



LETTER TO THE EDITOR

The COVID-19 pandemic and death anxiety in the elderly

The coronavirus disease-2019 (COVID-19) epidemic has affected millions of people around the world and posed serious challenges for the global healthcare systems (Usher, Kim *et al.* 2020; Vardanjani, Ronco *et al.* 2020). The mortality rate of the disease is directly related to the age of affected individuals such that the highest death tolls have been reported in people over 65 years of age. Eight out of 10 COVID-19-related deaths reported in the United States have been in people 65 years or older (Ioannidis, Axfors *et al.* 2020). In general, the elderly have a relatively weaker immune system making them more vulnerable to COVID-19. Furthermore, the elderly are more likely to have underlying chronic medical conditions which further render them susceptible to the infection. Therefore, mortality and serious complications are more common among the elderly, especially those with underlying chronic diseases (Meng, Xu *et al.* 2020; Vardanjani & Moayedi, 2020). Specifically, health conditions such as hypertension, diabetes, and coronary artery and cerebrovascular diseases can exaggerate the risk of serious complications of COVID-19 disease in the elderly (Ioannidis, Axfors *et al.* 2020). Anxiety is one of the most common psychological problems in the elderly. This is because people face various types of deficiencies and disabilities at this period of life. Studies have shown that elders are more prone to anxiety due to reduced self-confidence, decreased activity and mobility, losing friends, reduced financial and physical independence, and chronic diseases. The most common type of this is death anxiety (Mohammadpour, Sadeghmoghadam *et al.* 2018; Mokhtari, Moayedi *et al.* 2020). Death anxiety is a feeling of panic, fear, or great worry caused by thinking of death, being detached from the world, or what that would happen after life. The high prevalence of death anxiety among the elderly is due to the fact that they suffer from many physical problems, chronic diseases, movement disorders, physical disabilities, and dependence on others. Retirement and the ensuing loneliness can also contribute to death anxiety

in the elderly (Birgit, Tak *et al.* 2018; Menzies & Menzies 2020).

Traditionally, the United Nation and most researchers have considered some criteria and indicators for defining population ageing, which mainly or in a large part are based on people's chronological age (i.e. 60 to 65 years or older) and the elderly are defined as people 60 or 65 years of age or older. According to the United Nation, 703 million of the global population have been elders (65 or over) in 2019. As population ageing is spreading fast across the world, the number of elders is expected to double to 1.5 billion by 2050 (Fent, 2008).

In addition to physical morbidity and mortality, it is common for confirmed or suspected COVID-19-affected patients to suffer from excessive stress. Confirmed or suspected cases of COVID-19 infection have legitimate fears of the disease prognosis (Li, Yang *et al.* 2020,) which can contribute to stress and anxiety, especially among the elderly (Meng, Xu *et al.* 2020). As a result, they may experience loneliness, denial, anxiety, insomnia, and frustration which can reduce their adherence to medical treatments (Li, Yang *et al.* 2020) and negatively affect their mental health. Additionally, this fear can lead to obsessive-compulsive disorder, suicidal thoughts, depression, alcohol abuse, self-harm behaviours, avoidance, and fear of others (Pragholapati 2020). Isolated individuals with suspected COVID-19 infection may suffer from anxiety due to the uncertainty about their health status and experience obsessive-compulsive symptoms such as recurrent checking of body temperature and hand washing. Moreover, strict quarantine policies can lead to social exclusion, financial losses, discrimination, and shame. Misinformation about COVID-19 may exaggerate public anxiety, fear, isolation, frustration, and irritability (Li, Yang *et al.* 2020). Prolonged quarantine, boredom, inadequate nutrition, insufficient information, and social stigma are also documented sources of stress during the COVID-19 epidemic (Shojaei & Masoumi 2020).

The common anxiety among COVID-19 patients appears to be largely due to the unknown nature and ambiguities about the virus. The inadequate scientific information, the emergence of new clinical symptoms,

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and constant contradictions of previous information about the disease exacerbate public anxiety, especially among elderly. Fear of the unknown, which has always been a source of anxiety, can affect the immune system (Shojaei & Masoumi 2020; Usher, Kim *et al* 2020).

The elderly are increasingly experiencing severe death anxiety during this pandemic (Yao, Chen *et al.* 2020). (Zhang, Peng *et al.* 2019) Important factors that may affect the severity of death anxiety include age, gender, self-esteem, physical condition, mental health, ethnicity, religious beliefs, stressors, previous experience of death, and the media (Assari & Lankarani 2016; Nia, Lehto *et al.* 2016).

The results of a study by Meng *et al.* on 1556 elderly people showed that 37% of them suffered from depression and anxiety during the COVID-19 pandemic (Meng, Xu *et al.* 2020). We have done a comprehensive search and unfortunately, until 11th November, we did not find any study dealing with death anxiety prevalence in COVID-19 patients. However, some studies such as Meng, Xu *et al.* 2020, have reported the frequencies of anxiety and depression in COVID-19 patients. Based on these, death anxiety has a significant role in the progression of a wide variety of anxiety disorders. According to Terror Management Theory, "If the fear of nonexistence lies at the core of the human capacity for anxiety, then reminding people of this deeply rooted fear should exacerbate anxious responding among people with anxiety-related problems" (Strachan, Schimel *et al.* 2007.p1138). According to this, anxiety disorders are the result of an inefficient anxiety protection system (Strachan, Schimel *et al.* 2007). In patients with depression, there is a significant link between death anxiety and depression. Studies and clear evidence in this area confirm the association between anxiety, death anxiety, and depression (Birgit, Tak *et al.* 2018; Lee, Jobe *et al.* 2020; Menzies & Menzies 2020; Mohammadpour, Sadeghmoghadam *et al.* 2018). Accordingly, it can be said that COVID-19 patients suffering from severe death anxiety also show a high incidence of anxiety and depression. Also, COVID-19 patients who suffer from anxiety and depression are more likely to experience a higher death anxiety. Nevertheless, there is a need for more research in this field.

In these pandemic situations, public health authorities must pay more attention to the physical and mental health of the elderly (Li, Yang *et al.* 2020). Mental health professionals have key role to increase the knowledge, attitude, and performance of elderly about the COVID-19 disease. In addition, nurses play an

important role in meeting the complex needs of the elderly during crises. Providing specialized nursing care is essential to meet the physical and psychological needs of this high-risk population (Barasteh, Rassouli *et al.* 2020, Naguy, Moodliar-Rensburg *et al.* 2020). In Iran, half of the elderly population of the country has low health literacy; therefore, health education should be prioritized for these individuals amid the current pandemic (Barasteh, Rassouli *et al.* 2020). Given that death anxiety is a common phenomenon in all societies, mitigating this type of anxiety can considerably improve the elderly's mental health and quality of life (Zhang, Peng *et al.* 2019). Based on our clinical experience, a 67-year-old man diagnosed with COVID-19 was hospitalized under acceptable hemodynamic condition. He has histories of hypertension and diabetes and was hospitalized 7 days ago. He is conscious and has no respiratory distress (without supportive O₂) and arterial O₂ saturation of 71% and 95% (with reserve mask). While crying, he kept saying: "I definitely die because everyone says elderly people who contract the virus die". He was constantly repeating: "I am dying", and "This disease is going to kill me."

Being hospitalized can place people in a dire condition at any age. However, the impacts of hospitalization are more serious in the elderly due to their higher death anxiety, low physical strength, and lower ability to accustom with strange environments. Death anxiety is a multifactorial phenomenon. The most important contributing factors are the ward of hospitalization, being unaware of therapeutics and the disease prognosis, limited visits, communicational skills of health providers (especially nurses), and providing inadequate education and information about the disease and treatment course. In regard to the policies, health protocols, and domestic regulations and instructions of every institution, most medical centres and elderly nursing homes do not comply with these guidelines during the COVID-19 pandemic, which exaggerates death anxiety in the elderly (Menzies & Menzies 2020).

The main point of this letter is not to present the case, but warning health managers, and particularly physicians and nurses, who are at the forefront of dealing with COVID-19 (and are in direct contact with the patients) around the world. Considering that the majority of victims of COVID-19 (more than 1,270,930 until drafting the current letter, 11th November)(World Health Organization 2020) are old people aged >65 years, this age group is more vulnerable to death anxiety than other age groups. So, they should be receiving special attention and more help by us amid

this pandemic. The present case is just one of millions around the world, who may be ignored.

Considering the psychological effects of death anxiety, as an important part of elders' lives, it is necessary to educate patients with COVID-19 how to deal with death anxiety and implement psychological interventions and counselling programmes in hospitals and treatment centres to relieve psychological stress and improve the mental health of these patients. It is also suggested to conduct a study to determine the prevalence of death anxiety and divulge its related factors as well as its relationship with other psychological components in the elderly with COVID-19.

RELEVANCE FOR CLINICAL PRACTICE

The clinical implications of this study include creating a sensitivity at all levels of health management and in healthcare workers to prevent, timely diagnose, and manage fear of death and treat death anxiety disorder in vulnerable patients such as the elderly with COVID-19 infection by implementing appropriate interventions and programmes. The measures that should be implemented to reduce death anxiety, at first step, include educating people how to cope with the COVID-19. Next, these educations should be provided using appropriate strategies, by mental health experts, and based on cultural and personal beliefs. It is recommended to start these educations following admission and continue them after discharge.

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REFERENCES

- Assari, S. & Lankarani, M. M. (2016). Race and gender differences in correlates of death anxiety among elderly in the United States. *Iranian Journal of Psychiatry and Behavioral Sciences*, 10 (2), 1–7.
- Birgit, M., Tak, L. M., Rosmalen, J. G. & Voshaar, R. C. O. (2018). Death anxiety and its association with hypochondriasis and medically unexplained symptoms: A systematic review. *Journal of Psychosomatic Research*, 115, 58–65.
- Fent, T. (2008). Department of Economic and Social Affairs, Population Division, United Nations Expert Group Meeting on Social and Economic Implications of Changing Population Age Structures. *European Journal of Population*, 24 (4), 451.
- Ioannidis, J. P., Axfors, C. & Contopoulos-Ioannidis, D. G. (2020). Population-level COVID-19 mortality risk for non-elderly individuals overall and for non-elderly individuals without underlying diseases in pandemic epicenters. medRxiv.
- Lee, S. A., Jobe, M. C., Mathis, A. A. & Gibbons, J. A. (2020). Incremental validity of coronaphobia: Coronavirus anxiety explains depression, generalized anxiety, and death anxiety. *Journal of Anxiety Disorders*, 74, 102268.
- Li, W., Yang, Y., Liu, Z.-H. et al. (2020). Progression of mental health services during the COVID-19 outbreak in China. *International Journal of Biological Sciences*, 16 (10), 1732.
- Meng, H., Xu, Y., Dai, J., Zhang, Y., Liu, B. & Yang, H. (2020). The psychological effect of COVID-19 on the elderly in China. *Psychiatry Research*, 289(112983), 1–2.
- Menzies, R. E. & Menzies, R. G. (2020). Death anxiety in the time of COVID-19: Theoretical explanations and clinical implications. *The Cognitive Behaviour Therapist*, 13(e19), 1–11.
- Mohammadpour, A., Sadeghmoghadam, L., Shareinia, H., Jahani, S. & Amiri, F. (2018). Investigating the role of perception of aging and associated factors in death anxiety among the elderly. *Clinical Interventions in Aging*, 13, 405.
- Mokhtari, R., Moayed, S. & Golitaleb, M. (2020). COVID-19 pandemic and health anxiety among nurses of intensive care units. *International Journal of Mental Health Nursing*, 29 (6), 1275–1277.
- Naguy, A., Moodliar-Rensburg, S. & Alamiri, B. (2020). Coronaphobia and Chronophobia—A Psychiatric Perspective. *Asian Journal of Psychiatry*, 51, 102050.
- Nia, H. S., Lehto, R. H., Ebadi, A. & Peyrovi, H. (2016). Death anxiety among nurses and health care professionals: A review article. *International Journal of Community Based Nursing and Midwifery*, 4 (1), 2.
- Pragholapati, A. (2020). MENTAL HEALTH IN PANDEMIC COVID-19. Available at SSRN 3596311.
- Shojaei, S. F. & Masoumi, R. (2020). The importance of mental health training for psychologists in COVID-19 outbreak. *Middle East Journal of Rehabilitation and Health Studies*, 7 (2), 1–2.

- Strachan, E., Schimel, J., Arndt, J. *et al.* (2007). Terror mismanagement: Evidence that mortality salience exacerbates phobic and compulsive behaviors. *Personality and Social Psychology Bulletin*, 33 (8), 1137–1151.
- Usher, K., Bhullar, N., Durkin, J., Gyamfi, N. & Jackson, D. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support. *International Journal of Mental Health Nursing*.
- Vardanjani, A. E., Moayedi, S. & Golitaleb, M. (2020). COVID-19 Pandemic Hemoperfusion Therapy Versus Plasma Exchange Therapy in Intensive Care. *Iranian Journal of Allergy, Asthma and Immunology*, 19(S1), 7–9.
- Vardanjani, A. E., Ronco, C., Rafiei, H., Golitaleb, M., Pishvaei, M. H. & Mohammadi, M. (2020). Early Hemoperfusion for Cytokine Removal May Contribute to Prevention of Intubation in Patients Infected with COVID-19. *Blood Purification*, <https://doi.org/10.1159/000509107>
- World Health Organization. 2020. Coronavirus disease (COVID-19) pandemic (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>).
- Yao, H., Chen, J.-H. & Xu, Y.-F. (2020). Patients with mental health disorders in the COVID-19 epidemic. *The Lancet Psychiatry*, 7 (4), e21.
- Zhang, J., Peng, J., Gao, P. *et al.* (2019). Relationship between meaning in life and death anxiety in the elderly: self-esteem as a mediator. *BMC Geriatrics*, 19 (1), 308.