Systematic Review: The Impact Of Pandemic Post-Covid-19 On The Mental Health Of The Elderly

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Abstract.

The elderly are those who spend a lot of time at home to gather with their families and grandchildren, which is normal. This systematic review aims to look at the impact of the COVID-19 pandemic on the post-pandemic mental health of the elderly. based on research journal articles published from January 2022 to April 2022 on the elderly. Five research articles were obtained from three international publishers. The five journals were tested for due diligence using six PRISMA (Preferred Reporting Items for Systematic Review and Meta-analyses) assessment protocols which included abstracts and titles, introduction and objectives, methods and data, sample selection strategy, data analysis, and research findings. The results obtained based on a systematic study conducted in depth regarding the impact of Covid-19 on the health of the elderly are; (1) Psychological disorders, namely: anxiety, stress, overdose, and trauma. (2) Disorders of happiness, namely quality of life, perceptions of health and well-being (3) and Physical Disorders, namely functional disorders, dyspenia, and cognitive disorders. This finding represents the impact that the elderly have felt during the 4 months of the pandemic in 2022, even though it has been more than two years of the COVID-19 pandemic, the elderly are still feeling the negative impact of the pandemic. The third finding of the impact of the pandemic on the elderly can be used as reference material and a source of reference for in-depth research by linking variables that can increase positive emotions in individuals.

Keywords: *Elderly* , COVID-19, *Mental Health, and Pandemic.*

I. INTRODUCTION

Approximately three years ago, a devastating event occurred that befell all humans in this world, this event is known as the *Corona virus disease* (COVID-19). This virus was first discovered in Wuhan City, which is the capital of Hubei Province in China. The city is the main center for this disease to develop and spread, but previously it was not known exactly what caused this disease to occur [1]. Scientists continue to conduct research to develop the case, in-depth studies related to the origin of this disease were successfully explored with the discovery of viral *pneumonia patients* who experienced severe acute respiratory syndrome which was transmitted from animal viruses to humans, causing major epidemics or infectious diseases [2].On February 2020, it was agreed by the World Health Organization (WHO) to designate covid-19 as a pandemic of *Corona virus disease* [3]. The increase in the number of COVID-19 cases has had a mental impact on all levels of society, such as the economy, business, education, health, and psychology. In particular, the growing psychological impact is anxiety and mental stress that can affect health, especially in children and the elderly [4] [5]. According to WHO [6] the increase in the elderly population will increase in 2020 to almost equal the number of toddlers, an average of 11% of the 6.9 billion population in the world is filled by the elderly. An increase in the elderly as a result of sustainable development, by 2030 WHO [7] predicts that a ratio of 1 in 6 of the world's population will be people of old age. Data found in Indonesia based on Susenas data in March 2022 proves that as much as 10.48% of the populations are elderly, currently there are more elderly women than elderly men, namely 51.81% compared to 48.19%. There are more urban elderly than rural elderly, namely 56.05% compared to 43.95%. As much as 65.56% are young elderly (age 60-69 years), 26.79% are middle elderly (age 70-79 years), and 7.69% are old elderly (age 80 years and over) [8].

Elderly are people who have entered an age with declining health or also known as a population *at risk* whose numbers are increasing. According to Allender et al [9], *The population at risk* is a collection of people whose health is disturbed by several factors that affect it. Generally, the death rate is found to be higher in parents with pre-existing respiratory problems coupled with chronic comorbidities [10]. Based on data obtained from the Center for Disease Control and Prevention in China, the mortality rate, which was initially 3.6%, increased by 18% for those aged 60-69 years, this impact also occurred in several countries

such as: Korea, Iran, Spain, Italy, and America [11] [12]. The mortality increased by 2 to 3% for adults, but for the elderly it was three times higher.Problems experienced in the elderly generally are sensory problems, impaired cognitive abilities, and decreased health. The elderly experience many changes in various aspects of life, including changes in health conditions, economic status, social environment, and changes in family roles. These changes will basically make the elderly experience a decrease in their meaning in life [13].Old age is the closing period in one's life span. The pandemic cases that occurred were a serious blow to the elderly, because they had to be able to adjust to the current pattern of life after the world returned to a new order of life. This is of course traumatic for the elderly, due to their vulnerable condition with the diseases they have suffered, so that the elderly are expected to be able to maintain their physical fitness [8]. This research seeks to describe the impact of the COVID-19 pandemic on the mental health of the elderly, through research to obtain variables that can explain the meaning of life or variables that affect the meaning of life, so that they can become a reference for researchers who will conduct further research related to the findings in the study [3].

II. METHODS

This research was a literature review with a systematic approach. This study was done by following PRISMA guidelines *(Preferred reporting Items for Systematic Reviews and meta-analyses)* as a groove implementation for a systematic review and meta-analysis [14]. The steps in this study consisted of several stages: (1) defining research journal eligibility criteria; (2) defining sources of information; (3) selecting research journals; (4) collect data; and (5) select data items to be used as sources for review [15].The inclusion criteria in the study used were empirical research with quantitative and qualitative design that could be accessed (open access), articles in English, participants were elderly, and searches were conducted from early January to April 2022 regarding the impact of COVID-19 on the mental health of the elderly during pandemic. A search for literature sources was carried out on the Google international scientific journal provider site Scholar , PubMed , and Sciencedirect. The reason for choosing these databases is because of the ease of access according to the keywords written. The search exclusion criteria are: literature review; opinion; thesis; dissertation; review; editor's message; research that is not conducted with the elderly; research that is not related to the meaning of life; and research with closed access,The selection of articles was carried out through several stages, namely: (1) searching with the help of keywords written "impact ", "COVID-19", "mental health", "elderly", this was done to bring up search articles according to the desired criteria; (2) reviewing and selecting research journals based on titles, abstracts, and keywords according to the inclusion criteria; and (3) reading articles that passed the selection at the previous stages in full or in part to ensure the suitability of the articles with the inclusion criteria so they can be included in further review [15].

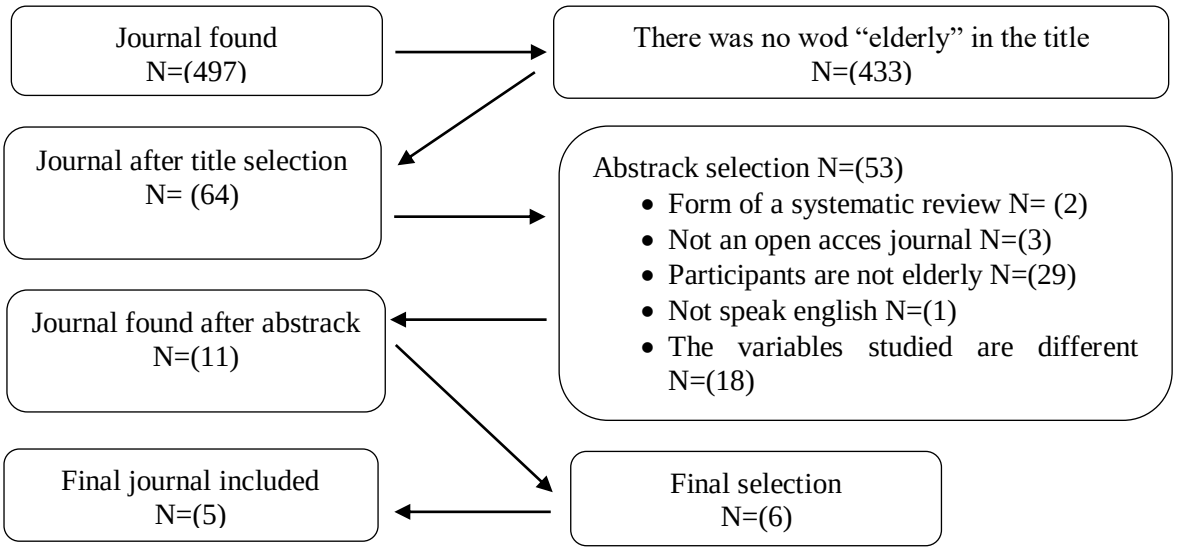

Fig 1. The flow of selection of scientific publications

In the next stage, data collection was carried out manually using a data extraction form which consisted of several parts, including title, year, research design, participation and location, measurement instruments, and research results. The assessment was carried out by reading the articles that fit the inclusion criteria thoroughly and extracting data which resulted in the results of the analysis in the form of a synthesis and presented in the form of a summary table [15].

III. RESULT AND DISCUSSION

After the selection, five selected journals were to be reviewed more carry on. The five studies reviewed were conducted in several countries, including; two research articles from America, and one article each from Spain, Canada, and Turkey. All participants in this study were elderly people. A summary of the findings from the journal review is presented in the table following:

Table 1. Summary of Article Reviews

No	Title, Author and Year	Design	Participant	Research Findings
1	Effect of health anxiety on disease perception and treatment compliance in elderly patients during the COVID-19 pandemic in Turkey [16]	Descriptive Quantitative	There are 7,550,000 elderly people registered with the population statistics agency in Turkey	These results found that the impact of COVID-19 caused physical and psychological problems in elderly individuals. Making it difficult for them to comply with treatment, fear of death, loss of loved ones, the amount of negative news spread in the news/media which adds to their anxiety.
2	Racial and socioeconomic status differences in stress, posttraumatic growth, and mental health in an older adult cohort during the COVID-19 pandemic [17]	Cross-Sectional Study	Adults with mean age 76 ± 81) years with 176 participants in the United States	This study found that there were no differences between groups and races in terms of mental health, religious coping strategies and positive reframing would regenerate post-traumatic enthusiasm.
3	Health impact on the elderly survivors of COVID-19: Six months follow up [18]	Longitudinal Observational Study	Patients aged > 70 who have been discharged from a hospital in Spain	These findings result in the impact of COVID-19 on elderly survivors of COVID-19 after being discharged from the hospital, namely: experiencing functional impairment; cognitive impairment; and symptoms of depression.
4	COVID-19 lockdowns' effects on the quality of life, perceived health and well-being of healthy elderly individuals: A longitudinal comparison of pre-lockdown and lockdown states of well-being [19]	Longitudinal study design	The sample is 72 healthy elderly people in Canada	The findings in this study are: decreased quality of life; perceptions of health and well-being; and death.
5	Impact of the COVID-19 pandemic on temporal patterns of mental health and substance abuse related mortality in Michigan: An interrupted time series analysis (Larson& Bergmans, 2022)	Descriptive Quantitative	Data obtained from the United States Department of Health and Human Services (MDHHS).	The impact of COVID-19 on mental health has increased cases of suicide, overdose, and death in people over 65 years of age.

Based on a thorough review regarding the impact of the COVID -19 pandemic on the mental health of the elderly, from the five articles that have been read, the authors get three points to review at a later stage. This step was taken to make it easier for the authors to obtain accurate research results in discussing research results. A brief explanation can be seen in table 2:

Table 2. Overview of post-covid 19 Mental Health

No	Mental Health Overview		A brief description
	Dimensions	Indicator	
1	Psychic Disorders	Worry	The daily life that the elderly live during the pandemic is not as comfortable as it used to be. Now, apart from thinking about illness due to their age, they are also thinking about the impact of the COVID-19 pandemic which has killed hundreds of people in one day, this event has made them fearful of death so that it increases their anxiety not to want treatment and triggers the emergence of other diseases in the elderly [16].
		Stress	Their mental health has worsened with the arrival of the pandemic [20].
		Overdose	The use of illegal drugs increased when the pandemic came [20].

		Traumatized	Older individuals are more vulnerable to exposure to COVID-19 than younger ones, because COVID-19 is considered a frightening event [17].
2	Happiness Disturbances	Quality of life	There is a decrease in the quality of life for the elderly from day to day [19].
		Health perception	Their health is not well controlled [19].
		Well-being	They also do not enjoy the rest of their current life [19].
3	Physical Impairment	Functional disorders, dyspnea, and cognitive impairment.	It is a factor associated with the risk of death after 6 months after treatment [21].

The results of a literature study show that there were several impacts felt by the elderly on their mental health during the COVID-19 pandemic. Among them are psychological disorders, happiness disorders, and physical disorders.

Psychic Disorders

The development of pandemic cases has had a huge impact on individuals, this was stated by Kwok et al [22], individuals who have entered the elderly phase will feel a higher level of anxiety and despair for their health as they get older. In line with research conducted by Varli and Alankaya [16] found that the issue of the COVID-19 pandemic had a higher impact on anxiety and perceptions of disease in the elderly, negative news circulating on social media, television, and newspapers added to their anxiety and fear. They were worried that it would be difficult to get treatment for their illness, especially individuals with a history of comorbid diseases. Consequently, according to Altin (2020), several places impose curfews for the elderly, but in fact this policy has a negative impact on their mental and physical health. The elderly are also not given the freedom to go out of the house, older individuals are more susceptible to exposure to COVID when compared to younger individuals [17]. This causes physical and psychological problems in elderly individuals.

Other impacts felt due to the pandemic are suicide, liver failure, alcohol, and overdose in using illegal drugs. Research conducted by Larson and Bergmans [20] shows an increase in suicides, alcohol-related deaths, and overdoses in men aged 65 years living in rural areas. Furthermore, Willey [17] conducted a study on levels of post-traumatic stress, socioeconomic status, and mental health during the pandemic, showing that there was no difference in the stress experienced by the elderly from the two communities due to post-trauma during the pandemic. Black individuals show significantly greater post-traumatic growth than non-Hispanic white individuals. So it can be said that during the pandemic, the elderly equally felt the impact of stress due to the event. Willey's research also provides coping strategies used to deal with stress: (1) non-Hispanic white people receive more emotional support; (2) while black people more dominantly use religion as their coping spirituality. The use of religion is believed to be a coping strategy to promote a better quality of life [24].

Happiness Disturbances

The government is making various efforts to prevent the entry of the COVID-19 more widely, especially in elderly individuals by implementing a lockdown. A research conducted by Colucci et al [25] shows that efforts to lock the house for the elderly have negative impacts such as, decreased quality of life, perception of health, and well-being. Individual who are used to doing a lot of physical activities such as sports, leisurely walks, and cycling, are confused because with the arrival of a pandemic they will certainly stop these activities, they must be limited in their activities, especially with the lockdown rules. According to Park et al [26] exercise improves the quality of life in healthy adults aged 65 years and over. In addition, the decline in happiness is also felt by the elderly. Individuals who experience a decreased quality of life are those who were previously feeling happy [27]. Thus, the feeling of happiness experienced by the elderly can change quickly so the elderly need other people to fill every empty day.

Physical Impairment

Individuals who were declared healthy after receiving treatment for six months due to the pandemic were returned to their respective homes, of the 165 patients, 13% of patients died, and 23.8% needed further treatment. Some of the disease symptoms found in the study of Garcia et al. are functional impairment,

cognitive impairment and depressive symptoms [21]. Individuals who suffer from premorbid cognitive vulnerability (impaired memory) will experience a decreased quality of life [19]. For this reason, the elderly need other people to provide encouragement in perceiving health, such as walking regularly around the house.Disorders that occur in the elderly require more attention to efforts that can be made to overcome them, one of these efforts is psychological intervention. The COVID-19 pandemic poses long-term and short-term threats that can harm the population and living environment, such as increased loneliness, anxiety, and depression [28].

Psychological interventions can be delivered remotely, meanwhile for adults who have entered old age, the most commonly used therapeutic modality is CBT/Cognitive Behavioral Therapy [28]. This effort can be done with the family's own guidance or guided directly by a doctor. Results of research conducted by Titov et al [29] demonstrated that CBT interventions can help adults ages 60 and older significantly reduce symptoms of anxiety and depression. Carefully self-guided, physician-led CBT interventions, or group guidance via a physician's pre-treatment telephone interview resulted in similarly high treatment completion rates, satisfaction rates and great clinical outcomes. Therefore, the existence of support received by the elderly is able to

IV. CONCLUSION

This systematic review was created to answer questions about the impact of the covid-19 pandemic on the mental health of older people. Based on a review conducted on five journals that were read in depth, it was found that there were three impacts of covid-19 on the mental health of the elderly, namely: (1) psychological disorders; (2) happiness disorders; and (3) physical disorders. Psychological disorders consist of anxiety, stress, overdose, and trauma. Happiness disorders consist of quality of life, perception of health, and well-being. While physical disorders consist of functional disorders, dyspenia, and cognitive disorders. The findings of the three pandemic impacts on the mental health of the elderly can be used as reference material and a source of reference for in-depth research by linking variables that can increase positive emotions in individuals.

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