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THE CAUSES OF STRESS ON ELDERLY DURING PANDEMIC OF COVID-19: A SYSTEMATIC REVIEW

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ABSTRACT
The problem of COVID-19 was able to infect all people regardless of age group, however the elderly of 60 years and above were the more vulnerable population to exposure to the corona virus. This research was aimed to identify the causes of stress on elderly during pandemic of COVID-19. Methods: A systematic search through three databases: ScienceDirect, PubMed, and ProQuest, by using these following terms "causes of psychological", "stress", "cause", "elderly", "older adult", and "COVID-19". The search was restricted on publication during December 2019 – October 2020. The article was selected by exerting PRISMA, the total of 16 articles were analyzed through systematic review. Findings: Based on the synthetic finding, this research found that the stress on elderly was divided into two factors. The internal factors were chronic disease, loneliness, emotional condition, and self-endurance, while external factor were lack of family support, regional lockdown, lack of communication with neighbor, reduced income, and lack of physical exercise. Conclusions: This research finding referred to risk factors from wither internal factor or external factor which could cause the stress on elderly during this pandemic of COVID-19.

Keywords: cause; covid-19; elderly; strees

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INTRODUCTION

Coronavirus was a RNA virus which causes infection as common cold or influenza until severe acute respiratory syndrome (N. Chen et al., 2020). The virus in a long-term period causes to psychopathological condition (Bohmwald et al., 2018). The Severe Acute Respiratory Syndrome (SARS) and Middle-East Respiratory Syndrome (MERS) cause to neuropsychiatric condition as long as after the pandemic is over (Rogers et al., 2020). The outbreak of coronavirus 2019 (COVID-19) disease is a global health threat since the beginning of 2020 (N. Chen et al., 2020), (Tian et al., 2020). COVID-19 is very infectious and fatal for a number of patients (Rothan & Byrareddy, 2020). Until this far, there is no a special solution found for this problem (Lai et al., 2020). The first case of coronavirus (COVID-19) has been reported in Wuhan, China, on December 2019, and this new kind of disease is started to spread quickly in Asia and Europe. On March 11, 2020, the World Health Organization (WHO) has declared for an issue of pandemic outbreak. Since the first case has been confirmed, the world has found more than 20,3 million of COVID-19 infection, and more than 741.723 people have died (per August 12, 2020).

In the statement from Regional Director of WHO, Europe, it is recorded that 29 of 30 elderly people with the largest proportion points to European member countries (except to Japan). 95% of death in those countries are on adult of above 60 years old and 50% of death on them who are above 60 years old (A statement from European WHO about the elderly people in case of COVI-19, 2020). In India, 51,2% of death as the result of COVID-19 occurs on people who are above 60 years old, as it has been launched by Government of India on April 30, 2020 (D'cruz & Banerjee, 2020). The risk of severe infection and death seems to relate to stochastic age (which reflects oxidative stress and underlying epigenetic changes) rather than to chronological age. Thus, the weakness and mobility seem to mediate the relation between infection and harmful health result.

WHO has also warned that the risk which is generate d by COVID-19 can result trouble, fear, anger, stress, agitation, and greater spending on parents during this pandemic, or during the lockdown period. Further, according to (Craske & Stein, 2016) COVID-19 can trigger stress, raise collective panic because of its uncertainty and lack of knowledge. Besides, the level of transmission is fast, infectious, and serious threat for life which can contribute to the increase of stress level (Antwi-Amoabeng et al., 2020). The emergency state due to COVID-19 will most likely cause the people to have a high level of stress. Moreover, the lockdown condition which is enacted by the government will also result depression indication on the population (Xu et al., 2020). In short, the lack of knowledge currently regarding to psychological symptoms which suffered by elderly population during COVID-19 crisis has encouraged us to explore the stress and worry situation on this vulnerable population. It has been estimated that the lockdown situation can affect mental health of elderly people (Brooks et al., 2020). Hence, the elderly who are at risk will be isolated and this risk will increase a serious anxiety as worry or depression during the social isolation (Deprest et al., 2020). Therefore, this research is aimed to identify the causes of stress on elderly during pandemic of COVID-19.

METHOD

The researchers exerted a systematic search in English language. The articles were published during December 2019 – September 2020. The search of e-database was done on October 2020 from three databases: ScienceDirect, PubMed, and ProQuest. In this systematic review, there is no search for the grey literatures. The search was done by using four keywords, as "causes of psychological" OR "stress" AND "cause" AND "elderly" OR "older adult" AND "COVID-19". The researchers used each keyword within the process of searching, then they combined all keywords with conjunction "and, or", this step was performed in each database. The articles were filtered clearly and strictly according to inclusion criteria, it referred that the articles discussed about issues that were related to the causes of stress or which could affect the stress during pandemic of COVID-19, especially on elderly population. This process was then selected based on the inclusion and exclusion criteria. The inclusion criteria within systematic review was indicated that: (1) the research discussed about the causes of stress on elderly during pandemic of COVID-19; (2) the research respondents were taken from elderly who were 50 years old and above; (3) the full text was provided; (4) the articles were published during December 2019 – September 2020; (5) the articles were cross-sectional, longitudinal, and case stud, while the exclusion criteria in this systematic review: (1) the teenager, children, and pregnant woman (2) it was not research article (comment, editorial, review, scientific statement), (3) the articles which did not use English, (4) the articles which focused on intervention and instruments of stress as a consequence of COVID-19.

To assess the quality of article, JBI was used in this systematic review. The research which have fulfilled 60% from the JBI checklist would be inserted in this review. The articles were

then criticized periodically and chosen by two commentators, and the articles with certain quality would be re-assessed by a reviewer to determine the compatibility of inclusion criteria in this review , the process of reviewing 16 journals by looking for findings from each related journal according to existing keywords, In this systematic review, there is no search for the grey literatures. The search was done by using four keywords, as "causes of psychological" OR "stress" AND "cause" AND "elderly" OR "older adult" AND "COVID-19".

RESULTS

There were 747 articles collected from the searching process on three databases by using the keywords that have been determined previously. The researchers identified the probability of duplication, and they found 10 articles which were duplicated. Moreover, as many as 30 articles did not contain full text, so they were excluded from this research. Based on the abstract and title review, there were 737 articles did not match to this research focus. 20 articles were then analyzed due to the full text. 16 articles were in accordance with JBI, inclusion criteria and exclusion criteria of this review. The reason that most of articles were not included in this review was that the research respondents in those articles were common society, children, teenager, until healthcare worker, and some articles which did not discuss about the causes of stress on elderly during pandemic of COVID-19. The document selection was illustrated on figure 1 and summary of article which fulfilled the systematic review criteria was shown on table 1 (attached).

Findings

As many as 16 studies have been acquired based on process of selection and put into this systematic review. Most of researches were from Asian countries (*n* = 30%) with majority of them were from China (*n* = 10,6%), Middle East (10,6%), the other researches were also done in Spain (*n* = 30%), and United States of America (*n* = 30%). The participants of research were elderly people of between 50 – 90 years old, with the average age of participants about 50, 60 – 70, 82 years old. The least number of research participants were 483 respondents (Carriedo et al., 2020) and the most were 2.194 respondents (Pacileo et al., 2020). The percentage of woman respondents was started from 42,7% until 65,96%, while the percentage of man respondents was represented from 34,04% into 57,3%. The researches put into this systematic review were in quantitative and qualitative research design, with the majority of them were in cross-sectional design (*n* = 90,1%). There were only 6 researches which used longitudinal research approach (*n* = 9,1%). Next, the cause of stress on elderly was divided into two factors: internal factor and external factor. For the internal factors: chronic disease, loneliness, emotional condition, and self-endurance, while for the external factors: lack of family support, regional lockdown, lack of communication with neighbor, relatives, decrease of income, lack of physical exercise.

DISCUSSION

The fear, stress, loneliness, and social isolation on elderly during the pandemic of COVID-19 could ruin their endurance and then harm their health and welfare as the consequences (L. Chen, 2020) the functional capacity of body organs on elderly have been decreased due to aging factor, so they were vulnerable to many kinds of bacterial infection, virus, or disease as COVID-19. (Then, it would impact on immune and health change, for instance hypertension and decline of heart function which would worsen the vulnerability to COVID-19. Meanwhile, the harmful consequences from COVID-19 disease on mental welfare of common people kept happening and the elderly people were at the higher risk. The problems related to the elderly were the problems of health and

mental disorder or stress. Those problems were proved by the high number of died people on elderly. Based on the data from WHO, it showed that the highest mortality rate were the elderly of 80 years old and above with percentage of more than 22% (Fear, stress, and loneliness, of older adult during the pandemic of COVID-19 could harm their endurance and then endanger their health and welfare as the consequences (Plagg et al., 2020). The cause of stress on elderly was divided into two, as internal factor and external factor. For the internal factor, it consisted of chronic disease, loneliness, emotional condition, and self-endurance, while the external factor, it consisted of lack of family support, regional lockdown, lack of communication with neighbor, relative, decrease of income, and lack of physical exercise. Those impacts would usually deliver unnecessary stress (Uvais, 2020). The main objective of this review was to identify the causes of stress on elderly during pandemic of COVID-19 through a systematic review on relevant articles.

COVID-19 could infect all people without regarding to age group, but the elderly who were 60 years old and above became the most vulnerable population to be exposed and infected by coronavirus (WHO, 2019). Moreover, the infected elderly would be at risk of more severe condition (Ding et al., 2020). Regarding to the health condition of elderly which could affect to the level of severity if they were infected by COVID-19. Thus, it was important to determine the safe ways for elderly people which related to mental health during this pandemic situation (Callow et al., 2020). The elderly did not only get disadvantage from a relatively low immune system, but they also needed to overcome challenges that appeared from a complex psychological environment during specific life time. Therefore, the mental health for elderly must be noticed more (Ding et al., 2020). Recently, the elderly became the vulnerable group of people and have the highest risk than the other group. The stress which appeared would worsen the immunity of elderly, especially when they who were already vulnerable and have congenital disease (Williams et al., 2020).

The importance of "social relationship", quantity, quality, and advantage from human relationship were the main focus of empirical research on determinant factors of social health. In this broad literature, the social isolation and loneliness reflected both objective and subjective experiences from social relationship termination, they emerged as two main constructions which affected on human health. The aspects of social isolation and loneliness were very relevant with physical and mental health and longevity of adult because of aging factors, for instance relationship loss, medical morbidity, and functional decline, they were predisposition factors. Furthermore, the impact of social isolation and loneliness to health and longevity of elderly was very great. For example, according to JS Kuiper, M Zuidersma (2015), the increase of incident risks for all causes of death.

In the relation to pandemic of COVID-19 issue, the vulnerability of elderly was caused by two factors, internal and external factor. For the internal factor, it was related to the decline of immune function and comorbid disease which could increase the risk of death on elderly people (Lo et al., 2020). For the external factor, the information of death rate on elderly because of COVID-19 also affected to worry or stress on the elderly (Leung et al., 2020). The research result from Qiu, et al. (2020), it has shown that the information regarding to a high rate of death on elderly would affect to their psychological condition. Furthermore, the lockdown policy or social distancing—the restriction of social interaction physically affected to their mental health which was generated by the stress because of isolation or spatial restriction (Plagg et al., 2020). The United Nations has reported that the social distancing on elderly people with dementia would interfere their

mobility and affect to their communication problem to state complaints of disease, so it could complicate the risk mitigation (The United Nations, May 2020).

The external factor was socio-economic problem. The hampered economic activity because of physical interaction limitation would impact to economic decline. This impact would be harder for the elderly population.(Feijóo et al., 2020) Howell (2020) in United States of America has stated that the elderly population tended to be in a low socio-economic status, since their business opportunity was highly reduced, and minimum of pension money or even they did not have, then it would affect to their access of health service. The society also has a significant role to maintain elderly resiliency. The active role of society was an embodiment of social capital. This social capital was referred that each relation which occurred and bound by a form of trust, mutual understanding, and shared value which bound the group member in order to create a collective action could be done efficiently and effectively.

In the context of Indonesian nationality, the social capital was represented by mutual help value. The mutual help was not only encouraged by a spontaneous intention to dedicate the other people, but the base of mutual help was also referred to a feeling of need for each other within the soul of health practitioner, which was aimed to educate the issue of COVID-19 risks and its treatment through a digital channel. In addition, it also needed to keep distance and behave healthy life. The limitation of this research was that some articles did not directly discuss about the elderly and the article which discussed about the cause of stress on age of 17 – 70 years old.

CONCLUSION

The cause of stress on elderly because of pandemic of COVID-19 was divided into two factors: internal factor and external factor. The internal factor comprised of chronic disease, loneliness, emotional condition, and self-endurance. Whereas, the external factor comprised of lack of family support, regional lockdown, lack of communication with neighbor and relative, decrease of income, and lack of physical exercise. The role of government was to provide a valid and tested official information source, then it could be a preference for the society to face COVID-19 problem. This pandemic have brought a great challenge for human being, especially the elderly population. This group of population was the most vulnerable group to be infected by this virus. The coronavirus raised a threat for their quality of life. Therefore, it was very significant to maintain resiliency and minimize the risks to fulfill the need of elderly population during this pandemic period.

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