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The Relationship between Loneliness and Mortality

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Abstract: This literature review explores the complex relationship between loneliness and mortality, emphasizing its effects on physical and mental health across different age groups. Drawing on studies from both Western and Asian contexts, the review highlights that loneliness contributes to increased risks of depression, cardiovascular diseases, substance abuse, and ultimately premature death, particularly among the elderly. It investigates how social relationships, living arrangements, cultural traditions, and institutional frameworks shape the experience of loneliness and its health outcomes. While some findings suggest a direct correlation between loneliness and mortality, others point to mediating factors such as health behavior and access to social or religious support. The paper also examines intervention strategies and proposes that targeted community-based programs and educational engagement may mitigate loneliness-related health risks. The findings underscore the need for more cross-cultural, longitudinal studies and policy-level interventions.

Keywords: Loneliness; Mortality; Social Relationships; Elderly Health; Depression; Intervention Strategies; Cross-Cultural Comparison

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1.Introduction

Whether loneliness affects mortality is a hot topic of discussion in society today. Past research has shown that loneliness may contribute to health problems such as smoking, suicide, depression, coronary artery disease, and the spread of HIV (Patterson & Veenstra, 2010)[1]. A growing number of scholars believe that loneliness affects human health, leading to increased mortality. Loneliness is a significant contributor to health problems in known studies. Moreover, loneliness can and is easily treated by intervention. For this reason, studying the effects of loneliness and proposing solutions can be part of the healthcare system. The primary purpose of this literature review is to examine the factors that influence loneliness and mortality and find solutions. Here it is predicted that social relationships, age, social institutions, cultural traditions, and religion are all factors that can influence loneliness and mortality.

2.Health problems caused by loneliness

While there is evidence that loneliness reaches its peak during adolescence, it is increasingly prevalent with age due to experimental evidence (Yang, K., & Victor, C., 2011). [2]For adolescents, loneliness mostly leads to changes in behavioral habits. For example, smoking and alcohol abuse. Although it has also been shown that for young people, loneliness can contribute to suicide or HIV transmission (Patterson & Veenstra, 2010). However, loneliness causes more health problems in older age groups and is more significant concern to society. Depression due to loneliness, alcohol abuse, smoking, cardiovascular problems, sleep difficulties, altered immune systems and Alzheimer's disease are all factors that may

contribute to early death in older people (Rico-Uribe et al., 2018).[3] Some studies have shown that loneliness causes increased mortality in older people with chronic illnesses compared to those with social support (Olaya et al., 2017). [4]Loneliness also poses a risk of eating disorders, as social isolation can lead to feelings of loneliness, and loneliness can lead some people to overeat (Heinberg & Steffen, 2021). [5]Obesity is a major threat to human health. Lonely people are also more likely to be at risk of coronary artery disease, and the persistence of loneliness symptoms over many years can lead to hypertension and cardiac dysfunction (Patterson & Veenstra, 2010). In summary, research on the topic of loneliness is necessary to reduce human mortality.

3.The impact of social relationships on feelings of loneliness

According to Luo & Waite (2014)[6], the notion that social relationships influence loneliness has been confirmed. Traditional Chinese culture emphasizes the importance of family and community. Due to the long-term rapid decline in fertility rates, the number of order adults left behind with children and those living alone is skyrocketing. In 2014, 25% of China's elderly households were living alone, and this figure is expected to rise to 90% in 10 years' time. Furthermore, as the number of older adults living alone skyrockets, so makes sense of loneliness among China's elderly. In a national survey it was found that in 1992 approximately 16% of older people felt lonely, however by 2000 nearly 30% felt lonely (Yang & Victor, 2008) [7]. According to Luo & Waite (2014), the study used cross-lagged models combined with survival analysis to assess the relationship between loneliness and mortality and social relationships. The results of this study suggest that an older person's mortality rate may increase by 12% over three years if they feel lonely. Older adults living in nursing homes or alone are more likely to feel lonely and have the highest mortality rates.

The conclusions reached in this literature are similar to those reached in the West regarding the loneliness of older people in the West. According to Abell & Steptoe (2021)[8], this paper examined the relationship between living alone and mortality over a period of 8.5 years using Cox proportional risk analysis and concluded that older people who live alone are more likely to feel lonely and have an increased risk of death. This would suggest that there is an effect of social relationships on loneliness and mortality, and that geography does not affect this view. However, the direct effect of loneliness on mortality was found to be diminished by the inclusion of behavioral and health variables in several papers. So the behavioral and health variables need to be examined in detail in order to confirm whether loneliness has a significant effect on mortality. However for social relationships to be linked to depression is well established. According to Holwerda et al. (2016)[9], this literature used the De Jong Gierveld Scale and the Centre for Epidemiological Studies Depression Scale to test the relationship between loneliness and depression and found that isolation of social relationships is a cause as well as a consequence of depression. The relationship between loneliness and depression is reciprocal. The co-occurrence of loneliness and depression has an amplifying effect, and the combination of the two results in higher mortality rates. Studies have shown a link between suicide and early death in older people with depression and social relationships and interpersonal interactions.

4.Social ties do not affect loneliness and mortality

Some scholars disagree with the notion that social relationships influence loneliness and mortality. According to Chan et al. (2015), three loneliness scales based on the University of California, Los Angeles (UCLA) were used to assess loneliness in older participants. This longitudinal study considered variables including self-reported, limited ability to perform life activities, smoking, and depression. Previous studies have considered socio-demographic covariates such as age, gender, race, marital status, housing type, educational attainment and socio-economic status. In contrast to Western countries, there is not a large literature on issues related to loneliness among older people in Asia. The study on loneliness among older people in Singapore included almost all residential patterns of older people, which is representative for some Asian countries. This means that preliminary results have been obtained on the question of whether social relationships influence loneliness. The study found no significant differences in loneliness and mortality between older people who lived with their children and were not socially isolated and those who were. Even when living with family, older people still experience loneliness. Older people need more than family companionship and the availability of social connections may not be the key reason for feelings of loneliness. Further research is needed into the causes of loneliness in older people. As the results of this study differ from

those of studies on Chinese older people, it is speculated that this may be due to differences in social systems and cultural traditions. However, as Singapore has a large Chinese diaspora, this idea needs to be further investigated.

5.Interventions for loneliness

Loneliness can be treated by intervention. A large body of literature is devoted to finding available treatment options to improve human mortality, especially in the elderly. The first is a programme for depression. Loneliness and depression have been shown to be among the identifiable and measurable risk factors for early death (Holwerda et al., 2016). Some scholars believe that loneliness and depression are causally related to each other and that they co-exist, so intervening in loneliness is treating depression (Rico-Uribe et al., 2018). Because loneliness and depression show highly similar symptoms, interventions for depression are also effective for loneliness. The two can be improved together. Training primary care teams to deliver brief interventions in the community to people with depression or who feel lonely has been shown to significantly improve depression outcomes (Rost et al., 2001).[10] Community health teams can use counselling, activities and community befriending parties as ways to improve loneliness. The establishment of counselling units in schools and nursing homes and regular counselling for students and the elderly are predicted to be effective interventions for loneliness. However, no literature has been found on this subject due to the need for long follow-up surveys and widespread availability to find results. After reviewing the extensive literature, it is clear that interventions for loneliness are not well established and widespread. Future research and government could focus on the popularization and development of interventions for loneliness.

6.Other moderating factors

In addition to medical moderation, there are other factors that can moderate the relationship between loneliness and mortality. For example, religion, education and social institutions. For religion, religious affiliation affects mortality rates. Suicide rates in areas of Muslim, Christian or Jewish faith are lower than in non-religious areas (Gearing & Lizardi, 2008)[11]. The reason for this is that such religions are opposed to suicide in the sense that they believe it is wrong and that those who commit suicide are not truly liberated but are punished after death. However, because of the contradictory nature of the texts of some religions, it is believed that some religions also support suicide. For example, Hinduism teaches that death leads to rebirth and forgives suicide, especially as a ritual act of suicide is practiced in some areas of Hinduism (Gearing & Lizardi, 2008). In general, however, the teachings of most religions do not support suicide. It is clear from the above that loneliness leads to an increased chance of suicide, but that belief in religion discourages the act. Religious factors can therefore moderate the relationship between loneliness and mortality. According to Chan et al. (2015)[12], university reduces loneliness in older people, whether living alone or with family. As loneliness in older people is not only caused by living alone or social isolation. It may also be due to the fact that there is nothing to do after retirement. Older people's universities are a place where they can learn and make friends so that education can affect loneliness. For more information on how the social system affects loneliness and mortality, see above on the differences in the causes of loneliness among older adults in China and Singapore. As the Chinese social system is collective and family-centered, older adults living alone are more likely to feel lonely in China. The impact of social relationships on loneliness is huge in China, but Singapore has a different system to China. There is no great difference in the odds of loneliness between older adults who live with their families and those who live alone. So the social system also moderates the relationship between loneliness and mortality.

7.Conclusion

In conclusion, the question of whether loneliness has a serious impact on mortality cannot be accurately measured as most of the current experiments have been studied using participants' self-reports. In particular, there are also health and behavioral factors. However, current research suggests that loneliness does have certain health effects on older people, such as depression and coronary artery disease. The effects of loneliness on human health can increase the risk of death. Widespread implementation of interventions for loneliness can be beneficial. The government could consider implementing measures to intervene in the community to reduce loneliness for the dual purpose of ensuring the physical and psychological well-being of humans. For future research, since most of the current research is about the effects of loneliness on older people, little consideration has been given to the effects of loneliness on young people. This is particularly the case with regard to smoking

and alcohol abuse. Therefore, future research could focus on how loneliness is related to smoking and alcohol abuse among adolescents.

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Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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