattering can be linked with joy, associated with fewer reported chronic health conditions and be a better predictor of health and wellbeing. Various initiatives and interventions that can be modified and enhanced to instil a sense of mattering among older adults.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Flint et al., 2020	Aim to discuss about how changes within the Canadian society due to COVID1-9 social distancing restrictions have affected the mental health care of older people.	Commentary	Not mentioned, US, Long-term care facilities	NA	Not mentioned	Expand the use of virtual care either by video or telephone. Canada has a well-developed telemedicine infrastructure, so the wholesale transition to virtual care of outpatients happened successfully almost overnight. Peer-support groups, such as those affiliated with Alzheimer's organizations and addiction services, have moved activities online.
Gaeta & Brydges, 2020	Aim to estimate the prevalence of loneliness and social isolation in older adults during COVID-19, and investigate associations between loneliness, isolation, and COVID-19-related anxiety during the stay-at-home order.	Cross sectional prevalence study (convenience sampling)	514 older adults (mean age 73.25 years), US, Community	NA	Loneliness (UCLA Loneliness Scale), Coronavirus Anxiety scale, questions pertaining to feelings of isolation/loneliness, change in loneliness, frequency of in-person interactions	Feelings of isolation and loneliness appear to be higher than usual as a result of the COVID-19 pandemic and the resulting stay-at-home orders, and that loneliness (but not isolation) is associated with anxiety about COVID-19.
Gerritson & Oude Voshaar, 2020	Aim to report the effects of the COVID-19 virus on mental healthcare for older people in the Netherlands.	Commentary	Not mentioned, Netherlands, Long-term care facilities, inpatient mental health organizations, community	NA	Not mentioned	Nursing homes: Challenging behaviour has been reported more in nursing home patients who are normally able to go outside and have relatively much control over their daily life. While those in dementia special care unit seemed to be more relaxed with no visitors. Outpatient: Direct psychological treatment is limited to patients who are able to use videoconferences. The first experiences using telepsychiatry have yielded positive and negative experiences.

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TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Goodman-Cassanova et al., 2020	Aim (1) to explore the impact of confinement on the physical and mental health and wellbeing of older adults (2) to provide television-based and telephone-based health and social support, (3) to study the effects of TV-AssistDem	RCT	91 community dwelling older adults (with mild cognitive impairment or mild dementia), 47 in intervention group, 46 in control group (mean age of 73.34 years), Spain, Community	TV-AssistDem contains content from official sources such as the WHO, the Spanish Ministry of Health, and local authorities. Informative content included infographics and videos about the disease, basic protection measures such as hand washing, advice for managing psychological distress, and guidelines to carry out health procedures. Additionally, the participants were encouraged to continue to use three of the usual functionalities of TV-AssistDem which are meant to guarantee physical and mental health and wellbeing. Physical activity was promoted through the visualization of videos of indoor home exercises. Cognition was stimulated with stimulus memory games. Finally, social connectedness with loved ones and health professionals was facilitated through videocalls	Health perception-health management and sleep-rest patterns (Gordon's Functional Health Patterns, numerically rated items). Coping stress tolerance, activity exercise, role-relationship patterns (open-ended questions)	Participants expressed fear, frustration and boredom, which are frequently expressed negative feelings during confinement. Living alone was found to be a risk factor for greater psychological negative impact and sleeping problems. However, there were no significant differences between intervention and control groups regarding health management, mental health, wellbeing, or sleeping problems. Respondents with TV-AssistDem performed more memory exercises than control participants.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Gorenko et al., 2020	Aim to (a) identify remotely delivered evidence-based interventions that can be implemented by individuals with differing education and training, for social isolation and psychological distress faced by older adults during a pandemic (b) identify barriers to remote-delivery of interventions and provide recommendations	Narrative Review	Studies included >age 50 years (one study above 45 years)** , Taiwan, England and Scotland, Canada, South Australia, Sweden, Netherlands, USA, Australia, Community and nursing home	Remotely delivered psychological interventions	Loneliness, Depression (qualitative interviews, GDS, BDI)	Community dwelling older adults may access support and psychological services through various remote-delivery methods and intervention types (e.g., self-guided psychological therapies, integrated co-occurring treatments [ICTs], telephone interventions) to reduce loneliness and psychological distress. LCT setting residents can use tablets or computers to connect with family members and friends to increase social engagement and to reduce loneliness and psychological distress. Video calls with relatives of individuals with dementia in LTC allow for good engagement by LTC residents, as reported by family members of residents. Barriers: older adults may not wish to learn how to use new technologies or maybe weary of technology, may have concerns regarding safety and privacy online. Certain technologies may not be accessible due to geographic location (e.g., rural communities) or socioeconomic status. Limited skills in technology use may impact uptake and adherence to treatment.

Goveas & Shear, 2020	Aim to review the new diagnosis of prolonged grief disorder and outline reasons to anticipate increased rates of this condition on the heels of COVID- 19, especially among older persons	Case study, discussion group	1 78-year-old woman, US, Community	NA	Prolonged grief disorder (PGD) (based on ICD-11 and DSM V)	COVID-19 has brought elevated rates of bereavement as well as unique challenges that can increase the risk of the development of PGD. The process of adapting to loss is derailed due to circumstances, content and consequences of death during COVID-19. When PGD is diagnosed, psychotherapeutic interventions are the first-line treatment.
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TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Grossman et al., 2021	Aim to assess COVID-19 related worries and resilience as potential moderators of the loneliness-sleep problems link amongst older adults.	Cross sectional, online questionnaire disseminated across multiple social media resources and contact lists provided by organizations (convenience sampling)	243 Jewish Israeli (mean age 69.76 years), Israel, Community	NA	Loneliness (UCLA Loneliness scale), sleep problems (3 item questionnaire adapted from insomnia severity index and PHQ-9 depression questionnaire)	The loneliness-sleep problems association was much stronger for those with more COVID-19 related worries and for those with low resilience compared to those with less worries and high levels of resilience respectively.
Gustavsson & Beckman, 2020	Aim to explore how older adults perceive information and act on recommendations about the COVID-19 pandemic and how their mental health is affected by the current situation.	Cross sectional, Recruited subjects via Facebook and the Swedish National Pensioners' Organization (convenience sampling)	1854 participants above age 70, 43 participants aged 69 years old belonging to the risk group, Sweden, Community	NA	Variables concerning information, recommendations and mental health in relation to the COVID-19 pandemic (questionnaire)	A vast majority of the participants perceived the general information about the current COVID-19 pandemic as sufficient (92.2%). The majority of respondents reported taking the recommendations of how to act during the COVID-19 pandemic seriously (96.8%). About half of the respondents (60.8%) said they worry about their health during the COVID-19 pandemic, and half of them said they experienced negative feelings during isolation. It was more common to have sleeping problems, feelings of depression and difficulties concentrating when single.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Harden et al., 2020	Aim to use three cases of elderly patients who required medical care during the COVID-19 pandemic to demonstrate how government-enforced social isolation has created barriers to care and overall wellbeing, highlighting aspects of social isolation and loneliness.	Case study	83-year-old man, 91-year-old woman, Elderly couple (83-year-old woman and 88-year-old man), US, Hospital, palliative care clinic and assisted-living facility	NA	Social isolation	<p>Social isolation is prevalent in older adults regardless of the healthcare delivery setting.</p> <p>Outpatient: The client and family were able to transition to telehealth and video visits during COVID-19 restrictions; however, they expressed a sense of loss for the in-person connection and feeling of caring that has come to be synonymous with palliative care. Patient expressed feelings of isolation from her provider who had previously been a strong source of support. Assisted living: Isolation occurred once another client was diagnosed with covid-19 or respite off-campus care, leading the patient to become increasingly agitated, anxious, and depressed. After 3 months of isolation, the assisted-care facility began to allow one visitor daily. The patient's depression and confusion lessened considerably then.</p>
Hwang et al., 2020	Aim to describe the nature of loneliness and social isolation among older persons, its effect on their health, and ways to cope with loneliness and social isolation during the COVID-19 pandemic.	Commentary	Not mentioned, Not mentioned, Community	NA	Not mentioned	<p>Quarantine and social distancing lead to elevated levels of loneliness and social isolation, which in turn produce physical and mental health-related repercussions.</p> <p>Ways to cope: Social media platforms enable people to stay connected but many older adults may not be as familiar with these new technologies and this style of interaction may not effectively serve their emotional needs. Maintain basic needs and healthy activities. Manage emotions and psychiatric symptoms (Continues)</p>

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Krendl & Perry, 2020	Aim to examine (1) whether social isolation due to the COVID-19 shelter-in-place orders was associated with greater loneliness and depression for older adults and (2) if social factors moderated that relationship.	Cross sectional, Re-contacted and invited participants, who had completed measures of their personal social networks, mental health and loneliness 6–9 months prior to COVID-19 pandemic, for a phone interview (convenience sampling)	94 older adults (mean age 75.20 years), US, Community	NA	Depression (PHQ), Loneliness (UCLA Loneliness scale), Anxiety, Stress	Older adults experienced greater depression and loneliness during pandemic. Among older adults who felt closer to their networks during the pandemic, those experiencing decreased loneliness were slightly less depressed during the pandemic than before it, while those with large increases in loneliness experienced significant increases in depression. Although older adults who felt less close to their networks during the pandemic showed the greatest increases in depression, this occurred irrespective of their loneliness. Also, older adults reported spending much more time using social media to reconnect with people they cared about.
Levi-Belz & Aisenberg, 2020	Aim to (1) discuss the specific risk factors and current status of older adults in Israel in light of the COVID-19 crisis, (2) suggest interventions to prevent suicides during and after the crisis	Commentary	Not mentioned, Israel, Community	(1) Identification: In addition to the traditional risk-assessment protocol, focus on changes in the individuals' social interactions and their effects on thwarted belongingness and perceived burdensomeness on others (2) Intervention: Design a very short online intervention or an equivalent protocol to be performed by the caregivers, focusing on the themes of loneliness and low levels of belongingness. (3) Prevention: Stakeholders and health policymakers should collaborate in establishing relevant and effective protocols to target risk of suicide in community dwelling older adults.	Not mentioned	One of the major risk factors for suicide ideation and behaviour among older adults is social disconnection. One of the significant negative consequences of quarantine is older adults' diminished ability to benefit from mental health services. The adverse consequences of eliminating social contact with family and friends along with the negative effects of quarantine among Israel's elderly highlight the need for an intervention.

(Continues)



TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Moore & Hancock, 2020	Aim to (1) discuss the challenges faced by older adults in their use of social technologies, (2) highlight their unique strengths that can be leveraged to overcome these challenges, (3) offer recommendations for how various stakeholders can support older adults in their effective use of digital technologies	Discussion paper	Not mentioned, Not mentioned, Community	NA	Not mentioned	<p>Barriers to technology: There is a lack of digital skills and experience due to older adults often feeling sceptical of new technologies or perceive they will be difficult to use (attitude). Today's digital technologies were not an essential part of many older adults' working lives, and inconvenient to use since smartphones have relatively small screens that rely on touch inputs and thus require good eyesight and physical dexterity to use. Also older adults are more likely to trust and share misinformation</p> <p>Untapped strengths: Older individuals tend to gain significantly more daily free time as they retire, meaning that they might have more flexibility than others to make use of digital resources.</p> <p>Recommendations: Family members should try to provide technical support to older loved ones. Technology companies should make accessibility a key priority in future development of technology. They can use their platforms to support older adults' use of digital media, by providing resources like technology tutoring, loaner devices, or educational content about new platforms and online safety. Media organizations should make an active effort to de-bunk coronavirus myths and should create fact-checking resources specifically designed for older individuals.</p>

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Sheffler et al., 2020	Aim to examine how policies and societal changes due to COVID-19 may specifically influence late-life suicide, propose methods for alleviating these risks and consider optimistic outcomes as well	Discussion paper	Not mentioned, Not mentioned, Community	NA	Social isolation, perceived burdensome	<p>Social distancing policies, potentially leading to social isolation and increases the risk of suicide by fostering thwarted belongingness and perceived burdensomeness. Addressing underlying psychiatric and health comorbidities to reduce distressing symptoms is critical in reducing suicidal risk.</p> <p>We must educate policymakers and the media in ways to discuss the COVID-19 crisis in a manner that does not overtly target older adults and communicates the value of all life, young and old.</p> <p>Psychosocial support mechanisms (smart technologies, encouraging family and friends to have frequent phone contact with older adults, community outreach services) need to be rapidly expanded to reduce social isolation and perceived burdensomeness for older adults.</p> <p>Optimism: Media may increase anxiety and fear regarding health and mortality, this coverage, in turn, has the potential to make life seem more precious, death more fearsome, and thus suicide less likely. Increased access to services through telemedicine may be another benefit resulting from the pandemic as telemedicine can provide rapid access to health and psychiatric services without exposing the healthcare workers or the patient to additional risks for infections.</p>

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Shrira et al., 2020	Aim to examine whether subjective age moderated the relationship between loneliness due to the COVID-19 pandemic and psychiatric symptoms.	Cross sectional, online questionnaire was disseminated across multiple social media resources and contact lists provided by organizations (convenience sampling)	277 older adults (mean age 69.58 years), Israel, Community	NA	Loneliness (UCLA Loneliness Scale), Anxiety (GAD scale), Depressive symptoms (PHQ-9), Peritraumatic distress symptoms (PDI)	Loneliness and feeling older was positively and strongly correlated with psychiatric symptoms (anxiety, depressive symptoms and peritraumatic distress symptoms)
van Dyck et al., 2020	Aim to identify effectiveness of the TOCO programme in alleviating exacerbated social isolation experienced by nursing home residents during the COVID-19 pandemic.	one group posttest-only quasi-experimental study, open-ended feedback	30 nursing home older adult residents paired with student volunteers, US, Nursing home	Telephone Outreach in the COVID-19 Outbreak (TOCO) Programme aims to alleviate the social isolation suffered by older adults through weekly friendly phone calls with student volunteers. Suggested topics: older adult's interests and hobbies, families, what they did for work, or how they are coping during the pandemic.	Feelings of restlessness, anxiety and fearfulness	The TOCO programme achieved initial success and promotes the social wellbeing of nursing home residents. Participating seniors look forward to their weekly phone calls and feel gratitude for new companionship during this period of loneliness. The TOCO Program revealed the current social isolation experienced by nursing home residents existed prior to COVID-19 outbreak.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Van Orden et al., 2020	Aim to provide a guide to clinicians who work with older adults on issues to consider regarding social connections as well as concrete actions to help patients maintain social health, and therefore, optimize their mental and physical health during the pandemic.	Discussion paper	3 case studies include a 66-year-old woman, a 77-year-old man and a 74-year-old widowed man who lives alone, US, Community and nursing home	Creating a "connection plan" based on a cognitive-behavioural model of social connectedness via a telephone visit, to help patients cope and manage with suicide risk. Follow a "matching exercise" whereby patients and clinicians can discuss how different interpretations of being alone in one's home due to social distancing can be associated with different thoughts and therefore different emotional reactions. Cognitive-behavioural strategies and mindfulness-based meditation can also be used to teach participants emotion regulation skills by reducing distress surrounding social isolation and thereby promoting more adaptive coping.	Not mentioned	The cognitive-behavioural strategies help patients maintain social connections and to provide clinicians with reassurance and hope that isolation and loneliness can be addressed. Using the cognitive-behavioural framework, older adults report high satisfaction with psychotherapy provided by telephone and demonstrate high retention rates.

(Continues)

TABLE 1 (Continued)

Author(s), Year	Research aim(s)	Design and data collection method	Sample characteristics, country, setting	Interventions (if any)	Outcome measures	Main findings
Wang et al., 2020	Aim to examine the links between suicide in older people and the COVID-19 pandemic, provide the perspectives of psychiatrists from four regions and propose solutions to support older adults.	Commentary	Not mentioned, China, Hong Kong, Italy and Australia, Community and nursing home	NA	Not mentioned	<p>China: Loneliness increases because Chinese older adults prefer face-to-face social interactions which are interrupted by social distancing requirements.</p> <p>Hong Kong: The traumatic experience of SARS, especially for the elderly, has predisposed to much fear and anxiety in older people in Hong Kong during the COVID-19 outbreak. This has been exacerbated by the lack of community and family support due to social distancing measures and reduced day-care services.</p> <p>Italy: The isolation imposed by the infection meant that thousands of people who subsequently died were last seen by family when they were taken to hospital by ambulance. The resulting widespread grief would be expected to increase suicide rates.</p> <p>Australia: Lifeline, a charity that provides crisis support and suicide prevention, is focusing on mental health and wellbeing during COVID-19 through telephone lines, text, and webchat.</p> <p>Solutions: Various organizations have issued advice for coping with anxiety and stress during the COVID-19 pandemic. Continuity of access to mental health care, specific telehealth treatments and grassroots initiatives.</p>

\*Callow et al., 2020. This study included participants aged 50 years and above, but will be included because it has a moderately large sample that includes individuals from nearly every state in the United States and many provinces of Canada, and the use of well-established measures of physical activity and symptoms of anxiety and depression validated for use in older adults.; \*\*Gorenko et al., 2020. This study included participants aged 50 years and above, but will be included because this narrative review draws upon a wide range of evidence to provide a comprehensive overview of appropriate remotely delivered interventions for older adults that target loneliness and psychological symptoms which can duly contribute to the results of this scoping review.

ratings (McArthur et al., 2015). Since more than half of the included articles are of low risk, it gives a strong reason for the quality assessment of articles to be reliable.

### 3.4 | Themes of the studies

Four major themes and eight sub-themes encompass the various emotional states of the older adults during social distancing measures and the different types of remote interventions available to tackle this issue and their respective barriers (Table 2). Table 3 illustrated the evidence that supports the themes and sub-themes in the summary findings extracted from the included articles.

#### 3.4.1 | Negative impacts and experiences of older adults during social isolation

##### *Adverse effects on older adults' mental health and wellbeing*

The majority of the studies reported that social distancing measures during the COVID-19 pandemic took an emotional toll on older adults' psychological wellbeing. Particularly for those who lived alone at home, long-term care facilities or had pre-existing mental illnesses (Emerson, 2020; Gerritson & Oude Voshaar, 2020; de Leo & Trabucchi, 2020), their loneliness and isolation increased (Gaeta & Brydges, 2020; Hwang et al., 2020). The commonly reported consequences of social isolation and loneliness included feelings of worry, stress, anxiety, fear, frustration, boredom (Bergman et al., 2020; Callow et al., 2020; Chen et al., 2020; Van Dyck et al., 2020; El Haj et al., 2020; Goodman-Casanova et al., 2020; Harden et al., 2020; de Maio Nascimento, 2020; Van Orden et al., 2020) and adverse outcomes such as depression, sleep disorders and suicide ideation (Callow et al., 2020; Deguchi et al., 2020; Flett & Heisel, 2020; Grossman et al., 2021; Gustavsson & Beckman, 2020; Levi-Belz & Aisenberg, 2020; Sheffler et al., 2020).

Community-dwelling older adults who lived alone reported struggles of eating properly, sleeping well and maintaining personal hygiene during isolation, which affected their daily function and mental health (Deguchi et al., 2020; de Leo & Trabucchi, 2020). Similarly, residents in long-term care facilities, who complained of being isolated in their rooms and being unable to join in communal meals or activities (van Dyck et al., 2020), described feelings of restlessness and anxiety. There are bidirectional links between physical and psychological health. Therefore, physical problems relating to eating and sleeping may lead to the development of psychological problems (such as anxiety) or the aggravation of existing mental health problems. Furthermore, there was a high chance for older adults with pre-existing mental illness, cognitive impairment or dementia to suffer from a relapse of serious mental illness or suicide tendencies during social isolation (Burlacu et al., 2020; Flint et al., 2020).

##### *Bereavement process in an atypical period of COVID-19*

Carr et al. (2020) reported older adults experiencing overwhelming sadness, disbelief and intense guilt during a typical bereavement process. Due to the need for social distancing measures during COVID-19, these feelings associated with bereavement are aggravated by older adults' social isolation and the lack of coping resources, including emotional support and face-to-face mourning rituals (Carr et al., 2020). This imposed isolation also meant that the last time the bereaved saw their loved ones would likely be when they were taken to the hospital by ambulance (Wand et al., 2020). Being unable to be by their loved one's side during their last hours could make it harder to accept the reality of death (Goveas & Shear, 2020). Moreover, the only viable avenue to offer support for these bereaved older adults is through remote means. It may not, however, sufficiently meet their emotional and physical needs, affecting their wellbeing (Carr et al., 2020). During this atypical time of grieving, many factors affected the mourning milestones, which slow down the process of adapting to loss while increasing the chances of prolonged grief disorder (Goveas & Shear, 2020).

TABLE 2 Themes and Subthemes of the studies

	Themes	Subthemes
1	Negative impacts and experiences of older adults during social isolation	Adverse effects on older adults' mental health and wellbeing Bereavement process in an atypical period of COVID-19
2	Adopting coping behaviours in the midst of COVID-19	Self-help or external support for social isolation Cherishing life and accepting death
3	Online interventions to combat consequences of social isolation	Telehealth solutions for medical services Online home-based physical activity programmes
4	Barriers to online interventions	Lack of access to and proficiency in technology Older adults' attitude towards online support

TABLE 3 Evidence supports the themes and subthemes extracted from the included studies

Theme 1: Negative impacts and experiences of older adults during social isolation		
Author(s)\ Themes and Subthemes	Adverse effect on older adults' mental health and wellbeing	Bereavement process during the current atypical period associated with COVID-19
Bergman et al., 2020	"The connection between COVID-19-related health worries and anxiety symptoms was stronger among individuals who felt older."	
Burlacu et al., 2020	"Difficulties in receiving medical services or specific psychiatric treatments has led to mental relapses..."	
Callow et al., 2020	'...older adults, particularly those with pre-existing conditions, are now undergoing physical and social isolation, which may increase the incidence and severity of anxiety and depression among this population.'	
Carr et al., 2020		'...COVID-related fatalities (are) particularly devastating for bereaved kin, whose grief may be compounded by their own social isolation, lack of practical and emotional support, and high-stress living situations marked by financial precarity, worries about their own or other family members' health, confinement to home, and the loss of routine and activity that once structured their days.' '...trigger pain in seeing a loved one suffer, and they may make family members feel guilty that they could not protect their loved one from the devastating situation.'
Chen et al., 2020	'Participants' comments reflected that they experienced stress, anxiety, and worry due to COVID-19.' '...relationship between social disconnectedness and social isolation and symptoms of depression and anxiety'	
de Leo & Trabucchi, 2020	'The negative effects of social isolation could be particularly insidious for older adults or those with pre-existing mental illness.' 'When living alone, eating properly and maintaining personal hygiene can become quite difficult, increasing the sense of demoralization and suffering from loneliness as well as risk for suicide in late life.'	
de Nascimento, 2020	Older adults experienced 'emotional changes due to anxiety, generated by social seclusion and fear of the virus contamination'. '...they were experiencing sleep disorders...'	
Deguchi et al., 2020	'...complained of headache, dizziness, general fatigue, and depressed mood and began to have trouble performing household chores and eating meals.' '...reported loss of motivation, appetite loss, and severe insomnia.' Despite lockdown restrictions removed, '... depressive symptoms did not improve.'	
El Haj et al., 2020	'Due to isolation of residents and drastic changes in their daily life and care they receive, participants reported higher depression and anxiety during than before the COVID-19 crisis.'	
Emerson, 2020	'Over one-third (36.9%) of the sample reported being moderately to a great deal stressed.' 'Those living alone had much higher rates of current loneliness (59.3%) compared to those that lived with others (38.4%).' 'Younger respondents (60–70 years) were significantly more likely to report sleeping less.'	

(Continues)

TABLE 3 (Continued)

Theme 1: Negative impacts and experiences of older adults during social isolation		
Author(s)\ Themes and Subthemes	Adverse effect on older adults' mental health and wellbeing	Bereavement process during the current atypical period associated with COVID-19
Flett & Heisel, 2020	'...growing concerns about suicidal tendencies among older people, especially during the pandemic.'	
Flint et al., 2020	'There is a high chance of relapse and recurrence of serious mental illness as well as suicide tendencies for older adults because provision of outpatient electroconvulsive therapy (ECT), which is an essential service is affected due to the need for social distancing.' 'Social distancing may also lead to an increased sense of isolation and loneliness...'	
Gaeta & Brydges, 2020	'Over half (56.4%) of participants reported feeling isolated as a result of the COVID-19 outbreak, and more than one-third (36.0%) reported feeling lonely.'	
Gerritsen & Oude Voshaar, 2020	'Challenging behaviour has been reported more in nursing home patients who are normally able to go outside and have relatively much control over their daily life.'	
Goodman-Casanova et al., 2020	'Participants expressed fear, frustration, and boredom, which are frequently expressed negative feelings during confinement. Living alone was found to be a risk factor for greater psychological negative impact and sleeping problems.'	
Gorenko et al., 2020 Goveas & Shear, 2020		'The many stresses and the need for social distancing made it more difficult for Alice to accept the reality that Charles was gone.' 'She fluctuated between numbness, overwhelming sadness, and intense guilt...' '...not having seen him (before his death) made the feeling of disbelief even stronger.'
Grossman et al., 2021	'Higher level of COVID-19 related loneliness is associated with higher levels of sleep problems among older adults.'	
Gustavsson & Beckman, 2020	'About half of the respondents (60.8%) said they worry about their health during the COVID-19 pandemic, and half of them said they experienced negative feelings during isolation. It was more common to have sleeping problems, feelings of depression and difficulties concentrating when single.'	
Harden et al., 2020	'Because of quarantine and stay-at-home restrictions... Aubree expressed feelings of isolation...' 'Isolation occurred once another client was diagnosed with covid-19 or respite off-campus care, leading William to become increasingly agitated, anxious, and depressed himself.'	
Hwang et al., 2020	'Quarantine and social distancing...lead to elevated levels of loneliness and social isolation, which in turn produce physical- and mental health related repercussions.'	
Krendl & Perry, 2020	'Older adults experienced greater depression and loneliness than they had prior to the pandemic.'	
Levi-Belz & Aisenberg, 2020	'One of the major risk factors for suicide ideation and behaviour among older adults is social disconnection.'	
Sheffler et al., 2020	'Social distancing policies, potentially leading to social isolation... may directly contribute to increases in desire for suicide...'	
Shrira et al., 2020	'Loneliness due to the COVID-19 pandemic would be related to higher levels of psychiatric symptoms (i.e., anxiety, depressive, and peritraumatic distress symptoms) among older adults, especially among those feeling older.'	

(Continues)



TABLE 3 (Continued)

Theme 1: Negative impacts and experiences of older adults during social isolation		
Author(s)\ Themes and Subthemes	Adverse effect on older adults' mental health and wellbeing	Bereavement process during the current atypical period associated with COVID-19
Van Dyck et al., 2020	<p>"In nursing homes, residents are secluded in their rooms and no longer partake in communal meals or activities. They have extremely limited contact with support staff and are no longer able to receive visits from family members and friend."</p> <p>'...feelings of restlessness and anxiety as isolation continues, and fearfulness as COVID-19 enters nursing home facilities.'</p>	
Van Orden et al., 2020	<p>'Mr. X reported feeling lonely and isolated, and is worried he is becoming depressed...'</p> <p>'Mr Y starts having difficulty sleeping at night and appears more restless and irritable during the day, sometimes yelling at staff and other residents.'</p> <p>'Ms. Z reports feeling increasingly anxious and isolated.'</p>	
Wand et al., 2020		<p>'The isolation imposed by the infection meant that thousands of people who subsequently died were last seen by family when they were taken to hospital by ambulance.'</p>
Theme 2: Adopting coping behaviours in the midst of COVID-19		
Author(s)\ Themes and Subthemes	Self-help or external support for social isolation	Cherishing life and accepting death
Brooke & Clark, 2020		<p>'Participants accepted they had lived a good life and considered themselves as being blessed, lucky and fortunate...'</p>
Burlacu et al., 2020	<p>'Religion may provide a resource that helps in the search for meaning and in overcoming loneliness.'</p>	
Chen et al., 2020	<p>'Participants themselves reported the use of social technologies to connect with family.'</p> <p>'Information and technology use kept participants informed and connected.'</p>	
De Maio Nascimento, 2020	<p>'Vast majority of the older adults felt sufficiently informed about COVID-19 news via radio, TV, conversations with family and friends and WhatsApp.'</p>	
Emerson, 2020	<p>'Respondents also reported using email and text messages more than usual and spending more time on computers/tablet than usual.' 'Two-thirds of respondents reported using more social media than usual.'</p>	
Flint et al., 2020	<p>'Peer-support groups, such as those affiliated with Alzheimer's organizations and addiction services, have moved activities online. Mental health and caregiver organizations have expanded their online presence, with information about coping strategies, including links to web-based counselling and advice on how to make the best use of technology.'</p>	
Gaeta & Brydges, 2020	<p>'The majority reported using some form of social media to connect to others.'</p>	

(Continues)

TABLE 3 (Continued)

Theme 2: Adopting coping behaviours in the midst of COVID-19		
Author(s)\ Themes and Subthemes	Self-help or external support for social isolation	Cherishing life and accepting death
Gorenko et al., 2020	'Regular contact from family, friends, and healthcare workers can be a means to assess for increased distress, burden, health changes in older adults under self-isolation.'	
Gustavsson & Beckman, 2020	'A vast majority of the participants perceived the general information about the current COVID-19 pandemic as sufficient (92.2%).'	
Krendl & Perry, 2020	'...older adults reported spending much more time using social media to reconnect with people they cared about.'	
Sheffler et al., 2020	'Psychosocial support mechanisms... such as community outreach services using online strategies need to be rapidly expanded to reduce social isolation and perceived burdensomeness for older adults.'	Media 'has the potential to make life seem more precious, death more fearsome, and thus suicide less likely.'
Theme 3: Online interventions to combat the consequences of social isolation		
Author(s)\ Themes and Subthemes	Telehealth solutions for medical services	Online home-based physical activity programmes
Banskota et al., 2020	Telemedicine may provide a temporary solution for older adults who have elective appointments for their chronic health conditions. 'Medisafe, along with its real-time missed medication alerts and frequent check-ins via phone calls by family members or healthcare providers, may help older adults stay in the path of medication adherence.'	'Older adults use an app such as Yoga: Down Dog to reduce the ill-effects of sedentary behaviours'
Burlacu et al., 2020	'Telemedicine might meet the elderly's needs for disease, particularly chronic pathologies'	
Flint et al., 2020	'Expand the use of virtual care either by video or telephone. Canada has a well-developed telemedicine infrastructure, so the wholesale transition to virtual care of outpatients happened successfully almost overnight.'	
Gerritsen & Oude Voshaar, 2020	'Outpatient care make use of telephone calls and videoconferences with patients. The first experiences using telepsychiatry have yielded positive and negative experiences.'	
Goodman-Casanova et al., 2020		'TV-AssistDem promoted physical activity through the visualization of videos of indoor home exercise and stimulated cognition through stimulus memory games.'
Theme 4: Barriers to online interventions		
Author(s)\ Themes and Subthemes	Lack of access to and proficiency in technology	Older adults' attitude towards online social support and virtual exercise programme
Burlacu et al., 2020	However, 'seniors are not entirely familiar with technology...' and '...some have difficulties in using the necessary equipment especially cognitively impaired/frail elderly people.' Some older adults 'do not have internet access'.	

(Continues)

TABLE 3 (Continued)

Theme 4: Barriers to online interventions		
Author(s)\ Themes and Subthemes	Lack of access to and proficiency in technology	Older adults' attitude towards online social support and virtual exercise programme
Carriedo et al., 2020		'Individuals with poor mental health symptoms and resilience could have been less prompted to exercise.'
Chu et al., 2020	'While technological solutions are helpful, many older adults lack the access (limited number of iPads in the LTC)...' 'Many older adults with limited cognition lack the technical proficiency to use such devices.'	
De Leo & Trabucchi, 2020	'Older adults did not grow up in an internet-connected environment. Using a laptop or a tablet can be a challenge.'	
De Maio Nascimento, 2020	'Many older adults do not have access to digital technologies such as smartphone (WhatsApp)...' They 'cannot operate the devices...' hence these older adults remain offline.	'There were also cases of technophobia, i.e., resistance and/or fear to use new information technologies'
Flint et al., 2020	'It has been challenging to provide mental health care to residents of long-term care homes due to the limited availability of portable telemedicine technology'	
Gorenko et al., 2020	'Certain technologies may not be accessible due to geographic location (e.g., rural communities) or socioeconomic status.' 'In LTC settings, staff commitment, time, attitudes toward technology and turnover pose potential barriers to video calls with family.' 'Limited skills in technology use may impact uptake and adherence to treatment.'	'Older adults may not wish to learn how to use new technologies or may be weary of technology, may have concerns regarding safety and privacy online.'
Hwang et al., 2020	'But many older adults may not be as familiar with these new technologies and this style of interaction may not effectively serve their emotional needs.'	
Levi-Belz & Aisenberg, 2020	'Older adults often have limited access (or limited proficiency) to internet services and smartphones, only a small fraction can benefit from these technology-based mental health services.'	
Moore & Hancock, 2020	'Some challenges are physiological—contemporary communication technologies such as smartphones have relatively small screens that rely on touch inputs and thus require good eyesight and physical dexterity to use' 'Some are related to the fact that today's digital technologies were not an essential part of many older adults' working lives.'	'There is a lack in digital skills and experience due to older adults often feeling sceptical of new technologies or perceive they will be difficult to use (attitude).' 'Also older adults are more likely to trust and share misinformation.'
Van Dyck et al., 2020	'Social isolation is exacerbated by a lack of technology (e.g., limited computer and internet access to communicate with loved ones)...' Social isolation is exacerbated by '... visual and hearing impairments'	

### 3.4.2 | Adopting coping behaviours in the midst of COVID-19

#### *Self-help or external support for social isolation*

To cope with the isolation they were experiencing, some older adults relied on text messages and emails, while others used social media and video calls to talk to their loved ones (Emerson, 2020; Gaeta & Brydges, 2020; Krendl & Perry, 2020). These social technologies also allowed appropriate stakeholders to regularly check in on older adults under isolation, conduct online activities or assess any subtle emotional health changes (Flint et al., 2020; Gorenko et al., 2020; Sheffler et al., 2020). On the other hand, a few older adults turned to various religious or spiritual practices (Burlacu et al., 2020) such as meditating, listening to inspirational programmes, or reading uplifting literature to manage their emotions during the isolation instead.

#### *Cherishing life and accepting death*

During this pandemic, some older adults have reported positive views, including feeling blessed and fortunate to have lived a long life (Brooke & Clark, 2020), and cherishing life and accepting death (Sheffler et al., 2020). Sheffler et al. (2020) reported that watching the media in confinement might have instead made life seem more precious and death more fearsome (Sheffler, 2020). Furthermore, people may come together unexpectedly in the wake of a crisis, increasing one another's sense of belonging and reducing their rates of suicide. Brooke and Clark (2020) also found that older adults with higher social support levels are associated with higher perceived life satisfaction, contributing to greater appreciation of life and reduced death anxiety.

### 3.4.3 | Online interventions to combat the consequences of social isolation

#### *Telehealth solutions for medical services*

Telemedicine applications have provided temporary solutions to facilitate the care of older adults with chronic health conditions during lockdown (Banskota et al., 2020; Burlacu et al., 2020). Specifically, in Canada, Flint et al. (2020) reported that the country's well-developed telemedicine infrastructure successfully supported the transition to virtual care of outpatients almost overnight. These medical apps also helped deliver virtual psychiatric assessments and treatments for older adults with mental health issues (Gerritsen & Oude Voshaar, 2020), improved medication adherence and support from healthcare professionals (Banskota et al., 2020).

#### *Online home-based physical activity programmes*

Goodman-Casanova et al. (2020) introduced the TV-AssistDem, which was meant to guarantee physical and mental health and wellbeing of older adults. It provided indoor home exercise videos for older adults to visualize and follow as well as introduced stimulus memory games to promote a less sedentary lifestyle during the pandemic and improve their emotional wellbeing. Banskota et al. (2020)

mentioned health and fitness applications that promoted meditation and yoga to decrease anxiety and further alleviate some of the negative mental health symptoms experienced by socially isolated older adults.

### 3.4.4 | Barriers to online interventions

#### *Lack of access to and proficiency in technology*

One of the barriers was the inaccessibility to digital devices, particularly in long-term care facilities where the number of computers and tablets were limited (Chu et al., 2020; Van Dyck et al., 2020; Flint et al., 2020; Gorenko et al., 2020; de Maio Nascimento, 2020). Gorenko et al. (2020) reported that in long-term care facilities, chances of older adults being able to video call their family depended on the staff's commitment and attitudes towards technology. Furthermore, older adults' geographical location or socio-economic status affected their accessibility to the internet (Burlacu et al., 2020; Gorenko et al., 2020; Levi-Belz & Aisenberg, 2020).

Additionally, most articles reported older adults' limited skills and unfamiliarity with technology (Chu et al., 2020; Gorenko et al., 2020; Hwang et al., 2020; de Leo & Trabucchi, 2020; de Maio Nascimento, 2020) which impacted their uptake and adherence to online interventions. Some also expressed having difficulties in using the devices due to their poor eyesight and hearing (Van Dyck et al., 2020; Moore & Hancock, 2020).

#### *Older adults' attitude towards online support*

Older adults were not interested in learning how to use new technology (de Maio Nascimento, 2020) because they either perceived it to be difficult or were wary of their safety and privacy online (Gorenko et al., 2020; Moore & Hancock, 2020). Moore and Hancock (2020) pointed out that older adults were easily targeted by fraud or misinformation, contributing to their scepticism towards technology. Some also felt that digital technologies were not an essential part of their lives, hence they did not bother learning about these devices (Moore & Hancock, 2020). About online interventions which promoted physical activity, there might be added inertia for those older adults with poor resilience and mental health to follow through with these online exercise videos (Carriedo et al., 2020).

## 4 | DISCUSSION

This scoping review provided a summary related to the experiences and emotions of older adults who were socially isolated during the COVID-19 pandemic. It presented a review of the online interventions used to tackle social isolation, including their benefits and barriers. The results demonstrated that the overall mental health and wellbeing of older adults were negatively affected. Older adults felt worried, stressed and anxious during social distancing measures, and struggled with activities of daily living. Other studies also reported emerging mental health issues and similar feelings of psychological

distress amongst older adults (Lee et al., 2020; Meng et al., 2020; Mukhtar, 2020), which further confirmed this issue was prevalent and worrisome.

Living arrangements played a part in older adults' mental status during the pandemic. Before the lockdown, older adults who lived alone had avenues for interactions with the community such as participating in activities at the senior centres (Wu, 2020) or having volunteers, family or friends visit their homes. Some frequently spent their time walking or staying around their neighbourhood or public places (Wong, 2020). However, the quarantine did not allow them to live as they used to, which resulted in overwhelming psychological effects. Most long-term care facilities have not only suspended group activities and communal dining but also restricted visitors. This is particularly burdensome for residents with cognitive impairment and dementia whose family members wish to continue their caregiving activities (Yamamoto-Mitani et al., 2002). Continuous family involvement may benefit older adults in long-term care facilities as it increases their social contact and improves their psychological functioning (Cohen et al., 2013). However, the lockdown took away their social interaction with the outsiders, increasing their isolation. Recent systematic reviews evidenced that psychosocial interventions could improve older adults' cognition, psychological and mental health, and social support (Chow et al., 2020; Tam et al., 2021).

Older adults who have experienced past pandemics of comparable psychological effects (Lahav, 2020) would be more vulnerable to psychiatric symptoms during the COVID-19 pandemic. Specifically, the traumatic experiences of the SARS outbreak in 2003 predisposed much fear and anxiety in emotionally unstable older people during COVID-19 (Wand et al., 2020). This is because older adults who were isolated during SARS exhibited long-term mental health issues like post-traumatic stress disorder (PTSD) (Hong et al., 2009; Tzeng et al., 2020). What the older adults experienced during SARS was likely carried over when similar quarantine and social distancing measures were implemented in COVID-19, worsening their psychiatric symptoms (Taylor, 2020).

This review reported the challenges of bereavement in the age of COVID-19 with social distancing measures in place. Weir (2020) stated that the act of saying goodbye to a loved one in fact starts well before the funeral or memorial. For most, the remaining days and hours of a loved one become especially precious to have meaningful conversations and interactions before saying their last goodbyes. These final moments tend to give the mourners closure, softening the blow of loss (Dutta et al., 2020). However, with strict isolation measures in most hospitals, most people could not be by their loved one's side for the final farewell (Wallace et al., 2020). It was hard to hold physical memorials and funerals, hence mourners were not able to physically gather for emotional support and comfort (Fernández & González-González, 2020). Furthermore, ageing and isolation take a heavy toll on an older person's emotional wellbeing (American Psychological Association & Silk, 2012; Sanjiv, 2020), which possibly makes them easily frustrated and helpless when they experience this ambiguous loss without any form of closure or strong emotional support.

This review revealed that older adults turning to various religious or spiritual practices as coping strategies during isolation. According to Kaplan and Berkman (2019), many older people reported that religion was the most important factor enabling them to cope with external factors. Especially during such a trying time like COVID-19, many might feel despondent and powerless, hence engagement with religious practices and staying connected with God gave older adults a sense of security and strength to manage their emotions (Koenig, 2020; Kowalczyk et al., 2020). Furthermore, older adults, who would have probably encountered more frequent reminders of their mortality during COVID-19, relied on their close relationship with God for hope, peace and a purpose in life, contributing to their fearless attitude towards death (Malone & Dadswell, 2018). Spirituality promotes better coping abilities (Kim & Goldstein, 2017) and lowers death anxiety amongst older adults (Taghiabadi et al., 2017). Nevertheless, some older adults reported feeling grateful and blessed to have lived a long life (Brooke & Clark, 2020). This could be due to the social class of the sample included in the article. These participants were of a higher social class and lived quite comfortably. With no external financial stressors or unnecessary worries, it would be more likely that their social needs were met and they could count themselves as 'fortunate' (Scott et al., 2011). This contributed to a better quality of life for them, higher life satisfaction and a more positive outlook in life (Fortuin et al., 2018). Notably, low-income countries lack the economic and human capital to develop specialist services, which includes mental health care (Prince et al., 2007). Conversely, high-income countries have strengthened their research and services for older adults who require support for their mental health (Yasamy et al., n.d.). The ongoing pandemic may affect long-term wellbeing and global inequalities would put older adults in developing countries further behind in terms of receiving help for mental health (United Nations, 2020).

This crisis has motivated some older adults to learn and expand their use of social technology to stay connected with family and friends to cope with the loneliness they faced during the isolation (Poon & Holder, 2020). These online social networking platforms helped overcome obstacles of social distancing by allowing older adults to stay in contact with family and friends (Khosravi et al., 2016). Besides facilitating increased communication, internet-connected devices empowered older adults to carry out tasks such as ordering food online or making an appointment with their doctor. These functional features promoted independent living amongst older adults, ultimately increasing their resilience and coping abilities during isolation (Berkowsky et al., 2018).

Healthcare professionals such as nurses and psychiatrists or social services have also learnt to tap on these online strategies to foster greater connections with older adults (Kassler, 2020) and support their mental health (Goswami et al., 2010). Even though there have been concerns from long-term care facilities nurses who feel that they were not adequately prepared for taking care of older adults' psychological problems due to the lack of focus in this area during their schooling and training years (Kuo et al., 2019), more attention has been paid to mental health care in recent

years. Literature has shown that efforts have been made to improve nurses' knowledge and attitudes towards mental health in older adults (Muhsin et al., 2020; Puentes et al., 2010) and efforts in community nurses to empower older adults on self-care has proven beneficial during the pandemic (Yi et al., 2020). These nurses and other healthcare providers are a source of external emotional support that can help older adults cope emotionally during isolation (Peng et al., 2019), hence it becomes important for them to adapt when necessary and develop their mental health care competence to ensure there is continuity of remote mental health care for older adults in this COVID era. However, it is undeniable that these remote interventions cannot fully replace interpersonal intimacy which older adults receive through physical human touch and interactions with others (Bush, 2001). Engagement in intimate and interpersonal social interactions is one of the core influences of an older adult's wellbeing (Lomanowska & Guitton, 2016). Nonetheless, the relevance of these social technologies in almost every aspect of our everyday lives (Daniels et al., 2017) has made them the most appropriate solutions during social distancing measures (He et al., 2021).

The emergence of home-based online exercises has become useful as activities can be executed in small indoor spaces to promote better functional health and strengths of lower limbs, prevention of fall, and decrease stress and anxiety in older adults (Chan et al., 2021; Chua et al., 2019; Goethals et al., 2020). It is important to maintain these older adults' physical activity because sedentary behaviours during the quarantine could lead to the potential deterioration of chronic health conditions (Cunningham & O'Sullivan, 2020). Moreover, older adults with chronic diseases (National Institute on Ageing, 2017) cannot afford to neglect their regular check-ups or treatments because uncontrollable medical conditions may lead to severe consequences (Wright et al., 2020). Therefore, telehealth has become essential during social isolation to facilitate health-related services. The use of video-conferencing enables verbal and visual interactions between patients and physicians, allowing more interactive and appropriate managements of older adults' chronic conditions (Boccalandro et al., 2019).

However, older adults who did not grow up around technology would naturally be adverse to using technology in their daily lives, let alone shifting over to telemedicine (van Houwelingen et al., 2018). Older adult's readiness to use technology can be affected by various factors including lack of guidance and confidence as evidenced by previous similar studies that reported the lack of access to technology and poor digital literacy amongst older adults (Fischer et al., 2014; Ma et al., 2020; Pywell et al., 2020; Vaportzis et al., 2017). Furthermore, the more outstanding reason holding back technology use among older adults is their mindset, particularly having wider concerns about technology's impact on society (Knowles & Hanson, 2018). This factor has affected how they adapt and live during this pandemic. Older adults worry that with the popular use of technology, online activity would threaten local brick and mortar businesses (Lee, 2020), which may remove places that were once hang out spots with friends. They cherish face-to-face contact

(Kemper & Lactal, 2004) and hence are reluctant to shift to online experiences. They also have concerns that digital technologies may make certain jobs obsolete, endangering their grandchildren's job prospects (Sherlock, 2020).

#### 4.1 | Clinical implications

This review summarizes the psychological impacts of older people living in the community and long-term care facilities experiencing social distancing measures and evidence of interventions. Technological interventions provide many avenues for improving older adults' wellbeing during the COVID-19 pandemic. With telemedicine making a breakthrough in healthcare, mental health, community and long-term care nurses could reach out to older patients and provide better support. Given the barriers of online interventions, the successful adoption of social technologies begins by changing older adults' mindsets about technology and tackling their poor digital literacy. For older adults who are sceptical about social media, it may be useful to point out other older adults who have used these online platforms and reported benefits related to social networking and increased interactions. For older adults who fear about internet safety, it is important to introduce good practices such as adjusting privacy settings or creating strong passwords (Pywell et al., 2020; Robey, n.d.). Targeted stakeholders such as technology companies or community organizations that support older adults should focus on accessibility to technology and digital literacy (Schaffel, 2018). By providing resources like technology tutoring or loaner devices, older adults can better understand how to operate the newer social technologies to cope during the pandemic. These collaborative efforts may be useful to bridge the digital gap faced by older adults, so that nurses can maximise the use of telehealth to provide the best possible patient care for them (Duncan et al., 2020). In the future, more research should be done in this area, so that barriers to online interventions can be overcome and more older adults can use technologies to promote their psychosocial and mental health.

#### 4.2 | Strengths and limitations

One of the strengths of this scoping review is the application of framework in the methodology, which contributed to the rigour and clarity of the study. The various stages in the framework allowed researchers to carry out each stage separately and in a reflexive way. Throughout the search process, search terms were refined and each step was repeated or revisited when necessary to ensure that the literature was covered in a comprehensive way (Arksey & O'Malley, 2005).

The COVID-19 pandemic is still a relatively new topic. This means that the included studies reported in this short period of time may not allow for many new perspectives to be researched. For instance, about the barriers of online technologies, at least six articles

reported similar findings, none of which brought in new points or elaborations. Various methods, designs and quality in the included articles could influence the synthesis. In addition, combining the experiences of older adults living in the community and long-term care facilities in a single review would have limitations. Both groups would encounter different experiences during COVID-19 restrictions, specifically in terms of physical access to social support system, or incidences of neglect or abuse from care staff (Su et al., 2021). Another limitation is that only articles in English and Chinese were included.

## 5 | CONCLUSION

This scoping review highlighted feelings of anxiety, frustration and boredom, and outcomes such as depression, sleep disorders and suicide experienced by socially isolated older adults during the COVID-19 pandemic. On the other hand, it revealed that some older adults coped well during this pandemic and felt blessed. Online interventions such as telehealth, online exercises and virtual social support, which could be a new normal in the COVID era, were beneficial in combating social isolation. Nurses in the community and long-term care facilities could adopt strategies and online intervention to better support the older adults, contribute to a stronger COVID-19 response and support system, and an overall better road to recovery from this crisis.

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## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

## AUTHOR CONTRIBUTIONS

Natalie Grace RODRIGUES was involved in study conception, design, search strategy development, database searching, study selection, data extraction, collection, analysis and writing of the manuscript. Claudia Qin Yun HAN was involved in the independent review of articles during the study selection and data extraction process and quality appraisal. Dr Ya SU and Associate Professor Piyanee KLAININ-YOBAS were involved in data analysis and critical review of the manuscript. Dr. Xi Vivien WU was involved in the study conception, design, study selection, quality assessment, data analysis and the overall critical review of the manuscript.

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