


Social Distancing vs Social Interaction for Older Adults at Long-Term Care Facilities in the Midst of the COVID-19 Pandemic: A Rapid Review and Synthesis of Action Plans

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Abstract

The present study aimed to systematically analyze the impact of COVID-19-related social distancing requirements on older adults living in long-term care facilities (LTCFs) and to synthesize the literature into thematic action plans to minimize the adverse effects of social isolation. The search included articles published between December 2019 and August 2020 across four databases. The inclusion criteria were used to screen for studies that reported on social isolation and loneliness due to the COVID-19 pandemic in older adults living in LTCFs. This rapid review identified 29 relevant studies and synthesized them into four thematic action plans: technological advancement, remote communication, therapeutic care/stress management, and preventive measures. These thematic action plans and cost-effective strategies can be immediately adopted and used as a resource for all LTCF administrators, healthcare design professionals, and researchers in battling current COVID-19-related issues, and improving social interaction in older adults living in care facilities.

Keywords

Action plan, COVID-19, coping mechanisms, loneliness, social isolation

What do we already know about this topic?

The social distancing policy associated with COVID-19 may disproportionately worsen lifestyle in long-term care facilities (LTCFs) due to already diminished social networks. Social isolation is considered to be a public health threat, and older adults are especially vulnerable to the risks associated with loneliness, which includes an increased risk of hypertension, cardiovascular, cerebrovascular disease, and health-related issues.

How does your research contribute to the field?

The thematic action plans and cost-effective strategies could be used as a resource for all LTCF administrators, healthcare design professionals, and researchers in battling current COVID-19-related issues and improving social interaction in older adults by reinventing future care facilities.

What are your research's implications toward theory, practice, or policy?

A high level of social interaction can be an indicator for positive health-related outcome measures and better quality of care provided in any care facility. This study suggests that more research is needed on this topic to bridge the gaps between practice and policy.

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Introduction

The coronavirus disease 2019 (COVID-19) pandemic has devastated many long-term care facilities (LTCFs) across the globe that includes not only high-income countries but also low- and middle-income countries (LMICs) and is particularly lethal to older adults who have underlying health conditions or cognitive impairment.¹ As of completing this review, more than 100,000 residents and workers at nursing homes and LTCFs have died from COVID-19, accounting for more than 38% of the deaths in the United States.² The Centers for Disease Control and Prevention (CDC) reported that globally 80% of deaths occurred among adults aged ≥ 65 years with the highest percentage of severe outcomes among persons aged ≥ 85 years.¹ To maintain infection control and reduce COVID-19 transmission, deaths, and cases, LTCFs and nursing homes have had to implement drastic measures, namely, those in accordance with the CDC's social distancing recommendations^{1,3,4} such as maintaining personal hygiene, wearing face masks, self-quarantine, travel restrictions, and social distancing. An individual who has moved from their home into a LTCF already experiences added loneliness,⁵ and the current social distancing policy to reduce the spread of infection puts older adults at a significantly higher risk of social isolation.⁶⁻⁸ The social distancing policy associated with COVID-19 may disproportionately worsen lifestyle in LTCFs due to already diminished social networks, living away from home (at a care facility), transportation limitations, and many other factors.⁹⁻¹² Even before this period of sustained social distancing, national studies reported that 1 in 4 older adults were socially isolated and more than 40% experienced loneliness.⁵

Loneliness, Social Isolation, and Health Consequences

According to a study by the National Council on Aging, an estimated 17% of all Americans over the age of 65 years are isolated or live alone because they face one or more barriers related to geographic location, language, or disability.¹³ Loneliness has been a very popular way to conceptualize isolation.^{14,15} Meaningful social connection is an inherent need that all human beings have and loneliness is the absence of this meaningful social connections.¹³ Loneliness or isolation refers to how an individual perceives his or her experience and whether or not he or she feels isolated. It is alleged to be one of the most significant negative consequences of isolation that has the potential to impact health in many ways.¹⁶⁻¹⁸

On the other hand, social isolation is the experience of diminished social networks stemming from a process whereby the impact of risk factors outweighs the impact of any existing protective factors.¹³ Isolation at the individual domain depends on a personal state, feelings, and a person's lack of social connectedness is measured by the quality, type, frequency, and emotional satisfaction of social ties. Social isolation and loneliness can significantly impact personal health and quality of life, which is measured by an

individual's physical, social, and psychological health; their ability and motivation to access adequate support for themselves; and the quality of the environment and community in which they live.^{13,14,18}

Both social isolation and loneliness are considered to be a public health threat, and older adults are especially vulnerable to the risks associated with it, which include an increased risk of hypertension, cardiovascular and cerebrovascular disease,^{19,20} and premature deaths in the range of 29 to 32% with increased likelihood of mortality.²¹ A growing body of research has found that social isolation is also associated with anxiety, depression, and faster cognitive decline.²²⁻²⁴ Social isolation and depressive symptoms appear to be risk factors for worsening cognition, exemplified by a 40% increased risk of developing dementia.^{25,26} Additionally, some of the latest evidence links COVID-19 to neurological disorders and risk for future neurodegeneration with potential long-term risk factors for Alzheimer's disease.^{27,28} A recent meta-analysis reported that in adults at least 55 years of age, about 9% of incident dementia cases can be arguably attributed to living alone as a proxy measure of social isolation.²⁹ To exemplify the far-reaching effects of social isolation, one study shows that social isolation and burden are equally experienced both by the person with Alzheimer's disease and related dementia (ADRD) and their family caregivers.³⁰ The impact of this unprecedented period of social isolation due to COVID-19 on the future physical and emotional well-being of older adults is yet to be determined.

Social Interaction in Older Adults

Social interaction (exchange between two or more individuals within a society), alternatively, promotes independence, provides psychological and physical health benefits, improves cognitive function, overall quality of life, and responsive behaviors such as wandering, agitation, and restlessness in older adults.³¹ Social interaction is considered to be one of the key components of quality of care in many LTCFs. Ten minutes of social interaction per day improves well-being for people with Alzheimer's disease and related dementias (ADRDs), especially for those living in LTCFs³² and it follows that a high level of social interaction can be an indicator for the quality of care provided in any care facility.³³ Other literature demonstrates that residents value the social environment more than other aspects of care facilities, and different aspects of the spatial design may improve the social environment and can lead to meaningful positive social interactions.³⁴ For most functionally impaired residents with limited abilities to initiate social contact, the daily meaningful contact with staff may become an important part of their overall well-being and quality of life after transitioning into a LTCF.^{35,36}

Aims/Objectives

The impact of COVID-19-related social distancing policies on older adults is evident and systematically analyzing these

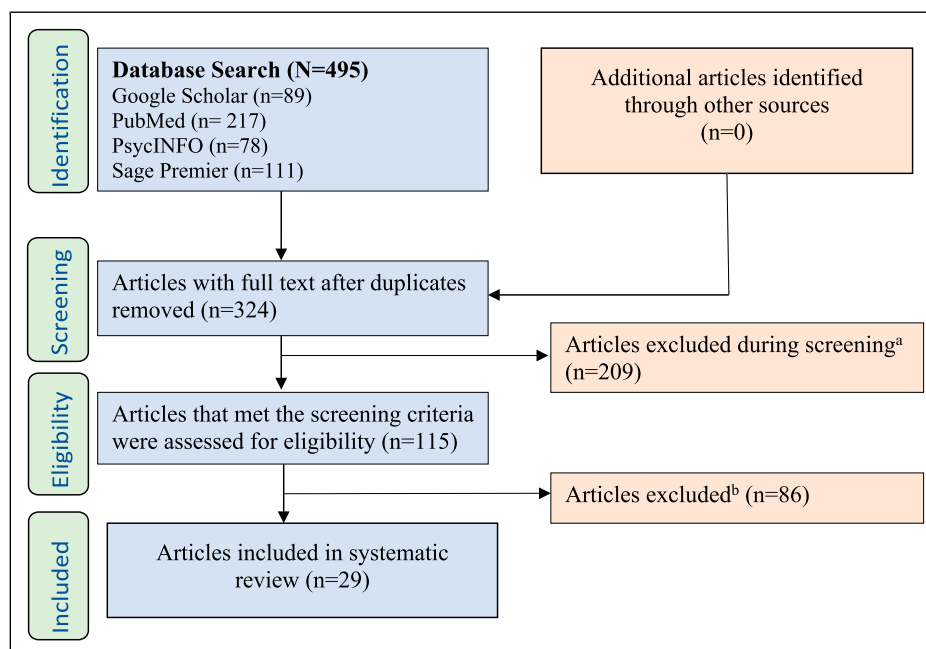


Figure 1. Screening flow diagram. Adapted from PRISMA.³⁸ (a) did not fit the inclusion criteria identified in Table 2 (b) Did not fit the exclusion criteria identified in Table 2.

requirements from recently published literature is almost absent. There is also a gap in synthesizing these guidelines to minimize the adverse effects of social isolation in the post-COVID-19 era for older adults who are living in long-term care facilities (LTCFs). Therefore, the first objective of this rapid review is to systematically review the published literature related to COVID-19 social distancing policies and how these new policies may have measurably affected social isolation and/or loneliness in older adults who are living in LTCFs. At least half of older adults staying in LTCFs experience cognitive impairment such as ADRD.¹ This study focused broadly on older adults and thus included individuals living with ADRD, who may or may not require specialized care for cognitive impairment and often live in specialized memory care units within LTCFs. The second objective of this review is to synthesize the findings of relevant literature into thematic subdivisions or action plans that could help nursing home or care facility administrators cater to necessary social interaction for older adults living in LTCFs in the post-COVID-19 era.

Method

Search Strategy and Selection Criteria

This study is a rapid review, which is a form of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a timely manner.³⁷ The study selection process is summarized according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2009 flow diagram

(Figure 1).³⁸ To accomplish the objectives, a search was conducted across four databases (Google Scholar, PubMed, PsycINFO, and Sage Premier) and included articles published between December 2019 and August 2020 (Table 1). Due to the nature of this research that deals with spatial setting, spatial design, and social science, the life science-, bio-medical-, and pharmacological-related databases were excluded during the selection of the search engines.

COVID-19 is a new phenomenon; therefore, published research focusing on the impact of COVID-19 and related guidelines on older adults living in LTCFs is limited. Search terms incorporated one keyword from each of the four domains: i) pandemic-related (COVID-19, coronavirus, global pandemic, severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2], and quarantine), ii) outcomes of interest (social isolation, loneliness, social network, and social interaction), iii) the spatial settings (long-term care facilities, memory care facilities, assisted living facilities, dementia care, and nursing homes), and iv) the older population (older adults, senior citizen, and elderly community). The inclusion and exclusion criteria that were used for screening and eligibility are shown in Table 2.

Data Extraction and Study Classification. A total of 495 articles were initially identified from the database search, and a total of 29 full-text articles were included in the rapid review (Figure 1). All studies included in this rapid review explored factors potentially influencing social isolation and loneliness during the COVID-19 pandemic in older adults living in care

facilities. An Excel spreadsheet was created to prevent bias, duplication, and record key information extracted from each selected study, including the article title, year, authors, country, research design, study details, major findings, and the key theme of the study (Table 3).

Table 1. Literature Search Matrix.

Databases	
1. Google Scholar	
2. PubMed	
3. PsycINFO	
4. Sage Premier	
Domain	Keywords
Pandemic-related	COVID-19 Coronavirus Global pandemic Severe acute respiratory syndrome coronavirus 2 [sars-cov-2] Quarantine
Outcomes of interest	Social isolation Loneliness Social network Social interaction
Spatial setting	Long-term care facilities Memory care facilities Assisted living facilities Dementia care Nursing homes
Population	Older adults Senior citizen Older adults community

Table 2. Screening and Eligibility Criteria.

Selection Criteria	Inclusion (Eligibility)	Exclusion (Screening)
1. Facility environment	The environment or setting should be in long-term care facility (LTCF) with the provision of including memory care residents	The environment/setting related to home, residential, hospice or end-of life care
2. Outcome of interests	Social interaction is explicitly addressed as a quality of life (QoL) Indicator or determinant	Does not have the concept in text such as social isolation, loneliness, social network, social interaction. Excluded the article focused on medical treatment, drugs or cure
3. Spatial setting	The physical environment and spatial setting of LTCF was explicitly addressed	The physical environment, spatial design and setting of LTCF was completely absent
4. Age group	Older adults or community with 55+ years of age, with or without dementia	Participants were healthy young with the age range below 55 years
5. Pandemic-related	Have at least one of the following pandemic-related keywords: COVID-19, coronavirus, global pandemic, severe acute respiratory syndrome coronavirus 2 [sars-cov-2], quarantine	Does not have any pandemic or COVID-19-related keywords or within the main text
6. Language	Full-text peer-reviewed articles in English	Full text not available and language is not in English
7. Publication year	Published between 12/01/2019-08/31/2020	Other than the specific time range mentioned in the inclusion criteria

Rigor and Quality Assessment

The quality of each study was evaluated based on several assessment criteria and the checklist is based on critical appraisal tools from Zaza et al., which also follow the PRISMA 2009 flow diagram.³⁹ The reviewed articles employed systematically sound qualitative and longitudinal research design, systematic or rapid literature review, quantitative mixed-method research design, editorial, and perspective and commentaries articles. The articles are also globally distributed and have study settings in many regions including China, Canada, New Zealand, United States, Sweden, Italy, Ireland, Israel, India, Europe, Spain, and Germany.

Results

After examination of the 29 articles included in this rapid review, the findings were categorized based on the two objectives of this study. The framework (objective 2) includes four categories of interventions identified from the review that may directly or indirectly improve social interaction in the midst of the COVID-19 pandemic (Table 4).

Objective 1. Effect of New Social Distancing Guidelines on Social Isolation and Loneliness in Older Adults

In the literature, it has been widely suggested that with the imposed social distancing guidelines, social isolation and loneliness may have worsened for older adults since the beginning of the pandemic. As an unfortunate result of the new COVID-19 policies, friends and family members of

Table 3. Systematic Analysis of Reviewed Literature.

Author (Date)	Journal (Country)	Article Title	Research Design/Article Type	Study Details	Major Findings/Summary of Results	Key Theme
47	Western journal of emergency medicine (United States)	15 smartphone apps for older adults to use while in isolation during the COVID-19 pandemic	Narrative review of apps for older adults	Older adults need support to address daily needs and maintain their mental and physical health	15 inexpensive and accessible smartphone apps that could support older adults during the pandemic	Smartphone apps and social connection in older adults (Technology)
Bergman et al. (2020)	International psychogeriatrics (Israel)	COVID-19 health worries and anxiety symptoms among older adults: The moderating role of ageism	Measuring scales to assess COVID-19-related health worries, ageism and anxiety symptoms	243 Jewish Israeli older adults, study period March 16 and April 14, 2020	Both health worries and ageism were positively associated with anxiety symptoms among older adults with high ageism levels	COVID-19 health worries Anxiety symptoms on older adults (communication and stress management)
61	Journal of advanced nursing (Canada)	Competing crises: COVID-19 countermeasures and social isolation among older adults in long-term care	Editorial, commentaries	Social isolation during COVID-19	Remote communication; person-centered care	Social isolation, long term care, remote Communication (communication and stress management)
40	JMIR Aging (USA)	Mitigating the Effects of a Pandemic: Facilitating Improved Nursing Home Care Delivery Through Technology	Editorial, Perspective	Technology adaptations during pandemic: telehealth, electronic, audiovisual programs, online learning systems and other online resources	Remote monitoring, improve social connectedness, help mitigate workforce stress and improve the quality of nursing home care	Technology and telehealth in Nursing Home Care (Technology)
7	Journal of the am. Geriatrics society (Canada)	Breaking social isolation amidst Covid-19: A viewpoint on improving access to technology in long-term care facilities	Editorial, viewpoint	Social isolation	Making technology more accessible to the marginalized older population	Use of technology in long-term care facilities (Technology)
75	Journal of aging and social policy (Germany)	Six propositions against ageism in the COVID-19 pandemic	Perspective	Ageism, older adults	The paper developed six propositions against ageism to illustrate adequate responses to the pandemic	Social distancing; digitalization, COVID-19; ageism (Technology)
40	Pan am. J. of public health (USA)	Coping with being cooped up: Social distancing during COVID-19 among 60+ in the United States	Web-administered survey, convenience sampling 833 responses	Adults aged 60 and older, sheltering in place and social distancing	A large portion reported being stressed (36%), and/or being lonely (42.5%). Nearly 1/3 stated that their sense of loneliness increased during the time of social distancing	Social distancing, loneliness and health behaviors (mental health and Loneliness)

(continued)

Table 3. (continued)

Author (Date)	Journal (Country)	Article Title	Research Design/Article Type	Study Details	Major Findings/Summary of Results	Key Theme
76	Journal of psychosocial nursing and mental health services (USA)	Preventing social isolation	Perspective	Older adults and holistic approach during the pandemic. Protecting physical, psychological and psychosocial health	Holistic nursing practices are vital in mitigating the effects of social isolation, especially during the COVID-19 pandemic	Social isolation, nursing interventions (mental health and Loneliness)
49	J. Clin. Med (USA)	Virtual reality exercise as a coping strategy for health and wellness promotion in older adults during the COVID-19 pandemic	Editorial	Synthesize recent research examining the efficacy and effectiveness of VR exercise in the promotion of favorable health outcomes among older adults	VR exercise has also been observed to be an effective intervention strategy for fall prevention in this population	Virtual reality exercise, coping strategy COVID-19 pandemic (Technology)
67	The BMJ (India)	Covid-19: Social distancing or social isolation?	Editorial	—	Disease surveillance, screening for isolation digital support	Social distancing, elderly people (technology & Loneliness)
56	J aging soc policy (USA)	A framework for aging-friendly services and supports in the age of COVID-19	Perspective and policy	In-home care, virtual care, connection and implementation of volunteer or paid intergenerational service	Person-centered services and supports through in-home acute and primary medical care. Aggressive use of video telehealth, social interaction	Aging-friendly services and support during COVID-19 (Virtual care and intergenerational connection)
42	J Gerontol B psychol sci soc sci (Sweden)	Up and about: Older adults' well-being during the COVID-19 pandemic in a Swedish longitudinal study	Longitudinal study (2015–2020) well-being: Life satisfaction, financial health, and loneliness	Effects of the COVID-19 pandemic-related to the levels of worry, risk perception and social distancing in response to COVID-19	Swedish older adults on average rated their well-being as high as, or even higher than, previous years. However, those who worried more reported lower well-being	Well-being in older adults (mental health and Loneliness)
de Leo (2020)	Int J environ Res public health (Italy)	COVID-19 and the fears of Italian senior citizens	Brief report	—	Forced isolation, loneliness, and fear of contracting the disease represent big challenges for frail elderly people	Frail elderly people, senior citizens, (mental health and Loneliness)
Miller (2020)	Journal of aging & social policy (USA)	Protecting and improving the lives of older adults in the COVID-19 era	Commentary	Policies and strategies for protecting and improving the lives of older people during the pandemic	Social isolation, enhanced economic risk, revealed ageism, delayed medical treatment, and challenges	COVID-19 era in long-term care facilities (mental health and economic Burden)
12	Journal of aging & social policy (USA)	Recovering from the COVID-19 pandemic: A focus on older adults	Commentary	Positive changes can come from increased levels of technology use, self-care, and time management	Economic setbacks, health and well-being effects, ageism, racism, and classism, increased connectivity, improved quality of life, expanded workforce specializing in aging	(Health risk and economic burden)

(continued)

Table 3. (continued)

Author (Date)	Journal (Country)	Article Title	Research Design/Article Type	Study Details	Major Findings/Summary of Results	Key Theme
Noone (2020)	Cochrane database syst Rev (Ireland)	Video calls for reducing social isolation and loneliness in older people: A rapid review	Rapid review	Use of the internet via video calls or videoconferencing through computers, smartphones or tablets in reducing loneliness or social isolation in older adults	Not enough evidence on the effectiveness of video call interventions to reduce loneliness and social isolation in older adults	Video call, loneliness, social isolation (Technology)
Alessandro et al. (2020)	Aging clin exp Res (Europe)	The potential long-term impact of the COVID-19 outbreak on patients with noncommunicable diseases in Europe: Consequences for healthy aging	Literature review	Noncommunicable diseases in Europe, healthy aging Social distancing and quarantine restrictions will reduce physical activity, increase unhealthy lifestyles	Decreased vitamin D level associated with mental health disorders, higher prevalence of multimorbidity and impaired immune function	Short and long-term health consequences of COVID-19 (mental health and Loneliness)
41	The american journal of geriatric psychiatry (Israel)	COVID-19-related loneliness and psychiatric symptoms among older adults: The Buffering role of subjective age	Web-based questionnaires comprising loneliness, anxiety, depressive, and peritraumatic distress symptoms	To examine whether subjective age moderated the relationship between loneliness due to the COVID-19 pandemic and psychiatric symptoms	Older adults are more susceptible to the adverse effects of loneliness	Loneliness Psychiatric symptoms, older Adults (mental health and Loneliness)
54	Am J geriatric psychiatry (USA)	Combating heightened social Isolation of nursing home elders: The telephone outreach in the COVID-19 outbreak program	Telephone outreach in the COVID-19 outbreak (TOCO) program in local nursing Homes	30 elderly residents were paired with student volunteers. Initial reports from recreation directors and student volunteers were positive	Elderly residents look forward to weekly phone calls and express gratitude for social connectedness	Social Isolation, nursing home, COVID-19 (remote Communication)
24	Age and aging (China)	Loneliness as a mediator of the impact of social isolation on cognitive functioning of Chinese older adults	Retirement longitudinal study	Chinese older adults aged 60-101 years	Potential mediation mechanism of loneliness between social isolation and cognitive functioning among Chinese older adults	(Mental health and loneliness)
53	J Am geriatric society (USA)	Using telehealth groups to combat loneliness in older adults through COVID-19	Editorial	The evidence-based psychosocial intervention "circle of friends" to socialize older adults through interactive activities	Telehealth and online group interventions can help connect lonely and isolated older adults during the COVID-19 pandemic and beyond	Circle of friends groups from in-person to telehealth (remote Communication)
46	Psychiatry Res (USA)	Facetime to reduce behavioral problems in a nursing home resident with Alzheimer's dementia during COVID-19	Video calls, FaceTime in older adults with Alzheimer's dementia during the COVID-19 pandemic	The patients communicated well with "lip read" during the video session and were less anxious and agitated after the call	Using FaceTime improved behavioral problems, appetite and sense of connectedness among residents	(Technology)

(continued)

Table 3. (continued)

Author (Date)	Journal (Country)	Article Title	Research Design/Article Type	Study Details	Major Findings/Summary of Results	Key Theme
62	Progress in cardiovascular diseases (Spain)	Physical exercise as therapy to fight against the mental and physical consequences of COVID-19 quarantine: Special focus in older people	Multicomponent exercise program with older adults: Aerobic resistance, balance, coordination and mobility training exercises	Physical exercise has shown to be an effective therapy for most of the chronic diseases with direct effects on both mental and physical health	Home aerobic exercises like walking inside the house, dancing or balance exercise, walking heel-to-toe and stepping over obstacles are recommended	Physical exercise, therapy (therapeutic care and stress Management)
51	J med internet research (Spain)	Telehealth home support during COVID-19 confinement for community-dwelling older adults with mild cognitive impairment or mild dementia: Survey study	A telephone-based survey was administered in Spain to 93 participants in the TV-Assist dem clinical trial	To study the effects of a television/telephone-based assistive integrated technology on health and social support	Television sets were preferred technological devices to access COVID-19 information, watching television was a recreational activity, and performing memory exercises was an intellectual activity	(Remote communication)
5	J Am geriatr society (USA)	"Social distancing" amid a crisis in social isolation and loneliness	Editorial	Social well-being has a powerful impact on health	Identifying older adults at risk for the immediate and unintended health consequences of physical distancing are critical	Social and mental well-being (mental health and Loneliness)
57	Aging mental health (New Zealand)	Challenges to dementia care during COVID-19: Innovations in remote delivery of group cognitive stimulation therapy	Editorial	Virtual cognitive stimulation therapy (vCST), in-home video telehealth to deliver interventions for people with dementia	Technology-based intervention, 'Reconnect' with each other virtually	(Technology)
55	J Am geriatr society (India)	Intergenerational digital engagement: A way to prevent social isolation during the COVID-19 crisis	Digital learning platform intergenerational experience sharing	Telephone and videoconferencing	Interaction with the youth is an excellent way to keep older adults happy and connected	(Intergenerational connections)
8	Global Health Research and Policy(USA)	Social isolation and loneliness among older adults in the context of COVID-19: A global challenge	Commentary	Innovative technology-based interventions may address the issues of social isolation and loneliness	Public health messaging, mobilizing the resources from community-based networks to improve social connections and engaging the health care system	(Technology)
6	J Nutr health aging (USA)	Loneliness and social isolation in older adults during the COVID-19 pandemic: Implications for gerontological social work	Editorial	Assessing loneliness and social isolation with rapid tool, ALONE scale	Innovative online intervention: Interactive photo sharing, support and learning assistants, pairing runners, cooks, and multiparty games	(Technology)

Table 4. Framework for Interventions and Action Strategies for Improving Social Interaction During and After the COVID-19 Pandemic.

Interventions and action strategies for improving social interaction			
a) Technological advancement	b) Remote communication	c) Therapeutic care and stress management	d) Preventive measures
1. Using devices for communication	1. Intergenerational connections	1. Improved communication 2. Animal-assisted therapy 3. Person-centered care 4. Opportunities for engagement	1. Regular screening 2. Monitoring residents' health
2. Virtual reality (VR)	2. Drive-by or virtual visits	5. Physical exercise	3. Signage and hygiene
3. Telemedicine		6. Therapeutic touch	

residents at LTCFs are largely not allowed to visit their loved ones in-person. This has been thought to worsen the social isolation and loneliness that already disproportionately affects older adults living in LTCFs. Several studies were conducted in different settings where the respondents (aged 60 years or older) reported feeling stressed, lonely, or as if their feelings of loneliness had increased since the beginning of the pandemic and social distancing guidelines.^{6,40} Shrira et al.⁴¹ identified relatively low mean loneliness and psychiatric symptom scores during the pandemic but also noted variable scores among respondents. Regarding the following measures of well-being, Kivi et al.⁴² reported that life satisfaction and loneliness remained stable over time while self-rated health and financial satisfaction were higher in 2020 compared to previous years. Although some of these outcomes were self-reported and/or subjective and the authors acknowledged possible sampling bias, the findings can be considered important contributions in reflecting respondents' feelings of loneliness and social isolation during the pandemic.

Objective 2. Interventions to Improve Social Isolation and Loneliness During and After the COVID-19 Pandemic

a) Technological Advancement

- i) *Using devices for communication*: Due to aging and cognitive issues, many LTCF residents may not be comfortable using modern devices for communication. Therefore, special attention, technical support,^{43,44} and technology-based interventions⁸ should be given to all residents to maintain social relationships with friends and family *via* phone calls, video chats, or by using social media on a regular basis.⁴⁷ Video chat platforms (e.g., Zoom, Facetime, and Skype) or use of social media could be very helpful in mitigating loneliness.^{6,7,46,47}
- ii) *Virtual reality (VR)*: VR technology could be used as therapy or exercise for older adults who have reduced sensory ability, reduced mobility, and/or impaired cognition. VR could be an effective intervention strategy for improving cognition and psychological

outcomes, preventing falls, enhancing motor ability, and reducing obesity.^{7,48,49}

- iii) *Telemedicine*: By adopting the practice of virtual diagnosis and consultation, “*Telemedicine*,” “*Telehealth*,” or “*Telephone Outreach*” could allow patients to receive a wider range of services without having to travel to a healthcare facility, saving travel time for both the patient and provider.⁵⁰⁻⁵⁴

b) Remote Communication

- i) *Intergenerational connections*: Social distancing does not necessarily limit opportunities for children to contact the seniors in their family or community who are away from their home or living in care facilities.⁵⁵ If local school students could find ways to engage with seniors in virtual settings, it could create opportunities for strong intergenerational connections.^{43,56}
- ii) *Drive-by or virtual visits*: LTCFs can arrange virtual visits^{6,52} or short window visits with telephone conversations so that residents can see their loved ones through windows. Drive-by visits could also be helpful in managing density where visitors can visit from their cars with their loved one outside the building while maintaining social distancing and mask requirements.

c) Therapeutic Care and Stress Management

- i) *Improved communication*: Small talk and comments from caregivers or other residents and remote group cognitive stimulation therapy^{51,57} can be helpful in managing stress. Positive comments can open up the opportunity for longer conversations to ease the stress related to social distancing.¹⁹
- ii) *Animal-assisted therapy*: Keeping small, non-demanding personal pets such as fish or birds or using virtual programs for animal-assisted therapy^{58,59} could create opportunities for safe therapeutic engagement.
- iii) *Person-centered care*: One of the most important steps in providing quality care is to know the person. Due to frequent shift changes, maintaining a folder

for each resident containing personal but non-sensitive information to be used by the caregiver prior to the shift could be helpful in maintaining person-centered care.^{56,60,61}

- iv) *Opportunities for engagement*: Creating a personalized, stimulating environment^{19,48} in the resident's room or adjacent balconies is another best practice to consider. Caregivers can work with residents to re-decorate their rooms, establish a craft corner or reading nook, or bring in a small fish tank or seed starters to connect with nature.
 - v) *Physical exercise*: Physical exercise is an effective therapy to combat both mental and physical illness, and home aerobic exercise with virtual assistance could work as a therapeutic treatment.^{62,63}
 - vi) *Therapeutic touch*: Washing residents' hands or using hand sanitizer also provides an opportunity for physical touch by the caregiver that can be therapeutic^{64,65} in addition to conforming to CDC guidelines for hygiene.
- d) *Preventive Measures*
- i) *Regular screening*: Health screenings for isolation and temperature checks should be mandated for all employees, residents, and essential visitors at least once per day.^{4,66} Regular data collection and disease surveillance should be monitored by each LTCF and stored in a secured database.⁶⁷
 - ii) *Monitoring residents' health*: Caregivers and administrators should develop an hourly round routine particularly during this critical period to monitor residents' health by managing pain control, placement, positioning, personal needs, and personal hand hygiene as preventive measures.⁴⁵
 - iii) *Signage and hygiene*: Hand washing and hand sanitizing should be part of an hourly routine for each resident. Age-friendly instructional signs with simple pictures about hand washing and personal hygiene guidelines could be effective.⁶⁸

Discussion

The focus of this article was to 1) rapidly review the published literature to understand the effect of new social distancing policies on older adults who are living in LTCFs and then to 2) critically analyze and synthesize the findings into thematic subdivisions and action strategies that could be reviewed and implemented by nursing home or care facility administrators. Many experts and governing bodies have speculated that social isolation and loneliness have worsened for older adults since the beginning of social distancing policies,⁶⁹ but measurable differences in these exact outcomes as a direct result of COVID-19 social distancing policies are unknown and important for informing future intervention studies.

It is widely known that the impact of pandemics around the world is different and different countries across the globe have implemented varying measures to protect residents from COVID-19, and some have implemented different interventions to address social isolation.⁷⁰ Specific guidance on public health, vaccination timeline, and how to combat the global pandemic is largely ignored by low- and middle-income countries (LMICs), which contain 69% of the global population aged ≥ 60 years.⁷¹ Public health systems are weaker in LMICs, and COVID-19 could potentially have the greatest impact in LMICs due to limited resources, lack of infrastructure support, logistical barriers, and limited trust in government.^{72,73} In many LMICs, the situation is compounded by the economic damage, emotional stress, and anxiety, which includes a high inflation rate with the rising cost of food, low to no supply of oxygen, electricity and increased unplanned expenditure in terms of illness, funerals, and unnecessary loss of life.⁷³ To identify the new knowledge, evaluate cost-effective therapies and interventions; a global expert group on gerontology could be formed so that they can support the particular needs of older people living in challenging settings, where formal health service infrastructure is limited.⁷¹

Prior to COVID-19, a substantial body of research aimed at improving social isolation and loneliness in older adults living primarily in LTCFs. However, those interventions may or may not be currently applicable if new COVID-19 policies have interfered with the ability to carry them out, whether due to physical restrictions on caregivers being able to help residents with activities or due to less time available for caregivers to help because of increased cleaning and sanitizing demands and other burdens related to the new policies. Interventions are needed that are actually conducted during the COVID-19 pandemic addressing the pandemic-specific levels of isolation and loneliness experienced by residents of LTCFs and the pandemic-specific barriers to conducting interventions. It is evident that, even prior to COVID-19, social isolation and loneliness are invariably experienced by individuals struggling with AD/DRD³⁰ and are closely associated with lower cognitive ability.²³ In these ways, new social distancing policies may actually be causing significant harm to this already vulnerable population; however, it may be difficult to measure a causal effect of any increased social isolation on cognitive decline as COVID-19 infection itself may result in cognitive decline.^{27,28} Following are discussions of four proposed action strategies based on the findings presented in the results for improving social interaction during and after the COVID-19 pandemic in older adults living in LTCFs.

1) Use Technological Advancement to Minimize Social Isolation

Several viewpoints and perspectives have been recently published addressing technological advancement in reducing

social isolation in older adults during the pandemic.⁷⁴ Access to technological devices^{5,7} and using smartphone applications, social media, and VR technology^{6,47} are the most popular media for mitigating “profound isolation” and improving communication in older adults. Eghtesadi,⁷ a physician who tends to patients in LTCFs, stated witnessing “profound isolation” and called for improved access to technology. In doing so, this physician also called for improving the way patients are assessed for their technological competency and motivation since the older adults are often wrongly assumed to be unable or unwilling to use technology. The above example of ageism in which older adults are assumed not to be motivated or able to use technology has also been brought up by Ehni and Wahl,⁷⁵ who importantly reminded us that older adults are heterogeneous in their abilities, and health status is not perfectly correlated with chronological age.

2) Maintain Virtual, Intergenerational Connections for Improved Social Interactions

Many care facilities are now allowing community volunteers of all ages to engage with residents in virtual or other remote modes of communication as alternate ways of improving social interactions among residents. Hoffman, Webster, Bynum,⁵⁶ and others are proponents of improving intergenerational relationships and programs, stating that they provide bi-directional benefits, which are cost-effective (typically volunteer-based), and relief to caregivers. Remote communication in the form of a telephone outreach intervention is another method being used.⁵⁴ Chatterjee and Yatnatti⁵⁵ also proposed intergenerational programs and cited several effective studies using digital platforms in their recent review. Zubatsky, Berg-Weger, and Morley⁵³ reported a successful adaptation of an evidence-based intervention to socialize older adults through interactive activities entitled *Circle of Friends* to a telehealth platform. During the COVID-19 pandemic, this program can be done virtually from home with the added benefit of having a recorded copy of the session; the program also includes creative activities such as therapeutic-narrative writing, sharing reflections, creative arts, and strength training/exercises. Through this avenue, LTCFs can offer creative, holistic solutions during this time of global crisis to maintain the physical, psychological, and psychosocial needs of older adults.⁷⁶

3) Maintain Therapeutic Care and Personalized Support for Stress Management

In the context of older adults with or without dementia, a holistic approach of personalized care and support can involve many domains including individuality, independence, privacy, partnership, respect, rights, value, choice, dignity, self-determination, and purposeful living.⁶⁰ Several therapeutic approaches are repeatedly mentioned in several studies to improve both physical and mental health outcomes and

manage stress in this unprecedented situation. Person-centered care,^{56,61} remote but effective opportunities for engagement,⁴⁸ making connections with nature or pets, therapeutic touch, and passive virtual therapy have been mentioned frequently as strategies to combat the added stress of regular health screenings and preventive measures suggested by the federal government. In addition to person-centered, therapeutic approaches, maintaining an active lifestyle with regular physical exercise can reduce mental fatigue, manage stress, and create opportunities for engagement.

4) Follow COVID-19 Safety Guidelines and Preventive Measures

Different public, private, and federal-level organizations such as the CDC, World Health Organization (WHO), Centers for Medicare & Medicaid Services (CMS), and Federal Emergency Management Agency (FEMA) have published official recommendations related to infection prevention, control, and safety for LTCFs to follow during the COVID-19 pandemic.^{1,77-79} This guidance includes hygiene and social distancing policies, limitations on group activities and visitors, testing and screening recommendations, and suggestions for monitoring community COVID-19 levels. However, these are guidelines and not requirements by law. Therefore, there is large variation in what these facilities are required to do at the state and county levels. It is imperative that inabilities to follow guidelines are identified, analyzed, and dealt with to reduce the transmission of COVID-19.

As new hygiene and safety policies may have different effects on older adults with ADRD compared to those without, some organizations have published supplementary guidelines that adhere to important dementia-specific care recommendations for memory care units in nursing homes and LTCFs. This guidance includes establishing daily routines, providing structured activities, and maintaining consistent staffing. Residents in memory care units at LTCFs are less able to negotiate changes in their environment and are arguably at increased risk for frustration, anxiety, and depression due to new social distancing and hand hygiene regulations.³ Moreover, mandatory face covering requirements for all employees of LTCFs set by the organization can result in hearing difficulties for older adults, which could increase agitation.³ Changes in routines, the physical environment, and daily schedules in memory care facilities should be kept to a minimum. Therefore, staff may need to provide memory care residents with additional support and closer supervision to ensure residents are not agitated, or otherwise redirect them with appropriate calming techniques by playing personalized music, offering to go for short walk, or doing enjoyable activities.

Conclusion and Future Directions

In this rapid review, a total of 29 full-text interventional studies were identified that specifically address COVID-19-

related social isolation and loneliness in older adults living in LTCFs. Some findings can be considered important contributions in reflecting respondents' feelings of loneliness and social isolation during the pandemic. Some articles have highlighted potential interventions to improve social isolation and loneliness during and after the COVID-19 pandemic that need further exploration in the form of clinical trials or additional research by interdisciplinary experts. COVID-19 is a recent phenomenon that is the biggest limitation to access relevant articles. Among the reviewed literature, many studies had small sample sizes, without describing the quality assessment, cross-verification, or triangulation in study design, and control of the environment or settings, these all are considered as limitations in this study. Moreover, this article only addressed older adults living in long-term care facilities as opposed to healthy older adults who are living in different settings such as a home or residential care, assisted living, palliative or hospice care; thus, generalizability is limited.

Interventions to improve social isolation and loneliness must continue to be tested during the pandemic so that conflicts with social distancing and hygiene guidelines, as well as increased caregiver burden, can be identified and managed. There is a strong need for action strategies with evidence-based solutions to accommodate the personal, social, and psychological needs of LTCF residents, staff, caregivers, and family members as they are proportionately related to physiological and psychological health and well-being. The presented thematic action plans and cost-effective strategies could be used as a resource for all LTCF administrators, healthcare design professionals, and researchers in battling current COVID-19-related issues and improving social interaction in older adults by reinventing future care facilities.

Appendix I

ADRD	Alzheimer's disease and related dementias
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare & Medicaid Services
COVID-19	coronavirus disease 2019
FEMA	Federal Emergency Management Agency
LTCFS	long-term care facilities
WHO	World Health Organization

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