

Narative Article

## Association of Loneliness, Social Isolation and Health Problems in the Elderly

Dede Himawan Dwi Susanto<sup>1</sup>

<sup>1</sup>RS TNI AU Soemitro, Surabaya, Indonesia

### Abstracts

Received: July 1, 2024  
Accepted: August 7, 2024  
Published Online: December 2, 2024

You are free to:  
Share — copy and redistribute the material in any medium or format

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.



Correspondence Author:  
Email: [dede.himawan.ds@gmail.com](mailto:dede.himawan.ds@gmail.com)

**Introduction:** Humans develop themselves and their personalities to survive and adapt to live with other humans in society as social beings. Healthy social relationships are essential for mental and physical health while disrupting social interactions can lead to loneliness and social isolation. This narrative review describes health problems in the elderly, especially depression and cardiovascular disease as a result of loneliness and social isolation. **Methods:** PubMed database was searched for studies written in English. Keywords to search the journals and ebooks are “loneliness”, “social isolation”, “depression”, “cardiovascular disease” and “old age”. **Results:** Loneliness and social isolation can occur in all age groups. It is more common in old age, where 50% of the population aged 60 years and over are at risk of experiencing social isolation and one-third experiencing loneliness. This should be of particular concern because it is a risk factor for increased morbidity and mortality in this population. This increased risk is greater than smoking, obesity, and physical inactivity. This situation is closely related to the increased incidence of depression and cardiovascular disease which are the main co-morbidities in the elderly. **Conclusions:** Problems of loneliness and social isolation that are not handled properly can increase the use of health services in the elderly, so special attention is needed to prevent adverse impacts on physical and mental health and reduce unnecessary use of health services.

**Keywords:** Loneliness, Social Isolation, Depression, Cardiovascular Disease, Old Age.

**Cite this as:** Susanto. D. H. D. “Association of Loneliness, Social Isolation and Health Problems in the Elderly”. *Jurnal Psikiatri Surabaya*, vol. 13, no. S11, pp.40-45, 2024. doi: [10.20473/jps.v13.isi1.62654](https://doi.org/10.20473/jps.v13.isi1.62654)

## INTRODUCTION

Humans are social creatures who constantly interact with other humans and the surrounding environment. This situation forces humans to constantly develop themselves and their personalities in order to survive and adapt to other humans in society. As social beings living in groups in everyday life, we certainly cannot escape mutual communication and social interaction [1]. Healthy social relationships are essential for mental and physical health, while disruption to social interaction can lead to loneliness and social isolation. Loneliness and social isolation can occur in all age groups. However, it is more common in the elderly [2].

With advances in public health and medical technology, as well as improvements in sanitation, the average life expectancy of people aged 60 years and over has increased globally, resulting in a projected 56% growth in the population of 901 million to 1.4 billion in 2030 [2]. Data from Badan Pusat Statistik (BPS) states that the number of elderly people in Indonesia has increased from 18 million people (7.6%) in 2010 to 27 million people (10%) in 2020. This figure is expected to continue to increase to 40 million people (13.8%) in 2035, where 50% of the population aged 60 years and over are at risk of experiencing social isolation and one third experience loneliness [2, 3]. This should be of particular concern because it is a risk factor for increased morbidity and mortality in this population. This increased risk is greater than smoking, obesity and physical inactivity. This situation is closely related to the increased incidence of depression and cardiovascular disease which are the main

co-morbidities in the elderly, resulting in high utilization of health services [1, 2, 4, 5]. This narrative review describes health problems in the elderly, especially depression and cardiovascular disease as a result of loneliness and social isolation.

## CASE

Loneliness and Social Isolation in Older Age According to Valtrota and Hanratty [2], loneliness is divided into social and emotional loneliness. Social loneliness is defined as a subjective feeling that is negatively related to the lack of relationships/ wider social networks as the root of loneliness. Meanwhile, emotional loneliness is caused by a lack of interest in social relationships caused by internal factors such as personality and psychological factors [2, 5].

Teresa Seeman [1], defines social isolation as separation from relationships, contact, and interaction with family members, friends, or the wider community. This state creates a feeling of emptiness. Individuals who are involved with positive social relationships tend to have less influence over daily problems. Conversely, those without social relationships will be isolated and neglected. This lack of contact with others tends to build and maintain a negative perception of oneself, lack of satisfaction with life, and often lack of motivation [1, 5].

There are some risk factors for increased loneliness and social isolation in old age, including physical, psychological, social, spousal bereavement/divorce, childlessness, failed marriages, and neglect of family members as well as lack of social engagement after leaving work (Table 1) [3, 6, 7].

Tabel 1. Risk factors for loneliness, social isolation and social vulnerability [7].

Sociodemographic risk factors	Medical risk factors	Social risk factors
<ul style="list-style-type: none"> <li>Increased age</li> <li>Female sex</li> <li>Low income</li> <li>Living in long-term care</li> <li>Living in isolated rural areas</li> <li>Living in low-income urban areas</li> </ul>	<ul style="list-style-type: none"> <li>Multimorbidity</li> <li>Hearing or vision loss</li> <li>Hearing and vision loss</li> <li>Cognitive impairment</li> <li>Functional impairment</li> <li>Frailty</li> </ul>	<ul style="list-style-type: none"> <li>Living alone</li> <li>Living far from family</li> <li>Lack of transportation</li> <li>Few friends</li> <li>Caregiver of an elderly relative</li> <li>Life changes: change of residence, shrinking of social network, loss of a spouse, declining health, and loss of driver's license</li> </ul>

Every individual will experience loneliness at some stage of their life to some degree, research has highlighted that the elderly are very vulnerable to experiencing loneliness and social isolation. Approximately 50% of individuals aged over 60 years are at risk of experiencing social isolation and one-third experience loneliness [2]. In addition, social isolation and loneliness are not completely interrelated, meaning that there are older people who can be socially isolated but not lonely, or lonely but not socially isolated, some older people experience social isolation and loneliness, while others experience neither [6].

**Health Problems in the Elderly as the Impact of Loneliness and Social Isolation**

Loneliness and social isolation are risk factors for all causes of morbidity and mortality with similar results to other risk factors such

as smoking, lack of exercise, obesity, and high blood pressure [8]. In addition, loneliness is also associated with decreased resistance to infection, cognitive decline, and mental health conditions such as dementia and depression [9, 10, 16]. A longitudinal study in Ireland on the elderly showed that loneliness is a major mediator between social isolation and depression. In addition, a longitudinal study in Amsterdam shows that loneliness and social isolation can independently affect the process of developing depressive symptoms. Similar findings in another study in Ireland show that loneliness and social isolation can independently influence depression [10].

Experiences of social isolation and loneliness can negatively impact physical and mental health, as well as increased utilization of health services (Table 2) [2, 6, 7].

Table 2. Adverse outcomes associated with loneliness and social isolation [7].

Physical health	Mental health	Health services
<ul style="list-style-type: none"> <li>• Increased mortality</li> <li>• Increased falls</li> <li>• Increased cardiovascular disease</li> <li>• Increased serious illness</li> <li>• Increased functional decline</li> <li>• Increased malnutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Increased depression</li> <li>• Increased dementia</li> <li>• Decreased life satisfaction</li> <li>• Increased elder abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Increased emergency department visits</li> <li>• Increased physician visits</li> <li>• Increased hospital readmissions</li> <li>• Increased long-term care admissions</li> </ul>

**Depression and Cardiovascular Disease**

Depression is a serious condition and can significantly affect a person’s quality of life. Symptoms of depression include feelings of sadness, loss of interest or joy in activities that are usually enjoyable, tiredness, feelings of worthlessness, and difficulty concentrating or making decisions. According to WHO, the overall prevalence of depression in the elderly varies between 10-20%, depending on the situation in each region [5, 11, 12]. Loneliness can also contribute to depression and death in old age. However, depression is only associated with death, when feelings of loneliness arise [7, 11].

Loneliness and social isolation have been

identified as predictors of changes in depressive symptoms. In addition, persistent loneliness and ongoing social isolation are closely related to depression [9, 10, 13].

Depression plays an important role in the incidence of cardiovascular disease beyond conventional risk factors. One study found that the incidence of coronary heart disease was more than 70% higher in depressed individuals compared to non-depressed individuals. Furthermore, the increased risk of cardiovascular disease is closely related to the severity and recurrence of depression [4]. Meta-analysis studies show that loneliness and social isolation in old age can have a negative impact on physical health, includ-



ing an increased risk of stroke, myocardial infarction, and poor sleep quality. Loneliness and social isolation can also decrease immunity, stimulate the release of pro-inflammatory monocytes, increase cytokines, and glucocorticoid resistance, all of which increase the risk of developing coronary heart disease [5]. In line with this study shows that the impact of loneliness and social isolation on death is equivalent to light smoking (15 cigarettes/day) and alcohol consumption (6 drinks/day), and exceeds the risks caused by

lack of physical activity, and obesity [15]. Several mechanisms have been proposed to link loneliness and social isolation with cardiovascular disease. Increased stress reactivity, autonomic system dysregulation, and exaggerated inflammatory response were identified as important pathways involved [4, 15]. A pathophysiological model linking loneliness and social isolation with atherosclerosis and cardiovascular disease development is shown in Figure 1 [4].

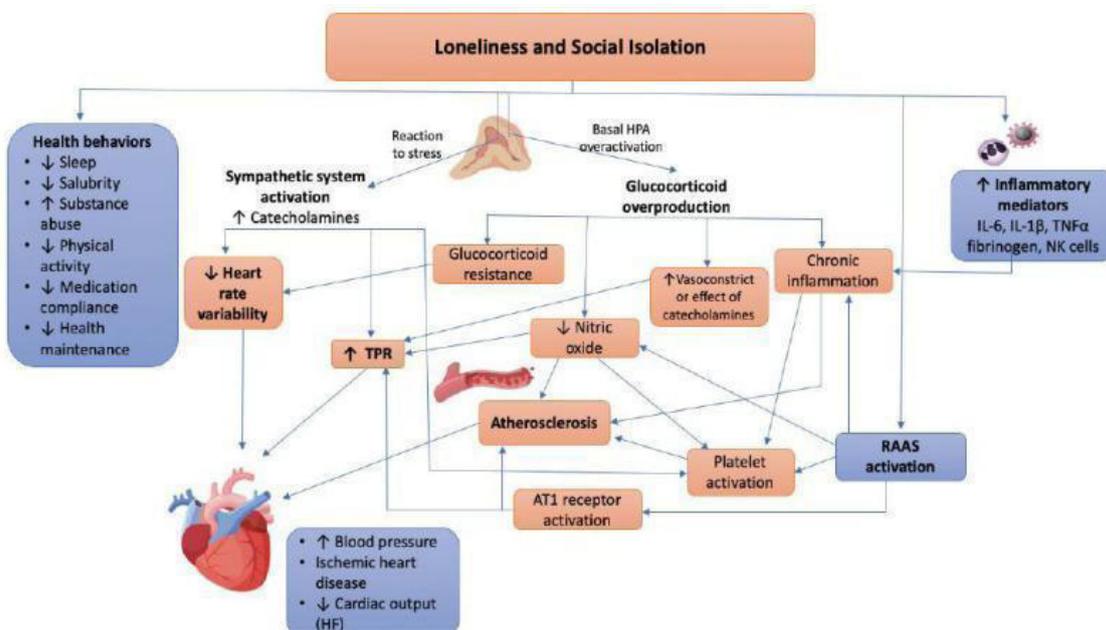


Figure 1. Pathophysiological hypothesis of the impact of loneliness and social isolation on cardiovascular disease [4].

Research shows that individuals who feel lonely have a higher risk of developing cardiovascular disease. Physicians must consider perceptions of social relationships when assessing patient risk factors. Identifying someone who is experiencing loneliness can help identify someone who may not be considered at risk for cardiovascular disease according to conventional risk factors, but who is likely to be. Highlighting one’s loneliness can be a first step in preventing the development and aggravation of other risk factors for cardiovascular disease, including anxiety, depression, and health-damaging behav-

iors such as smoking and drinking alcohol. Identifying the symptoms of loneliness in a person can help doctors to take appropriate preventive measures and improve the overall well-being of the patient [4, 13, 15, 17, 18].

**Management of Loneliness and Social Isolation in the Elderly**

In primary health care, family physicians have an important role in reaching out and identifying patients experiencing loneliness or social isolation. In the UK, 3–4 general practitioners report seeing between 1 and 5 people a day who come mainly because they

are lonely. Just as doctors screen conventional risk factors such as smoking, diet, and exercise, the role of doctors is also needed to identify patients who are socially isolated or lonely and provide appropriate management [7].

A reactive approach is currently used to address the needs of socially isolated individuals, many of whom are not identified.

The Three-item Loneliness Scale (Table 3) are validated scales to assess someone who is at risk of experiencing loneliness and social isolation. Additionally, screening with one question “How often do you feel lonely (almost never or never, sometimes, often)?”. Although single item questions are less extensively studied, they are more practical in clinical practice [7].

Table 3. The Three-item Loneliness Scale [7].

Question*	Hardly ever	Some of the time	Often
How often do you feel that you lack companionship?	1	2	3
How often do you feel left out?	1	2	3
How often do you feel isolated from others?	1	2	3

\*Participants are told “These questions are about how you feel about different aspects of your life. For each question, answer how often you feel that way.” Score range from 3-9, with higher scores indicating greater loneliness.

In order to reduce the risk of depression and cardiovascular disease in old age, it is important to pay attention to factors such as loneliness and social isolation. Increasing social interaction and maintaining positive relationships with family and friends can help reduce the risk of loneliness and depression in old age. In addition, maintaining a healthy lifestyle such as regular exercise, a balanced diet, and avoiding smoking and drinking alcohol can also help reduce the risk of cardiovascular disease [4, 5, 7, 10, 15, 18, 19, 20].

### CONCLUSION

Humans as social creatures need healthy social relationships for physical and mental health. Loneliness and social isolation can occur in any age group. However, they are more common in older people. Various factors such as physical, psychological, and social conditions can increase the risk of loneliness and social isolation in old age. Loneliness and social isolation increase the risk of depression and cardiovascular disease in old age.

Family doctors have an important role in identifying patients who experience loneliness or social isolation. The Lubben and

Hughes scale can be used to assess the risk of loneliness and social isolation. It is important to pay attention to these factors to reduce the risk of depression and cardiovascular disease in the elderly by increasing social interaction and living a healthy lifestyle. Problems of loneliness and social isolation that are not handled properly can increase the use of health services in the elderly, so special attention is needed to prevent adverse impacts on physical and mental health and reduce unnecessary use of health services.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### FUNDING

The authors did not receive any funding for the research.

### REFERENCES

- [1] Martino Jessica, Pegg Jennifer, Pegg Frates E. The connection prescription: using the power of social interactions and the deep desire for connectedness to empower health and wellness. *Am J Lifestyle Med.* 2017; 11(6): 466–475. <https://doi.org/10.1177/1559827615608788>
- [2] Fakoya Olujoke A, McCorry Noleen K,



- Donnelly Michael. Loneliness and social isolation interventions for older adults: a scoping review of reviews. *BMC Public Health*. 2020; 20: 129. <https://doi.org/10.1186/s12889-020-8251-6>
- [3] Pangribowo Supriyono. (2022, Nov.15). Infodatin Lansia berdaya bangsa sejahtera [Online]. Available: <https://www.kemkes.go.id/article/print/22111500004/2022-lansia-berdaya-bangsa-sejahtera.html>
- [4] Sharma Tanya, Padala Prasad R, Meh-ta Jawahar L. Loneliness and social isolation: determinants of cardiovascular outcomes. *Current Cardiology Reviews*. 2021; 17 (6). <https://doi.org/10.2174/1573403X17666210129101845>
- [5] Tragantzopoulou Panagiota, Giannouli Vaitza. Social isolation and loneliness in old age: Exploring their role in mental and physical health. 2021; 32(1): 59-66. <https://doi.org/10.22365/jpsych.2021.009>
- [6] Taylor HO. Social isolation's influence on loneliness among older adults. *Clin Soc Work J*. 2020; 48(1): 140–151. <https://doi.org/10.1007/s10615-019-00737-9>.
- [7] Freedman Amy, Nicolle Jennifer. Social isolation and loneliness: the new geriatric giants. *Can Fam Physician*. 2020; 66(3): 176-182.
- [8] Paquet C, Whitehead J, Shah R. Social prescription interventions addressing social isolation and loneliness in older adults: meta-review integrating on-the-ground resources. *J Med Internet Res*. 2023; 25: e40213. <https://doi.org/10.2196/40213>.
- [9] Santini ZI, Jose PE, York CE, Nielsen L. Social disconnectedness, perceived isolation, and symptoms of depression and anxiety among older American (NSHAP): a longitudinal mediation analysis. *Lancet Public Health*. 2020; 5(1): e62-e70. [https://doi.org/10.1016/S2468-2667\(19\)30230-0](https://doi.org/10.1016/S2468-2667(19)30230-0).
- [10] Zhang Yuwen, Kuang Jiawen, Xin Zhaohua, Fang Jialie. Loneliness, social isolation, depression and anxiety among the elderly in Shanghai: Findings from a longitudinal study. *Arch Gerontol Geriatr*. 2023; 110: 104980. <https://doi.org/10.1016/j.archger.2023.104980>.
- [11] Erzen Evren, Çikrikci Özkan. The effect of loneliness on depression: a meta-analysis. *Int J Soc Psychiatry*. 2018; 64(5): 427-435. <https://doi.org/10.1177/0020764018776349>
- [12] Noguchi T, Saito M, Aida J. Association between social isolation and depression onset among older adults: a cross-national longitudinal study in England and Japan. *BMJ Open* 2021; 11(3): e045834. <https://doi.org/10.1136/bmjopen-2020-045834>
- [13] Nicole K Valtorta. Loneliness, social isolation and risk of cardiovascular disease in the English Longitudinal Study of Ageing. *European Journal of Preventive Cardiology*. 2018; 25(13): 1387–1396. <https://doi.org/10.1177/2047487318792696>
- [14] Shukla A, Harper M, Pedersen E, Goman A. Hearing loss, loneliness, and social Isolation: systematic review. *Otolaryngol Head Neck Surg*. 2020; 162(5): 622-633. <https://doi.org/10.1177/0194599820910377>
- [15] Xia N, Li H. Loneliness, social isolation, and cardiovascular Health. *Antioxid Redox Signal*. 2018; 28(9): 837-851. <https://doi.org/10.1089/ars.2017.7312>
- [16] National Academies of Sciences, Engineering, and Medicine. 2020. *Social Isolation and Loneliness in Older Adults; Opportunities for the Health Care System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25663>
- [17] Zavaleta, D., Samuel, K. and Mills, C.T. 2017. Measures of Social Isolation. *Social Indicators Research*, 131 (1). pp. 367-391. <https://doi.org/10.1007/s11205-016-1252-2>
- [18] Andre Hajek, Steffi G. Riedel-Heller, Hans-Helmut Konig. 2023. *Loneliness and Social Isolation in Old Age: Correlates and Implications*. Hamburg, Germany: Ageing and Mental Health Research. <https://doi.org/10.4323/9781003289012>
- [19] Kaye Lenard W, Singer Clifford. 2018. *Social Isolation of Older Adults, Strategies to Bolster Health and Well-Being*. Germany: Springer Publishing Company. <https://doi.org/10.1891/9780826146991>
- [20] Britta Thege, Juliane Kochling-Farahwaran, Sonja Borm, Stephan Dettmers. 2022. *Ways Out of Social Isolation for Older People in the Context of New Media*. Germany: Springer Wiesbaden. <https://doi.org/10.1007/978-3-658-35581-4>