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COMMENTARY

Older adults live alone and socially isolated during the time of COVID-19

Commentary on "Prevalence of loneliness and social isolation among older adults during the COVID-19 pandemic: a systematic review and meta-analysis" by Su *et al*.

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Loneliness and social isolation in older adults are serious public health risks that affect a large number of people all over the world and put them at risk for multiple severe medical conditions for a long time. Especially during the COVID-19 pandemic, some public health measures, such as "social and physical distancing" by limiting their activity in public spaces, and refraining from in-person visits with family and friends, considerably increased the chance of being lonely and socially isolated in many countries. Further public health measures have been put in place to curtail the spread of the coronavirus, including mandatory lockdown for the entire country, mandatory closures of all schools and nonessential facilities, and stringent travel restrictions. Because different countries employ various strategies, the consequences of loneliness and social isolation may vary widely. These public health restrictions were put in place to "flatten the curve" or to reduce or stop the COVID-19 virus's spread, therefore boosting the ability of healthcare facilities to respond appropriately. Therefore, it is crucial to understand the prevalence of loneliness and social isolation among older adults during the COVID-19 pandemic to help health policymakers and healthcare systems develop more sane and effective public strategies to address the issue of loneliness and social isolation.

Being alone and lonely are different but related. Loneliness emphasizes a subjective sensation of an absence of a social network or a companion, whereas social isolation is an objective lack of interactions with others or the wider community. This review by Su *et al*. (2022) found that the prevalence of social isolation was slightly higher compared to loneliness in older adulthood. Social isolation and loneliness may not necessarily go together. In the United States, about 28% of older adults live alone, yet many of them are not socially or lonely isolated. At the same time, despite being surrounded by family and friends, some people experience loneliness. One of the most crucial matters for scientists to investigate is whether loneliness creates a channel for social isolation to have harmful health consequences or whether loneliness and social isolation are two separate processes with different negative health impacts. The internal reasons underlying the disparate incidence of loneliness and social isolation require further study using longitudinal studies.

Older adults experience an acute, severe sense of loneliness and social isolation, potentially developing internal and external health consequences. On the one hand, these restrictive initiatives may have had serious physical and psychological repercussions, primarily on elderly individuals, due to disrupting their daily routines and social contact with family and friends. Someone experiencing chronic loneliness feels intimidated and distrusts other people, which triggers a biological defensive response (Cole *et al*., 2015). The detrimental effects of loneliness and social isolation biologically include decreased levels of hormones that protect against adverse effects on blood pressure and heart rate, as well as dysregulation of the immune and neuroendocrine systems due to insufficient or poor sleep quality (Cacioppo and Hawkley, 2003; Cacioppo, *et al*., 2002; Heffner *et al*., 2011). The biology of loneliness can speed up the development of arterial plaque, promote the growth and spread of cancer cells, and foster brain inflammation that leads to the symptoms of Alzheimer's disease. Numerous physical deteriorations of the body are fostered by loneliness. Furthermore, those who experience loneliness may have immune systems that are less able to defend against viruses, making them more susceptible to many infectious illnesses. On the other hand,

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losing a sense of connection and community may alter their perception of the world, leading to severe emotional and social impacts. A systematic review of social determinants and suicidal behavior has identified that limited social connectivity is related to suicidal thoughts and suicidal behavior in later life (Fässberg *et al.*, 2012).

In addition to increasing the risk of stress, depression, anxiety, and suicide, loneliness might worsen pre-existing mental and psychological issues (Hawkley and Cacioppo, 2010; Lim *et al.*, 2020). Social support, personal resilience, and coping abilities can help people less likely to be stressed or lonely (Ogińska-Bulik and Michalska, 2021; Wu *et al.*, 2016). However, public health controls buffered these effects considerably during the COVID-19 pandemic, which partially led to the elevated prevalence of loneliness and social isolation.

Moreover, the current study contends that stress reactions provided a wealth of evidence for the detrimental impacts of loneliness on health. Adrenal glands produce and release the hormone cortisol into circulation when the body is under stress. Cortisol, sometimes called the "stress hormone," can raise blood pressure and heart rate. Normal cortisol levels can even strengthen your heart muscle while controlling blood pressure and blood sugar levels. However, coping with stress in unhealthy ways raises the risk of hypertension, heart disease, stroke, immune system suppression, and digestive issues. The stress response system will be affected and lead to unhealthy lifestyles, such as smoking, excess alcohol consumption, overeating, or brief sexual encounters, as a psychological relief mechanism (Leigh-Hunt *et al.*, 2017). In actuality, many people are responding to the pandemic's stress by less physical exercise, making unhealthful weight changes, and drinking more alcohol. The body may be continually producing cortisol when the prolonged time of loneliness experienced during the COVID-19 epidemic due to the body's in a high-stress condition. Therefore, it is essential and necessary for healthcare professionals to address the psychological needs of older persons and assist them in developing suitable coping mechanisms for stress and loneliness during pandemics. It is likewise crucial to make appropriate policies and ensure that everyone who needs effective interventions can receive them.

Studies have shown that loneliness increased significantly during the COVID-19 pandemic among younger and older people (Khan and Kadoya, 2021). Despite research suggesting that loneliness declines with age (Barreto *et al.*, 2021), older persons nevertheless experience significant increases in loneliness and isolation. Su *et al.* (2022) used Carstensen's socio-emotional selectivity theory to explain why loneliness and social isolation levels tend to be lower among older adults than younger adults during the COVID-19 outbreak. According to socioemotional selectivity theory, as people age, they start to feel that they have less time in life. Due to these shorter time horizons, older adults tend to prioritize achieving physical needs and emotional gratification, which result in more positive changes in attention and recall on their own (Barber *et al.*, 2016).

Loneliness and social isolation have been indicated to be related to physical and mental health. For example, Cohn-Schwartz *et al.* (2021) have indicated that social isolation has a significant effect on older adults' cognitive function. Besides, it is reported that loneliness and social integration can mediate the association between physical pain and suicidal ideation among the elderly (Lutzman *et al.*, 2021). Social cohesion has been demonstrated to act as a positive indicator for better quality of life for older adults (Burnette *et al.*, 2021). Even older people living together, such as in the retirement village, still reported high levels of loneliness (Boyd *et al.*, 2021). Therefore, it is essential to take urgent legislative actions or steps to strengthen older adults' community involvement and social cohesion, e.g. enhance friendship ties and/or several types of family/community relationships, so that they feel more taken care of, secure, and socially connected in order to promote older individuals' mental health. Strategies to combat loneliness and social isolation in older persons should be investigated to avoid adverse mental health effects.

As such, the paper by Su *et al.* (2022) in this current issue is timely and indeed warranted. The current paper updated a comprehensive understanding of the nature of loneliness and social isolation, how they change over time, their effects on physical and mental health, and practical initiatives to cope with loneliness and social isolation during the COVID-19 pandemic. Hopefully, these results will assist in timely detection and prevention, as older adults who experience loneliness and social isolation are frequently inadequately identified and treated. Moreover, these findings can act as a stepping stone for further research exploring the effects of loneliness and social isolation on older adults. The analysis plan is another strength of this study. The authors did a sensitivity analysis and indicated that no individual study affected the pooled results. They also carefully used subgroup analyses and meta-regression to examine which study characteristics and quality assessment items impact the pooled estimates.

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The public health and clinical implications of these findings are substantial. They suggest that strengthening social integration is an essential target for disease prevention efforts among vulnerable aging populations, especially during the COVID-19 pandemic periods. Many countries have established a variety of interventions and initiatives to manage loneliness issues for the elderly. For example, in Ireland, some volunteer telephone support services have been organized to help connect with older adults (McCausland *et al.*, 2021). Another approach builds on primary care models already used for remote communication to maintain social connections (Karimi *et al.*, 2021). All of these initiatives and strategies can create a global coalition to increase the prevention priority of loneliness and social isolation to increase the welfare of vulnerable old populations. More importantly, the development and implementation of initiatives to address the social factors of health, including loneliness and social isolation, is becoming a rising concern for public health organizations, insurance industries, and community groups.

Although some limitations might have been affected, such as the high heterogeneity, simple study methods, and lack of comparison with related articles in other pandemic periods, this review gives us a straight and comprehensive understanding of loneliness and social isolation among older adults during the COVID-19 pandemic. It highlights that older persons' rapidly expanding psychological requirements are a looming concern for public health systems and decision-makers.

In conclusion, health policymakers and health systems should be aware of the importance of psychological conditions in the context of the COVID-19 pandemic periods. Researchers need to continue on this line of research area for older people. Hopefully, collaboration in multicenter research that would profit from the increased resources and participants to produce more solid and credible conclusions on the effects of a pandemic on older adults in terms of loneliness and social isolation is hoped to be possible.

Conflict of interest

None.

Description of author' roles

The author, Guang Yang, revised, read, and approved the submitted version.

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