

The COVID-19 pandemic's impact on older adults' mental health: Contributing factors, coping strategies, and opportunities for improvement

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KEYWORDS

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Key points

- Rates of anxiety and depression have increased during the COVID-19 pandemic in older adults.
- Younger generations have reported higher rates of anxiety and depression during the pandemic compared to older adults.
- Factors influencing the risk of mental illness in older adults during the pandemic include sex, age group, location, living situation, socioeconomic status, and medical and psychiatric comorbidities.
- Strategies for older adults, caregivers, and health-care providers may mitigate the effects of social isolation on the older adult population.

1 | BACKGROUND/SIGNIFICANCE

The COVID-19 pandemic rapidly changed the way that societies around the world live, work, and interact with each other. Lockdowns and physical distancing orders were established to prioritize public health efforts toward slowing the transmission of severe acute respiratory syndrome coronavirus (SARS-CoV-2), stabilize collapsing health-care structures, and protect the most vulnerable. Older adults are at the highest risk of severe illness from COVID-19 and 80% of reported US deaths from COVID-19 occur in people over the age of 65.¹ One study of the United States and five other countries estimated that 3.1 million deaths had been avoided due to the implementation of several interventions, including social distancing, school closures, border closures, travel bans, and large lockdowns.² While vaccination against COVID-19 has reduced the need for physical distancing in some countries,^{3,4} uncertainty about the ability of the currently available vaccines to protect against SARS-CoV-2 variants remains. Certain countries are still recommending limitation of the sizes of gatherings and testing prior to gathering of people of

different households.⁴ Although physical distancing does not necessarily equate to social isolation, loneliness can be an unintended, harmful consequence of physical distancing in the older adult population despite its benefit of slowing the transmission of SARS-CoV-2. Demographic, socioeconomic, and medical factors contribute to the risk of mental illness in older adults during the pandemic. Awareness of these contributing factors and implementation of coping strategies and interventions may help safeguard this vulnerable group from psychological complications that impact quality of life and health span.

Loneliness is not only associated with anxiety, anger, and emotional instability,⁵ but it also activates the sympathetic nervous system, leading to hypertension, inflammation, and elevated stress hormone levels. Social isolation is associated with increased mortality, decreased quality of life,⁶ and increased risks of premature death, stroke, and dementia in the older adult population.⁷ Even before the pandemic, older adults were at higher risk of social isolation and loneliness than younger age groups. Pre-pandemic, 50% of Malaysian people over age 60 were found to be at risk of social isolation⁸ and

the prevalence of loneliness in older adults was found to be 35% in Sweden⁹ and 62% in the rural United States.¹⁰ Possible contributing factors to loneliness in older adults include less cohesive communities, retirement, decreased income, losses of significant others, and declining health.¹¹ Older adults are also more prone to anxiety at baseline, especially death anxiety, likely due to their higher prevalence of physical disabilities, chronic illnesses, and dependence on others.¹²

On this background, the COVID-19 pandemic restrictions imposed additional barriers to social networks for older adults. This population experienced rapid restrictions to in-person gatherings, travel, visitations in long-term care facilities and nursing homes, recreation, and entertainment. Spiritual institutions closed their doors, exercise facilities shut down, and family gatherings were canceled. One opportunity to salvage social connections is through virtual platforms. However, one survey found that 48% of participants felt that virtual gatherings failed to reduce loneliness, and 10% experienced increased loneliness after the gatherings.¹³ Some older people do not have the knowledge or the physical ability to use this technology, while others lack the necessary devices. Health-care institutions rapidly adapted to telemedicine, leaving some patients too fearful to seek in-person medical care and without the proper equipment for telemedicine. On the other hand, those with access to the Internet may become overwhelmed, paranoid, or distrustful with "information overload" about the threats of the virus from scientific and media publications.¹⁴ One study of 126 Italian adults with cognitive decline over age 60 showed that 40.5% spent 2 h or more per day engaging in COVID-19-related media.¹⁵

The pandemic has brought additional stresses that may be even more impactful for older adults, including job losses and scarcity of food and basic household supplies.¹⁶ As if these practical struggles were not enough, the anxiety and stigmatization surrounding the virus spreads and may cause conflicts between family and friends.¹⁷ Some seniors reported feeling as if their lives were "expendable in the rush to reopen the country."¹⁸ This impression reinforces self-destructive viewpoints of not being necessary and of being forgotten.¹⁹ Manifestations of this distress included increased rates of substance use and symptoms of anxiety, depression, and trauma-related stress disorder in a surveyed population of Americans over age 18.²⁰

There was heightened awareness in the medical community for the risk of mental health issues in older adults due to their predisposition to social isolation and increased risk of severe illness from SARS-CoV-2. One survey from July 2020 showed that 46% of adults 65 years and older felt that their mental health was negatively influenced by coronavirus-related worries. This had increased from 31% of older adults 2 months earlier.⁷ Similar rates of depression and anxiety (37.1%) were reported in patients over the age of 60 in China during the pandemic.²¹ From March to August 2020, one in four (24%) older adults reported anxiety or depression, which was significantly increased from a 2018 pre-pandemic survey, which showed the rate then was only approximately one in ten (11%). Another group investigated lockdown's greatest emotional

disappointments for 126 Italian elders with cognitive decline and found that they were the inability to gather with family (41.3%), leave home (24.6%), exercise normally (23.8%), receive help from domestic workers (14.3%), and attend medical visits (5.6%).¹⁵

Despite the substantial increase in self-reported anxiety and depression in older adults during the pandemic, younger adults are still more likely to report anxiety or depression.⁷ Potential explanations for this discrepancy are that young adults are more likely to deal with the challenges of unemployment, childcare, and remote learning.⁷ Another caveat is that depression in the elderly may be misinterpreted as an expected part of the aging process and may be neglected and underreported.⁷ Nonetheless, multiple studies have revealed that senior citizens are faring better mentally than younger groups during the COVID-19 pandemic. An August 2020 CDC survey demonstrated that participants 65 years and older reported significantly lower rates of anxiety (6.2%), depression (5.8%), trauma- or stress-related disorder (9.2%), substance use (3%), and suicidal ideation (2%) than younger participants.²⁰ The early resilience of the older age group may be due to differences in their biologic stress response, personality traits, social status, and/or financial stability.

Despite lower rates of depression in older adults, the consequences of depression in this group can be devastating. Older adults with depression are more likely to have functional impairment compared to their non-depressed counterparts and have decreased recovery from medical disorders such as hip fracture²² or stroke.²³ They are also at greater risk for death from medical disorders or by suicide.²⁴ Older adults with depression have longer medical hospitalizations²⁵ and a disproportionate number of hospital admissions.^{26,27}

The personality trait of wisdom has been reported to combat loneliness. Wisdom is known to drive empathy and compassion, behaviors which improve emotional regulation, acceptance of uncertainty, and spirituality.²⁸ Thus, wisdom and its prosocial actions may be an age-dependent source of resilience during this pandemic. In addition to wisdom, high pre-pandemic rates of depression in the elderly may paradoxically help this population cope under the current circumstances. One study of older adults with pre-existing major depressive disorder in four US cities found no increase in depression, anxiety, or suicidality during the pandemic. In general, the participants feared contracting SARS-CoV-2 more than social isolation. Although participants reported decreased quality of life during the isolation, having coped with chronic depression in the past had already "taught them to be resilient."²⁹

2 | FACTORS INFLUENCING THE RISK OF GERIATRIC MENTAL ILLNESS DURING THE PANDEMIC

2.1 | Demographics

Sex influences the development of depression and anxiety during the COVID-19 pandemic. In August 2020, 28% of older women

compared to 20% of older men self-reported anxiety or depression.⁷ This is not unexpected, as older women had higher rates of depressive symptoms and diagnoses compared to older men pre-COVID-19 pandemic.³⁰ Koma et al. also discovered that the age group of 65–74 had higher rates of depression and anxiety (26%) in August 2020 compared to those 80 and older (19%).⁷

In addition to sex and age group, there was a significant effect of race. Older Hispanic adults reported the highest rates of anxiety and depression (33%) compared to black (26%), white (23%), and Asian (17%) adults. Pre-pandemic race-related differences in geriatric depression have been well established, with a higher rate of depression among black older persons compared to white,³¹ and high rates of depression among Hispanic older adults.³² Racial differences in anxiety and depression during the pandemic may reflect systemic disparities and discrimination in access to mental health and other medical treatments and resources.⁷

2.2 | Socioeconomic status

Financial resources impact the risk of development of anxiety and depression in older adults during the pandemic. Koma et al. identified that the rate of depression or anxiety was 37% in older adults with annual household incomes <\$25,000, almost twice the rate among older adults with annual household incomes >\$100,000 (20%).⁷ Likewise, older adults who reported that they or a household member lost employment during the pandemic had increased rates of depression or anxiety (34%) compared to those who were unaffected by job loss (21%).⁷ This group also found an association between educational level and rates of anxiety or depression, with participants who had some high school education experiencing higher rates of anxiety or depression during the pandemic (29%) compared to those with some college or graduate degree (21%).⁷ These pandemic trends are consistent with previous studies which demonstrate that socioeconomic status, which is comprised of income and education level, predicts depression in many countries.³³

2.3 | Living situation

The living environment during the pandemic impacts risk of anxiety or depression. Reports of anxiety and depression were slightly increased in older adults who lived alone (27%) compared to those who lived with at least one other person (24%).⁷ Another study of 126 Italian seniors with cognitive impairment discovered significant associations of depression with living alone, having a poor relationship with co-inhabitants, and not owning a pet.¹⁵

Location may also have a significant impact on mental health outcomes of older adults, as the climate and population density may influence which physical activities are possible. It is well established that weather affects mood; for example, one study found that higher temperatures in the springtime were associated with improved mood and better memory.³⁴ Older adults living in mild climates may spend

time outdoors more easily and safely. Connectedness with nature has been shown to have multiple mental health benefits, including improved recovery from stress, exercise, social contact with others, and providing a sense of purpose.³⁵

2.4 | Pre-existing mental health conditions

One of the most striking associations between the development of mental illness among older adults during the COVID-19 pandemic is a pre-existing psychiatric condition. Not surprisingly, patients with baseline anxiety or sleep disorders are more likely to suffer from depression during the pandemic. Older patients with high anxiety levels are more likely to present with somatic flu-like symptoms such as myalgias or cold even when not infected with SARS-CoV-2, perpetuating the fear that they are infected with the virus and may spread it to others.¹⁵ Similarly, older adults with a pre-existing diagnosis of obsessive-compulsive disorder are at higher risk of obsessive worries about the virus and excessive compulsive behaviors to take precautions.¹⁹

The mental health of older adults with schizophrenia or other psychotic disorders may be threatened by physical distancing, as stress from social isolation has been associated with altered behavioral and neurochemical responses in animals and humans.³⁶ It is suspected that due to a combination of histories of social adversity and dopaminergic dysregulation, patients with schizophrenia are at risk for having paranoid interpretations of events.³⁷ This may result in distrust of the health-care system and noncompliance with safety and quarantine measures. One retrospective cohort study of patients who tested positive for SARS-CoV-2 in New York City found that having a schizophrenia diagnosis was associated with an increased 45-day mortality compared to patients with mood disorders, anxiety, or unaffected controls.³⁸ Strikingly, there has been a 25% increase in incidence of psychotic outbreaks during the pandemic.¹⁹ One contributing factor to the increased rates of psychosis during the pandemic in older people may be the use of corticosteroids to treat patients with severe COVID-19. Another possibility may be that infection with SARS-CoV-2 causes neuropathological changes that manifest as psychosis.¹⁹ The mean age of schizophrenia diagnosis has increased drastically during the pandemic, from 39 to 50 years.¹⁹ One study in Milan, Italy showed that the rates of first episode psychosis increased by 29.6% during the pandemic with a higher than expected mean age (43.5 in 2020 vs. 34.0 in 2019). They suspect that this reflects a more stress-related trigger for the psychotic episode,³⁹ rather than late onset schizophrenia. Older adults may be more vulnerable to the development of stress-induced psychosis due to co-occurring medical illness or less effective cognitive strategies in response to stress.⁴⁰

Perhaps the most relevant neuropsychiatric disorder to the older adult population during the pandemic is major neurocognitive disorder. One study found that 13.9% of all Americans age 71 or older have some form of major neurocognitive disorder.⁴¹ The COVID-19 pandemic has exacerbated stresses on this already vulnerable

group. Patients with major neurocognitive disorder may not have equal access to or the ability to recall information about the pandemic, leading to confusion, sadness, and a sense of abandonment about physical distancing measures. Patients with major neurocognitive disorder are less likely to live independently, and instead live in more isolated assisted living facilities or nursing homes. Furthermore, older adults with major neurocognitive disorder may not be capable of compliance with hygiene recommendations, increasing their risk of acquiring the virus and resulting in more strict physical isolation as a precaution to others. The COVID-19 pandemic may also worsen mental status for patients with dementia, as many rely on nonpharmacological treatments such as social interactions, exercise, and group therapies, many of which still may be postponed.¹⁹

2.5 | Pre-existing medical conditions

Just as medical comorbidities such as hypertension, diabetes, Chronic obstructive pulmonary disease, cardiovascular disease, and cerebrovascular diseases are major risk factors for patients with COVID-19, older patients with medical comorbidities are also at greater risk for the development of mental illness during the pandemic. For example, for older adults in “excellent” self-reported health, the rate of anxiety or depression was 14% during August 2020, while rates were higher for patients in “good” health (24%) and were drastically higher for patients with “poor or fair” health (48%).⁷ In fact, one's perception of having “poor or fair health” was the factor most associated with depression and anxiety that Koma et al. found in their study of older adults during the pandemic.

3 | OPPORTUNITIES FOR IMPROVEMENT

Despite the new challenges facing older adults and their caregivers around the world, hope for a brighter, more connected future remains. So far 4.4 billion SARS-CoV-2 vaccine doses have been administered globally.⁴² Unfortunately, mutant variants of the coronavirus are emerging, and their significance is still uncertain.⁴³ Because of this, it is possible that a new strain will evolve that is not protected by the vaccines and physical distancing measures or lockdowns will need to be reinstated. Thankfully, there are a variety of coping strategies and interventions that patients, caregivers and family members, and health-care providers can employ to help reduce the risk of mental illness in the unpredictable months ahead.

3.1 | Enhancing individual coping strategies

A large component of reducing COVID-19-related stress is to remain safe from potential exposure to SARS-CoV-2. One study of 515 Americans found that avoiding sick contacts, canceling unnecessary travel, and refraining from public transportation reduced virus-

related anxiety in older adults.²⁸ With increased isolation at home, there are many helplines designed specifically for older adults that include counseling over the phone or delivery services for food or other essential items. These resources consider the special technology, accessibility, and communication challenges that individual callers may face.¹⁴

Although the pandemic may prioritize digital technology to communicate with family and health-care providers, experts advise that in general, we should minimize “digital screen time” to reduce panic and the spread of misinformation. While COVID-19-related news is essential, unnecessary alarming statistics and disturbing images should be avoided if possible.¹⁴ On average, Americans over age 60 spend 7 h per day in front of a screen. Screen time in older adults has increased over the past decade and increases with age group, with adults over age 80 spending the most time in front of a phone, computer, or television.⁴⁴ Screen time use in American adults is inversely correlated with education level.⁴⁴ Unlike in the field of pediatrics,⁴⁵ there is no consensus on a screen time limit for adults. This may be because many young and older adults rely on digital screens for their work, however, adults over age 60 use the majority of their screen time for leisure, to watch television and videos.⁴⁴ Longer durations of television and computer time among adults has been associated with moderate or severe depression level,⁴⁶ insomnia, and eye and muscle strain.⁴⁷ Strategies to decrease screen time are provided in Table 1.

Older adults may cope better with the isolation knowing that the quality of social connections outweighs the quantity of contacts. Closer, more meaningful relationships have been shown to be more protective against loneliness.²⁸ Acts of compassion towards others also reduce loneliness and promote wellbeing. Compassion is a component of wisdom that shows the greatest inverse correlation with loneliness.²⁸ Unprompted acts of kindness may enrich relationships despite physical distancing and may include becoming immersed in virtual volunteerism, helping with a household chore, expressing gratitude for a loved one, donating to a charity, playing with a pet, or reaching out to a friend and inquiring how they are coping with the changes brought by the pandemic.⁴⁸

3.2 | Optimize caregiver roles

Unprompted acts of kindness for older loved ones by family members and caregivers reinforce that they are loved and not forgotten. Caregivers can ensure that elders have adequate food, arrange grocery deliveries, and even surprise them with their favorite treats.⁵⁰ Families can find creative ways to connect with their loved ones by scheduling recurrent video chats, waving outside of windows,⁵⁰ and continuing to involve them in important family decisions, even if they are physically remote.¹⁴

An essential role for a caregiver during the pandemic is to simply listen to their loved ones. Instead of refuting or falsely reassuring loved ones about the situation, acknowledging the difficulty and welcoming their true emotions and thoughts can be therapeutic and

TABLE 1 Strategies to improve quality of care for older adults during social distancing restrictions

Enhancing individual coping strategies	<ul style="list-style-type: none"> • Help line resources <ul style="list-style-type: none"> ◦ Friendship line: A crisis intervention and non-emergent “warm line” for adults 60+ sponsored by National Institute on Aging (1-800-971-0016) ◦ Disaster Distress Helpline (1-800-985-5990) ◦ National Suicide Prevention Hotline (1-800-273-8255) ◦ SAGE National LGBT Elder Hotline (877-360-5428) • Food, housing, and transportation resources <ul style="list-style-type: none"> ◦ Meals on Wheels (mealsonwheelsamerica.org) ◦ Feeding America (FeedingAmerica.org) ◦ BenefitsCheckUp.org for help with food stamps, medicine, utilities, housing ◦ Teens Helping Seniors (teenshelpingseniors.org) ◦ Eldercare locator for transportation services (eldercare.acl.gov) • Strategies to minimize digital screen time <ul style="list-style-type: none"> ◦ Use the Internet purposefully: Avoid using devices because of boredom ◦ Unplug before bedtime ◦ Monitor use by setting time limits on apps ◦ Continue non-digital hobbies ◦ Regular breaks for physical activity and outdoor time • Improve quality of connections over quantity • Acts of compassion⁴⁸ <ul style="list-style-type: none"> ◦ Virtual volunteerism (engage.pointsoflight.org) ◦ Arrange virtual movie-watching among friends ◦ Call a friend, neighbor or family member experiencing loneliness ◦ Send an appreciative message to a loved one ◦ Donate to foodbanks ◦ Offer mentorship to younger generations
Optimizing caregiver roles	<ul style="list-style-type: none"> • Unprompted acts of kindness⁴⁸ • Routine scheduled video chats and safe visitation strategies • Involvement in important family decisions and conversations • Compassionate conversations embodying more emotional thoughts • Connection to faith-based resources • Reduce caregiver burden <ul style="list-style-type: none"> ◦ National Institute on Aging (nia.nih.gov/health/caregiving) educational articles ◦ Family Caregiver Alliance (caregiver.org): FAQs, checklists, guidance, and educational articles ◦ Senior homecare services (e.g., Visiting Angels, Nurse Next Door, Seniors Helping Seniors, Home Instead) ◦ Grocery delivery services for self and others (e.g., Instacart, PeaPod, Amazon Fresh) ◦ Restaurant delivery services (e.g., DoorDash, Seamless, UberEats) ◦ Care for yourself every day (e.g., take breaks, make time for hobbies, connect with family/friends, eat healthy foods, and get adequate sleep)
Connection to the health-care team	<ul style="list-style-type: none"> • Improve screening of mental illness • Establishment of virtual options for televisits/mental health visits • Virtual or in-person cognitive behavioral therapy • Recommend digital mental health applications,⁴⁹ for example: <ul style="list-style-type: none"> ◦ MoodMission for learning coping skills ◦ Talkspace for therapy ◦ Headspace for meditation ◦ Depression CBT-Self Help Guide for depression • Compassionate, active listening

bonding. Even if caregivers cannot change or improve the problem, they can still be a source of support.¹⁸ Families should also be aware of signs and symptoms of depression in older adults and ask their loved ones about suicidal thoughts if they are concerned.¹⁴ As communities of faith are central to many older adults' lives, connecting them with online religious services,⁵¹ offering to read a passage from a religious text, or praying with them can be healing.¹⁸

3.3 | Health-care providers

While health-care providers have always had a duty to vigilantly screen for mental illness in the elderly, clinicians should consider the new and chronic stresses facing their older adult patients during the pandemic. Not all patients will admit to feeling sad and some may only describe somatic symptoms such as fatigue, sleep issues, or poor concentration.¹⁸ Therefore, it is important to routinely ask about

these symptoms. Virtual mental health or medical visits may in fact provide better context for health-care providers to understand patients' needs because videos reveal home environments.⁵⁰

Cognitive, behavioral, and social therapies can be offered both in-person and virtually, which can help provide coping skills and reduce the perception of loneliness.⁵² Tele-mental health consultations can provide beneficial counseling and social interaction without the physical health risks.¹⁴ Telepsychiatry may employ digital tools to screen for psychiatric disorders in older adults and assess their need for closer monitoring or hospitalization.¹⁹ Providers who are more experienced with telemedicine should be encouraged to provide training opportunities in order to improve the quality and scope of care that can be delivered virtually during and after the pandemic.¹⁹

Although patients may not be attending in-person office visits, it is essential not to diminish the quality of medication management and counseling for a healthy lifestyle. For example, patients should be given professional advice before refills of prescriptions and should be asked about self-medication, as this can be fatal with certain substances or medications.¹⁴ Despite the changing landscape by which medical visits are conducted, the autonomy, respect, and dignity of every patient must be upheld. The doctor-patient relationship can be preserved by continuous involvement of patients in their care through shared decision making.¹⁴

4 | CONCLUSIONS

The COVID-19 pandemic has interfered with almost every aspect of life and presents unique threats to the physical and emotional well-being of older adults. Although anxiety and depression have increased in this population since the start of the pandemic, unexpectedly, elders are coping with the uncertainty better than younger generations. However, depression and anxiety still have negative impacts on their quality of life, function, and general health. The risk for mental illness during this pandemic is multifactorial, influenced by demographics, socioeconomic status, living situation, location, and psychiatric and medical comorbidities. Future research may study the long-term impact on mental health of the older adult population to investigate possible effects of the duration of stress and restrictions related to the pandemic, as well as the influence of vaccination on mental health and COVID-related worries. Additionally, future studies should seek older adults' feedback on and ability to utilize telehealth to improve the technology and their accessibility to it, even in a post-pandemic world.

Due to their medical vulnerability and the possibility of vaccine-resistant SARS-CoV-2 variants, physical distancing recommendations may be long-lasting for older adults. Although the pandemic has brought sacrifices and pain to the older adult population that still endure, this historic crisis illuminates the resilience of our seniors. The scientific evidence reinforces that the elderly population is equipped with rich life experiences and wisdom, key defenses against loneliness.

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CONFLICT OF INTEREST

The authors report no disclosures.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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