

Editorial

What Factors Are Associated With Psychological Vulnerability and Resiliency Among Older Adults During the COVID-19 Pandemic?

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As of early January 2022, the World Health Organization (WHO) attributed nearly 5.5 million deaths worldwide to the coronavirus disease 2019 (COVID-19) pandemic (WHO, 2022). Older adults have been disproportionately affected by the virus. For example, in the United States, which has had the highest number of COVID-19-related fatalities, nearly three quarters of COVID-related deaths have been among individuals aged 65 or older (Bosman et al., 2021). Numerous health disparities have also been observed in COVID-19-related fatalities. In the United States, COVID-19-related fatalities are disproportionately high for Hispanic and non-Hispanic Black individuals (Center for Disease Control and Prevention [CDC], 2022). Due to older adults' increased vulnerability to COVID-19, there has been an influx of research, including in a previous special section of *The Journals of Gerontology, Series B* (Martire & Isaacowitz, 2021), examining the impact of the pandemic on older adults' well-being. Indeed, within 2 years of the onset of the pandemic (January 2022), the search terms "COVID-19" and "older adult" in PsycInfo yielded more than 1,800 results. Many of these studies, including in our previous special section, have primarily been descriptive in nature, focusing on challenges and vulnerabilities facing older adults in the early stages of the pandemic. In this special section, we feature research on the factors that both exacerbate and attenuate the negative effect of COVID-19 on older adults' well-being. Across more than a dozen articles, these factors are explored on the individual, interpersonal, structural, and cultural levels.

Now only part of the focus of the special collection, six articles address specific vulnerabilities for older adults

during the pandemic (Avidor et al., 2021; Igarashi et al., 2021; Lin et al., 2021; Lytle et al., 2020; Pauly et al., 2021; Pearman et al., 2021). Two articles focused on factors related specifically to age—ageism and subjective age (Avidor et al., 2021; Lytle et al., 2020)—one examined racial differences in psychological vulnerability during the COVID-19 pandemic (Pearman et al., 2021), and two studies evaluated factors associated with loneliness (Lin et al., 2021; Pauly et al., 2021). Regarding the effects of ageism, Lytle et al. (2020) found that young adults' ageism toward older adults (measured prior to the pandemic) predicted their lower intentions to help older adults during the pandemic. This finding suggests that willingness to engage in supportive behaviors toward older adults during the pandemic may be negatively influenced by preexisting age-related biases. Avidor et al. (2021) examined the effects of older adults' age-related beliefs (subjective age) on their mental health. Using a life-span sample, they found that higher levels of anxiety sensitivity during the pandemic predicted worse mental health outcomes (anxiety and depression), particularly among participants with higher subjective ages. Pearman et al. (2021) used daily diaries to systematically evaluate racial differences in psychological well-being (anxiety and depression) during the pandemic. They found that race moderated the association between COVID-19 stress and depressive symptoms, with increases in experienced COVID-19 stress being more strongly associated with increases in depressive symptoms for Black participants relative to White participants. The collection includes one qualitative paper (Igarashi et al., 2021), which used open-ended questions to highlight some of the

vulnerabilities experienced by older adults during the pandemic. Difficulties associated with psychological distress included lack of interpersonal connections and difficulties following everyday COVID-19-related protective activities.

Lin et al. (2022) evaluated loneliness progression among older adults in Florida (United States) and Ontario (Canada) at five time points during the first 6 months of the pandemic. They identified gender differences in the trajectory of loneliness between Florida and Ontario, with more loneliness among men in Florida and among women in Ontario. Meanwhile, through a daily diary approach, Pauly et al. (2021) found that greater self-reported time alone predicted higher self-reported loneliness, particularly for older adults. However, engaging in everyday creativity (e.g., arts and crafts) offered some buffering effect.

The theme of resilience is more closely explored in the remaining studies in this special section. These studies explore individual, interpersonal, structural, and cultural factors that may promote resilience. On the individual level, using a daily diary approach and a life-span sample from mainland China, Jiang (2020) found that on days when individuals felt more gratitude, they experienced better subjective health and lower COVID-19-related stress. Interestingly, the benefits of feeling gratitude on COVID-19-related stress persisted the following day, suggesting that gratitude may buffer against stressful and anxiety-provoking situations. Research on interpersonal factors that conferred resilience during the pandemic focused on giving and receiving support between mother and adult children (Jiang et al., 2021) and prosociality toward close others (Cho et al., 2021). Specifically, Jiang et al. (2021) found that receiving support was associated with giving more support. Moreover, mothers and adult children both benefitted from support, but in opposite ways: mothers showed a greater benefit from providing support, whereas adult children showed a greater benefit from receiving support. Cho et al. (2021) found that age was positively associated with engaging in prosocial behaviors (particularly toward close others), but not empathy, during the pandemic. From this, they concluded that age differences in prosocial behaviors emerge even during a period of limited resources and/or threat. Igarashi et al. (2021) discussed sources of resiliency among older adults during the COVID-19 pandemic in their qualitative research study. In their work, they observed that keeping busy with familiar and new activities, interpersonal connectivity, shared positive experiences, and social solidarity ameliorated COVID-19-related psychological distress.

Two studies explored the impact of pandemic-related media messaging and consumption. In an experimental manipulation, Levy et al. (2021) exposed younger and older adults to pandemic-related positive or negative age stereotypes in curated media messages. While exposure to these stereotypes had no impact on the mental health of younger adults, exposure to negative pandemic-related age stereotypes in messaging led to mental health declines

among older adults. Furthermore, exposure to positive pandemic-related age stereotypes in messaging led to improvements in mental health outcomes for older adults. Nolte et al. (2021) conducted an online life-span study to evaluate pandemic-related changes in media consumption. They found that older adults consumed less media and demonstrated greater behavioral media avoidance than their younger counterparts despite no difference in self-reported avoidance. These data suggest that older adults may not deliberately avoid pandemic-related media, but that they may subconsciously avoid pandemic-related media messages, perhaps as a way of maximizing positive emotional experiences over negative ones.

Finally, one study evaluated the role of cultural differences in COVID-19-related psychological processes. Lin et al. (2022) explore age-related and cultural differences in COVID-19-related optimistic bias (i.e., an individual's belief that bad things are less likely to happen to them than to others). In a survey that compared younger and older adults from China, Israel, and the United States, the researchers observed that older Chinese participants demonstrated more COVID-19-related optimistic bias (e.g., than younger Chinese participants). Furthermore, they also demonstrated more COVID-19-related optimistic bias than older adults from Israel and the United States.

Next Steps in Studying Psychological Aging and COVID-19

The first special collection of COVID-19-related papers described the psychological experiences of older adults during the early months of the COVID-19 pandemic (Martire & Isaacowitz, 2021). This current special collection of papers advances our understanding of psychology and aging during COVID-19 by considering the factors associated with psychological vulnerability and/or resiliency under pandemic conditions. Negative age-related beliefs, high anxiety sensitivity, lack of interpersonal connections, race, gender, and self-reported time spent alone were associated with greater psychological vulnerability. Meanwhile feeling gratitude, participation in activities, interpersonal connectivity, providing or receiving social support, and exposure to positive age-related stereotypes were associated with greater psychological resiliency.

As the pandemic evolves, our approaches for understanding and describing well-being among older adults will also need to evolve. Early pandemic-related studies focused on well-being during intense periods of lockdown, social distancing, and low vaccine uptake. As the epidemiology of the COVID-19 pandemic shifts, policies will continue to shift, which will likely have implications for well-being, especially among older adults. Moreover, our approach to studying well-being will need to evolve. Indeed, the preponderance of studies in this special section leveraged data from self-reports, with several of these taken over numerous time points either through daily

diaries (Jiang, 2020; Jiang et al., 2021; Pauly et al., 2021; Pearman et al., 2021), or using longitudinal assessments (Lin et al., 2021). Although there are numerous benefits from this approach, they limit our ability to make causal inferences. Integrating experimental manipulations (Levy et al., 2021) in future work will address this limitation.

A critical takeaway from the work in this special section is the finding that well-being among older adults during the COVID-19 pandemic likely varies greatly based on demographic characteristics, including age, gender, and race. A few of the papers in this collection consider these variables (H. Lin et al., 2022; T. Lin et al., 2021; Pearman et al., 2021); however, more work is needed. Given that the COVID-19 pandemic has differentially affected subgroups of the population (CDC, 2022), it is reasonable to expect that the processes associated with psychological vulnerability and/or resiliency also vary considerably based on demographic characteristics.

Given what we have learned about COVID-19-related resiliency and vulnerabilities from the papers in this series, researchers also have the opportunity in future studies to test existing psychological interventions using the COVID-19 pandemic as a real-life, naturalistic stressor. For example, evidence from the positive psychology literature suggests that gratitude interventions can improve psychological functioning and adaptive coping under stressful conditions (Boggiss et al., 2020; Killen & Macaskill, 2015). Indeed, Jiang (2020) found support for this claim by showing that experiencing more gratitude on one day predicted reduced COVID-19-related stress on the subsequent day. Additionally, digital technology interventions have been utilized to reduce social isolation among older adults (Sen et al., 2021), and art therapy has demonstrated promise for improving the emotional states of individuals with a history of trauma and/or chronic health conditions (Regev et al., 2018; see also Pauly et al., 2021 in this special section). Research that evaluates the benefits of such interventions for reducing distress under pandemic conditions would add a valuable contribution to the field.

Though the papers highlighted here have primarily focused on psychological well-being, it will be important for future research to delineate how vulnerability and resiliency factors are associated with stress-related physical, cognitive, and mental health outcomes among older adults under pandemic conditions. Given our knowledge of the mind-body interplay, it is reasonable to expect that factors associated with increased psychological resiliency and vulnerability also have implications for health. Indeed, prior work has shown that chronic stress predicts poorer outcomes for older adults on each of these factors (Gouin et al., 2008; Marin et al., 2011). This relationship between chronic stress related to the pandemic and poorer health may be particularly pronounced for disadvantaged groups (Pearlin et al., 2005), as they experienced more hardships during the pandemic (Perry et al., 2021). Given the wealth of data that have been collected during the initial stages

of the pandemic, follow-up longitudinal research, experimental research, and interventions would greatly inform our understanding of the trajectory of the pandemic for older adults' physical, mental, and cognitive health.

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