

A Theoretical Review on the Impact of COVID-19 on the Mental Health of the Elderly

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ABSTRACT

Since late 2019, a sweeping viral contagion has percolated the whole globe. During the pandemic, the elderly, who constitute a population at particular risk, appeal to more attention and efficient measures to surmount all the hurdles. This paper, through a method of literature review, defines the quarantine, uncertainties, and media hype as determining factors that would predispose the elderly to have mental disorders based on their special characteristics. As for the coping strategies, this paper exemplifies three validated coping strategies, health education about authentic information, exercise, as well as internet for medical needs and family connection, aiming to promote constructive interpretations and measures about the mental health of the elderly. The paper finds that all the repercussions caused by pandemic should be matched with sovereign coping strategies. Health care givers are necessary to furnish with authentic facts and evidence to dispel all the negative thoughts during this special period. Besides, exercise is an excellent way to maintain both physical and mental health. Internet and multimedia are good ways to render support for medical demands and family interactions.

Keywords: COVID-19, the elderly, mental health, media hype

1. INTRODUCTION

Coronavirus disease 2019 (COVID-19) has been spreading worldwide since late 2019 and causing a pandemic. According to World Health Organization (WHO), as of 9 May 2022, there have been 515,192,979 confirmed cases of COVID-19, including 6,254,140 deaths across the world. [1]

This contagion is caused by the SARS-CoV-2 VIRUS and has become an omnipresent topic all over the world. One of the most important features of this virus is that anyone can be defined as a susceptible population. Most people contracted with coronavirus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, compared to other kinds of populations, the elderly population has a characteristic of the age's immunological senescence thus this group has the highest risk of infection and death, especially those individuals with chronic diseases [2].

It is conspicuous that the elderly are in dire straits during this public health emergency of global concern, and meanwhile obtaining persistent well-being and healthy aging have always been human preoccupations. For the sake of the elderly's health aging, none of the

physical and mental health can afford to be omitted, and not that many papers focus on this side in detail. This paper analyzes the characteristics and mental health of the elderly in the pandemic and aims to conclude some essential determinants and then promote constructive countermeasures for the future.

2. COVID-19 AND THE ELDERLY

2.1 COVID-19 in the elderly

2.1.1 Characteristics of the elderly

There is a virtually unanimous conclusion that the elderly can be a vulnerable group on part of the biological side and demographic side. As for biological characteristics, having a weakened immunologic system is an inherent part of older adults. They must go through a decline in immune function and pro-inflammatory cytokines-upregulation due to aging, which means the impossibility of a balanced inflammatory response and a higher risk of infection among this vulnerable group.[3] Besides, aging denotes degraded functions of organs and tissues at different levels. The whole ramshackle package can not afford to bear any extent of viral attack.

As for demographic characteristics, population aging has been a prevalent topic all over the world. In the wake of burgeoning medical technology and decreasing fertility, the number of older adults has been proliferating disproportionately. According to the United Nations, the number of the elderly (>60 years old) is estimated to spike to two million by 2050 [4], which means the challenge of protecting this vulnerable group from multifaceted diseases and injuries has been escalating.

2.1.2 Incidence and mortality

Based on the special characteristics of the elderly, it is not surprising that this group constitutes a high incidence rate, a severe course of the disease, and a high mortality rate. According to the Centers for Disease Control and Prevention, elderly people (>65 years old) make up 17% of the total population in the United States, but they account for 31% of confirmed cases, 45% of hospitalizations, 53% of intensive care unit admissions, and 80% of fatalities. [5] Unfortunately, the elderly are bearing the brunt of this tumultuous time.

In addition to the risk of infection, the prognosis and recovery of the elderly are relatively weak compared to other groups. Study data [6] have shown that among death cases, most of them are patients who are over 60 years old and/or are accompanied by chronic diseases. John et al. [7] also established a cross-sectional survey of European countries and several US locations to conclude features of mortality between the elderly (<65 years old) and non-elderly people (<65 years old). Data showed that only 4.5-11.2% of all COVID-19 deaths were ascribed to the non-elderly and the risk of mortality of people under 65 years old was 30- to 100-fold lower than those above 65 years old in all European countries. Therefore, unsatisfactory prognosis and high mortality rates are common in the elderly population.

2.1.3 The elderly with chronic diseases

Global chronic non-communicable diseases account for a great proportion of the global burden of disease. Furthermore, multimorbidity, which means the coexistence of two or more than two chronic diseases, has been prevailing around the globe. A retrospective study conducted by CHEN, et al. [8] has shown that 24.5% - 51% of COVID-19 patients had chronic underlying diseases such as hypertension, diabetes, cardiovascular disease, and chronic obstructive pulmonary disease (COPD). Another study conducted by academician Zhong Nanshan's team [9] on 1099 patients diagnosed with COVID-19 showed that 23.7% of patients had at least one underlying disease, and patients with the severe illness had more comorbidities. All the study data mentioned above illuminates that the chronic disease that has become the norm rather than an

exception among the elderly can be regarded as a catalyst for infection and even death.

2.2 COVID-19 and mental health in the elderly

Reminiscing all the elderly around us in reality, an image of being lethargic might occur to us. Several factors devitalize the elderly, and this condition runs afoul of the tenet of healthy aging. A brand-new definition of healthy aging, which was illuminated by the World Health Organization (WHO) in 2015 encompassed the combination of physical and mental capacities of an individual. [10] Losses of intrinsic capacity along with aging manifest sensory and cognitive impairments, such as amnesia, and trouble with interpreting and articulating.

According to the World Health Organization (WHO) data, over 20% of people aged over 60 experienced mental disorders. 7% of them suffered from depressive symptoms and 3.8% of them had anxiety disorders. [11] Drastic turmoil caused by the pandemic has been triggering developing anxiety, depression, or irritability all over the world, especially among the elderly. Beata et al. [12] utilized a sociodemographic questionnaire to assess the mental symptoms among 221 individuals aged 60+. The result indicated that 19.15% of the participants manifested depression and 58.83% of them had a presence of loneliness. Nevertheless, it's imperative to summarize the reasons for mental disorders and propose countermeasures accordingly.

2.3 Reasons for mental disorder

2.3.1 Quarantine

Quarantine, a social intervention, is conducive to decreasing human contact and stifling the spread of the virus. However, the gregarious complex is deeply entrenched in people's personalities, and taking advantage of quarantine to regiment people's freedom is not compatible with nature. Besides, loneliness in late life can be an essential indicator of depression and segregation from all the loved ones and the community would exacerbate the sense of loneliness and depressive symptoms. With the secular experience of depression and a paucity of timely support, the elderly may go to extremes and commit suicide.

Ziggi et al. [13] conducted a longitudinal mediation analysis of the mental symptoms of community-residing older adults collected from NSHAP and concluded that the elderly tend to obtain perceived isolation, which means when they are deprived of social support, depression and anxiety would be on the way.

2.3.2 *Uncertainty and fear over disease*

The elderly are predisposed to have sentimental insecurities about safety, livelihood, finance, relationship, etc. Since the highest mortality occurs among the elderly, there is no wonder that they worry about infection and death. Fear is an ingrained feature when someone is in face of all the uncertainties and risks. Su et al.[14] did a multiple linear regression analysis of 549 surveys they collected and concluded that influencing factors of mental health during a pandemic include conscious physical condition, fear perception of the COVID-19 pandemic, attention to elderly death cases, and clear routes of transmission. Apparently, the elderly get depression and anxiety from a paucity of cognition about their disease and fraught situation.

Besides, many community services, like daycare centers for geriatrics, have been shut down temporarily, for the purpose of reducing nonessential gatherings. Therefore, the elderly, especially those with comorbidities, will be preoccupied with the thought that what if the chronic condition gets worse. The increasing anxiety would be a pernicious factor for the pre-existing disease and the whole well-being in turn.

2.3.3 *Social media*

Understandably, an individual at risk of an infectious disease is tempted to assimilate an assortment of information he or she can access. However, because of the large transient population globally, the rapid pace of viral mutation, and the delay of case announcements, there is a formidable gap between the authoritative reports and sensational but weakly founded comments that can go viral easily. Public cognition about risk tends to be overstated. If individuals fall into the trap set by ill-disposed ones, all of a sudden the news report is discounted as propaganda, which is not conducive to healthy practices.

Not to mention the elderly, who are usually not able to distinguish between the authentic message and the noxious one. Some reports[15] even illustrate that the elderly have no value compared to younger counterparts, and when it comes to the issue about only one ventilator, the older individual is the one who does not get the ventilator. Swamped with information bombs, older people might experience the unprecedented climax of anxiety and depression.

In addition, even though browsing through all the sources coming from authoritative agencies, it is conceivable that the 24/7 news coverage of events that go up and down like roller coasters might be a powerful stressor.

3. COPING STRATEGIES

3.1 *Health education about authentic information*

In order to address the situation mentioned in the “uncertainty and fear over disease” and “Social Media” parts, facilitating health communication from health-givers like doctors and nurses can be an efficient way on part of the elderly, since they generally define health-givers as “that omniscient person” and have a constant connection for chronic disease treatment. Therefore, health care givers are supposed to fill in this gap and strive to disseminate professional knowledge timely. Besides, considering the educational situation of the elderly, the words and phrases used should be understandable and straightaway.

The health education could include basic knowledge of COVID-19, such as the transmission route, incubation time, symptoms after infection, and how to prevent it. Health care givers can inform them that COVID-19 is highly contagious and widespread, that they should not take it lightly, and that they need to strictly follow the local prevention requirements, wear masks, minimize exposure, and self-isolate at home if it is necessary. They were also informed that even if they contracted COVID-19, they could still recover if they received professional treatment. It is imperative to help elderly patients with chronic diseases to establish an objective understanding of COVID-19, not to believe and disseminate information from unofficial sources, and to avoid blind optimism or excessive nervousness about COVID.

Wang et.al[16] conducted a longitudinal study on the mental health of a general population and concluded that compliance with doctors and nurses, the hope of survival, proactive measures from exposure, and consent to the system of health education can alleviate the possibility of suffering mental disorders during the pandemic.

3.2 *Exercise*

Exercise is beneficial for people’s physical health, especially during periods of confinement. As for the elderly who owns aging characteristics, moderate-intensity aerobic exercise like yoga has been highly recommended, even without the need for facilities and space[17].

Besides, older adults usually do not boast a motley of habits and interests. When there are no friends who are called upon to break the monotony of their daily existence during the quarantine, exercise can be an excellent choice to kill the time and relieve the stress valve.

Guo et al.[18] established a cross-sectional survey about predictors of mental symptoms and figured out that the association between the low risk of mental disorders

and exercise habits is significant, even though only 15.4% of participants had exercise habits. Similarly, Grazia et al.[19] organized an online survey among 2974 Italian subjects and found a powerful positive correlation between the variation of physical exercise and mental well-being.

3.3 Internet and multimedia

3.3.1 virtual consultations and telemedicine

Due to policies about suspending parts of hospitals and community services, the elderly's demand for consultation cannot be satisfied. In China, many general hospitals have been gearing up for contingency and also for future development. For example, Peking Union Medical College Hospital[20] aggrandized the online specialist consultation service based on the quintessence of "Internet+ Medical Treatment". Patients are blessed with instant assistance and guidance through the official platform. This practice not only mitigates the public's fear of disease and timely treatment but also aligns with the doctrines of prevention from spreading the virus.

Furthermore, Anton et al.[21] combined cognitive behavioral therapy(CBT) with the internet to test the efficacy of loneliness treatment. After robust linear regression analysis, the results shine a promising light on the potential of internet-based CBT and are expected to be put into practice.

3.3.2 Connecting with families by internet

Along with the decline of dynamics about sociation, the magnitude of the role played by family is highlighted. Many old people pin their faith on their descendants and resign themselves to their fate when some disastrous events occurred. Therefore, family contact is of paramount importance. According to Guo et al.[22]'s interpretation, one individual's mental status and well-being are entwined with the intergenerational relationship. Then, based on this interpretation, Li et al.[23] also collected data from China Longitudinal Aging Social Survey(CLASS) and analyzed the bond between depression and family cohesion. The family's support functions as a positive factor to refrain the elderly from depression. Considering a paucity of interaction with family during self-isolation, the internet comes into handy and plays a crucial role in bridging the elderly with loved ones.

4. CONCLUSION

In conclusion, as a susceptible group, the elderly, the ambient family, and the community should be proactive but not reactive in face of this upheaval. All the repercussions caused by the pandemic should be matched with sovereign coping strategies. Fear and uncertainties would rise during a coerced rest period, health care

providers are on the mission to furnish with authentic facts and evidence to dispel all negative thoughts. Besides, efficient and healthy communication is also supposed to exterminate all the gratuitous rumors derived from media hype. In addition, exercise is an excellent way to maintain both physical and mental health. In the last, utilizing the internet and multimedia is able to render support for medical demands and family interactions. This turmoil is still on the march, and incessant reemergence might be intimidating. However, methods always exceed difficulties.

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