

Depression, anxiety, coping strategies, quality of life of the elderly during the COVID-19 pandemic

Iswatun Iswatun^{1,2}, Ah. Yusuf³, Joko Susanto^{1,2}, Makhfuldi Makhfuldi³, Abd Nasir^{1,2}, Amellia Mardhika^{1,2}

¹Doctoral in Nursing Program, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

²Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia

³Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

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ABSTRACT

The occurrence of COVID-19 has a psychological impact on the elderly which will affect mental health and quality of life. This study aimed to identify the relationship between depression, anxiety, coping strategies with the quality of life of the elderly. This cross sectional study was conducted during the COVID-19 pandemic. Cluster sampling technique was used to select 232 sample. This study employed geriatric depression scale (GDS 15) to measure depression, the geriatric anxiety inventory (GAI) to measure anxiety, brief resilient coping skala (BRCS) to measure coping strategies, and the WHOQOL-BRIEF questionnaire to measure quality of life among the elderly. Data analysis used Multiple Linear Regression statistical test. This study showed that there is a correlation between depression and quality of life ($p=0.000$), anxiety and quality of life ($p=0.000$) with coping strategies and quality of life ($p=0.027$). This study recommended the provision of appropriate psychological interventions to improve and maintain the quality of life among the elderly.

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Corresponding Author:

Iswatun Iswatun

Faculty of Vocational Studies, Universitas Airlangga

Gubeng, Surabaya City, East Java 60286, Indonesia

Email: iswatun@vokasi.unair.ac.id

1. INTRODUCTION

Coronavirus disease 2019 (COVID-19) is a health problem and crisis in the world because its transmission is very fast [1], [2]. The elderly group is very vulnerable, where the most cases of death occur at the age of more than 80 years [3]. This pandemic causes anxiety, mental health disorders and quality of life [4], onset of depression and decreased quality of life especially for the elderly [5]. Depression and anxiety are symptoms of psychological disorders that occur in the elderly [6]. Feelings of low self-esteem are predictors of the onset of depression [7]. The results of the study in Malaysia dan Indonesia stated that the strongest protective factor for depression was social awareness from the environment, while the strongest risk factor for anxiety was the fear of losing [8].

The aging process causes anxiety, worry, fear, discomfort in elderly people with disabilities, cognitive disorders, comorbidities and difficulty sleeping [9]. Studies in China, it shows that the onset of psychological disorders due to anxiety and fear of COVID-19 is more dangerous than comorbid diseases, especially in the elderly [10]. The population in China showed 53.8% experienced severe psychological effects, 16.5% severe depression symptoms, 28.8% severe anxiety symptoms and 8.1% severe stress levels [11]. Based on the discussion, psychologist experts said that the public's reaction to the spread of COVID-19 was also excessive protection for themselves and their families [12]. This situation gives rise to

obsessive compulsive symptoms, namely a mental disorder that cause sufferers to feel compelled to perform an action repeatedly, the individual will continue to be overwhelmed with anxiety and fear [13]. For patients who are confirmed positive, the psychological impact can be feelings of depression, stress, anxiety when diagnosed with COVID-19 [14]. World Health Organization (WHO) declares COVID-19 as a pandemic, which has spread and infects people almost all over the world [15]. Although COVID-19 involves a higher proportion of mild infections than influenza, the risk of death the elderly with a history of comorbidities requires additional treatment [2].

COVID-19 treatment that has not been found triggers panic resulting in negative stigma from the community to individuals who are confirmed to be suspected or positive and their families, this results in psychological distress in the community of close contact cases [16], [17]. The number of COVID-19 increased by 249,824,903 cases. The United States is the country with the highest number of cases, with 47,278,555 cases. Indonesia is ranked 14th out of 223 countries infected with COVID-19 where the total number of cases is 4,247,320, 143,519 deaths and 4,092,586 recoveries [3]. Many elderly people end up experiencing various psychological and physical problems such as chronic illness and feeling lonely. That is what causes a change in the quality of his life [18]. The elderly have a higher probability of suffering from health problems due to decreased physical and mental function. Decreased quality of life can be caused by emotional disturbances caused by loneliness, metabolic disorders and sexual activity [19]. The decline in physical function causes the elderly to experience health problems due to various chronic and degenerative diseases experienced. Based on the research above, the quality of life of the elderly is still in the low category.

Good coping strategies are used in overcoming health problems so that their quality of life increase. Elderly who use coping strategies have better quality [20]. The elderly who use maladaptive coping styles have poor mental health, while the elderly who use adaptive coping have better mental health [21]. Coping strategies can affect the quality of life of the psychological domain [22]. Strategic coping is used by the elderly to deal with the loss of the quality of social relationships, emotional, loss of well-being and loss of quality of life, anticipation of sadness and seeking support [23]. The use of emotional expression can be used as a coping strategy [20]. This research is considered very important for researchers because the increasing number of elderly people and quality of life are very important issues in dealing with the problem of the elderly during the COVID-19 pandemic. This study aimed to find the relationship between depression, anxiety and coping strategies with the quality of life of the elderly.

2. RESEARCH METHOD

2.1. Studi design and data collection

This cross sectional study was located in the Lamongan area, in four health centers, namely Deket Health Center, Sukodadi Health Center, Pucuk Health Center and Tikung Health Center. The population is all elderly in the area of the Lamongan District Health Office. This study involved 232 respondents, who met the inclusion criteria (no cognitive impairment, able to communicate well and willing to become respondent). The independent variables were depression, anxiety and coping strategies, while quality of life of the elderly is the dependent variable. Data was collected from October to December 2021. This study approved by ethical clearance from Universitas Muhammadiyah Lamongan No. 112/EC/KEPK-S2/10/2021.

2.2. Research instrument

The research employed the geriatric depression scale (GDS 15) [24], consisting of 15 questions; the geriatric anxiety inventory (GAI) [25], consisting of 20 statements; using brief resilient coping scale (BRCS) [26], World Health Organization quality of life instruments (WHOQOL-BRIEF) [27], consisting of 26 questions. The validity test revealed 0.642-0.735, and the reliability test resulted Cronbach's Alpha = 0.981.

2.3. Data analysis

Descriptive analysis was using frequency tables to describe demographic data of age, gender, education, economic status and marital status. Normality test revealed that data is normally distributed. Hence, data were analyzed using multiple linear regression statistical test, with a significance level of <0.05.

3. RESULTS AND DISCUSSION

Table 1 shows that most respondents are 60-74 years old (77.6%), female (72.4%). Their education level is mostly elementary education (64.2%). Hence, more than half of them are married (59.1%).

Table 1. Description of respondents' demographic data

No	Characteristics	Frequency (n)	Percentage (%)
1	Age		
	60-74 years	180	77.6
	75-90 years	52	22.4
2	Gender		
	Male	64	27.6
	Female	168	72.4
3	Education		
	No school	17	7.3
	Elementary	149	64.2
	Junior high	60	25.9
	Senior high	6	2.6
	Diploma/College	0	0
4	Economic status		
	No Income	118	50.9
	< Regional minimum wage	69	29.7
	> regional minimum wage	45	19.4
5	Marital status		
	Not married	10	4.3
	Married	137	59.1
	Widower	28	12.1
	Widow	57	24.6

Table 2 shows that depression, anxiety, coping strategies are related to quality of life. Linear regression (R) test revealed that depression has a significant positive relationship with quality of life (R=0.312, p=0.000), anxiety and quality of life (R=0.397, p=0.000). Hence, coping strategies was also related to quality of life (R=0.145 and p=0.027).

Table 2. Correlations between depression, anxiety, coping with quality of life

No	Variable	Quality of life	
		R	p
1	Depression	0.312	0.000
2	Anxiety	0.397	0.000
3	Coping	0.145	0.027

*Linear regression sig. <0.05

Table 3 shows the results of R=0.505, R²=0.255, F regression =25.965, with p=0.000 (p<0.05). The most influential variable on the quality of life is coping with a beta coefficient =1.258. The regression analysis also showed that all beta coefficients were significant at the level of p<0.05. The regression equation obtained R²=0.255. This shows that statistically, depression, anxiety and coping strategies can contribute 25.5% to the quality of life and 74.5% is influenced by other variables not examined.

Table 3. Results of multiple linear regression variables depression, anxiety, coping with elderly quality of life

Independent variable	Beta coefficient	T	Sig.	95% Confidence Interval for B	
				Lower bound	Upper bound
Constant	17.777	1.980	0.049	0.087	35.467
Depression	0.844	2.977	0.003	0.285	1.402
Anxiety	0.896	5.444	0.000	0.571	1.220
Coping	1.258	5.020	0.000	0.764	1.752
Correlation coefficient (R)	0.505				
Determinant coefficient (R ²)	0.255				
F Regression	25.965				
Significance	0.000				

*Multiple Linear Regression sig.<0.05

Table 4 shows the results of Pearson's analysis of the correlation coefficient (r) of demographic data (age, gender, education, economic status, marital status as predictors of depression, anxiety, strategic coping and quality of life). The analysis shows that the characteristics of respondents' age have an effect on depression (r=0.177 p=0.005), and has no effect on anxiety (r=0.70 p =0.287), strategic coping (r=-0.026 p =0.089), quality of life (r=0.064 p=0.329). Gender influence on depression (r=0.234 p=0.000), anxiety (r=0.160 p=0.015), strategic coping (r=-0.425 p=0.000) and quality of life (r=0.262 p=0.000). Education has

a negative effect on depression ($r=0.329$ $p=-0.045$) and strategic coping ($r=-0.478$ $p=0.000$) and had no effect on anxiety ($r=0.373$ $p=-0.478$), quality of life ($r=-0.062$ $p=0.351$). Economic status effect coping strategies ($r=-0.140$ $p=0.033$), quality of life ($r=0.305$ $p=0.000$) and marital status only affect anxiety ($r=-0.139$ $p=0.035$).

Table 4. Pearson's analysis for the predictors of depression, anxiety, coping strategies and total quality of life (QOL) scores

Category	Depression score		Anxiety score		Coping strategies score		QOL score	
	R	p	R	p	R	p	R	p
Age	0.177	0.007	0.070	0.287	-0.026	0.089	0.064	0.329
Gender	0.234	0.000	0.160	0.015	-0.425	0.000	0.262	0.000
Education	0.329	-0.045	-0.059	0.373	-0.478	0.000	-0.062	0.351
Economic status	-0.054	0.412	0.096	0.145	-0.140	0.033	0.305	0.000
Marital status	-0.022	0.738	-0.139	0.035	-0.121	0.066	0.042	0.527

*Pearson's correlation sig.<0.05

There is a positive correlation depression and the quality of life of the elderly. This is due to psychological disorders that have an impact on physical disorders. The existence of physical and mental health disorders will exacerbate depression [28]. This is in line with a study conducted in Padang [29]. In contrast to research conducted in Jordan [28]. Other studies state that mental disorders are common in old age but these conditions often go undetected and untreated. Mental disorders trigger functional disabilities, rehabilitation disorders, can burden the health system and damage of the elderly and their families [30]. Depression often occurs at the age of over 60 years, which is a psychological problem. Facts explain that during the COVID-19 pandemic it will make people who have mental disorders worse, aged 60-74 years (77.4%) [31]. This finding emphasizes to pay extra attention, especially the elderly who have mental disorders by providing access to mental disorders services, sending home medicine or telehealth to prevent more severe mental disorders [28].

People's fears that are not true will lead to negative discrimination and stigma [32]. This requires intervention and psychological support from the community to eliminate the effects of symptoms of depression and anxiety to reduce stress, especially groups at risk for children, adolescents and the elderly [33]. Elderly who experience anxiety has an impact on their psychological well-being. Theoretically it is stated that psychological well-being includes having status, good religious beliefs, mental health, self-esteem and sexuality [34]. In elderly, experiencing changes in terms of psychological, psychosocial, physical life and cognitive changes. Psychological well-being can be improved by psychological stability [35]. During the Physical, psychological, social and environmental well-being have a very important role in determining the quality of life and as an individual controller in carrying out all events in life [16]. Excessive feelings of anxiety are a manifestation of various emotions that occur because the individual feels depressed and occurs because of the health conditions experienced [36], The elderly with moderate anxiety only focus on things to do, including narrowing their sensory vision so that what they see, hear and feel becomes narrower [37]. Quality of life is a person's subjective perspective of the physical, psychological, social and environmental conditions in which life is experienced.

Many people experienced psychological disorders and felt afraid so they used coping strategies to maintain their life [38]. Coping strategies are easy plans of an action that we can follow, all of these plans can be used as anticipation when we encounter a stressful situation or as a response to ongoing stress and are effective in reducing the stress level we experience [39]. In line with this study, it was found that there was a positive relationship between the emotional focus of coping and coping with social support which had a major impact on the lives of elderly caregivers [22]. The study proves that there is a positive influence between coping strategies and the quality of life of the elderly, other research also states that [40]. Coping strategies used in this study were acceptance, religious approach, emotional support and positive reframing. Another study said where the research was conducted qualitatively, during this COVID-19 pandemic, the coping strategy used was to mention various experiences/activities to deal with stress. The themes that often arise are engaging in daily activities, sports, yoga and meditation, watching movies, listening to music, playing cell phones and reading books, relaxing with children and partners or with other family members, gardening, calling friends and other people loved ones, doing hobbies, cleaning the house and wash hands, ensure safe distance, pray, work from home, cook and eat more, drink and smoke, don't think too much about the situation, don't watch the news about COVID-19 and visit doctor or psychologist to relieve fear and distress [38]. There are studies that state that individuals can plan more actively when using problem-focused coping strategies [20]. Therefore, the use of appropriate coping strategies can help the elderly to solve their

problems. If the elderly choose the wrong coping strategy, it will lead to problems that cannot be decided and can add new problems. Patients who follow task-oriented coping patterns and who use social support will have a better quality of life, higher self-esteem, relatively lower loneliness, pessimism, and anxiety [41]. The results of the literature review show that the strategic coping strategies that are often carried out by the elderly are anticipatory bereavement, the desire to die, isolation, surrender, negotiation, acceptance, accommodation, seeking social support, seeking spiritual comfort and living in the present [23]. The more old enough will affect someone in solving problems based on experience that has been experienced.

Table 4 shows that there is a relationship between education level with depression (-0.045) and strategic coping (0.000). A person's level of education is related to his knowledge of a specific problem which is also high. So the higher a person's level of knowledge, the lower the level of depression. Study showed that education, gender and marital status were strongly related to depression in the elderly [42]. Most of the respondents in this study had elementary school education (64.2%). Education can affect emotional intelligence. If the emotional intelligence is low, people will become anxious, aloof, often afraid, feel unloved, nervous, sad and prone to depression. These stressors can affect a person's level of satisfaction in life and become one of the causes of decreased quality of life. Another study states that women who have low education, have mental health disorders and physical health have a low quality of life [28]. Studies of students in Indonesia state that there is a significant between knowledge and quality of life, both in the physical, psychological, social and environmental domains [43]. This study states that there is a significant between education level and coping strategies (0.000). In line with this research, other studies also show that there is a relationship between education and strategic coping [44]. Higher education will influence someone to use coping adaptively.

Table 4 shows that there is a positive correlation between age and the level of depression in the elderly $p=0.000$. Old age is part of late adulthood, which starts from the age of 60 years until almost reaching 120 or 125 years. This is the longest span in the entire period of human development which is 50 to 60 years [45]. In line with the study, it is said that there is a relationship between age and gender with the level of depression in the elderly [46]. Age is one of the factors that cause depression. With increasing age, the risk of depression will also be doubled [47].

In the this study, there is a relationship between gender and depression ($p=0.000$) anxiety ($p=0.015$), coping strategies (0.000) and quality of life of the elderly ($p=0.000$). Another study showed that education, gender and marital status were strongly related to depression in the elderly [42]. Likewise, a study conducted in Samarinda found a significant relationship between age and gender with the level of depression in the elderly [46]. In Table 1, state that the majority of respondents (72.4%) are female, which during the COVID-19 pandemic women tend to experience a more severe level of depression and a lower quality of life than men [28]. There are studies which state that women have more severe psychological distress than men [38]. The highest incidence of depression occurs in the age group 75-90 years, the elderly are female, and the elderly have basic illnesses [48]. Anxiety in the elderly arises from a sense of vague and diffused concern related to feelings of uncertainty, helplessness, and unspecified objects. Women are considered to be more sensitive and use their feelings while men are considered to have a strong mentality in dealing with dangerous responses [49]. Anxiety women are more vulnerable than men, because men are more active and exploratory in responding to their anxiety, while women are more sensitive and choose to suppress all their feelings, women feel taboo to talk about stressors so they are more likely to have maladaptive coping, men are more likely to experience anxiety. interact with the outside world while women are more silent in place or at home [50].

There is a relationship between economic status and coping strategies ($p=0.033$) and the quality of life of the elderly ($p=0.000$). The distribution of respondents' occupations shows that the highest distribution is no-income (50.9%). This shows that many elderly are not working. Productivity and identity of a person can measure the value and status related to the role in the work. The loss of work and social relationships makes the elderly feel lonely and empty [51].

4. CONCLUSION

The current focus on the transmission of COVID-19 infection around the world is a concern for the emergence of the problem of psychosocial disorders. Health problems that arise can become long-term health problems. Global health measures must be applied to overcome psychosocial stressors, namely depression and anxiety experienced by the community, especially the elderly so that their quality of life is maintained. This study revealed that depression, anxiety, coping strategies related to quality of life among elderly. This study recommended the provision of appropriate psychological interventions to improve and maintain the quality of life among the elderly. The information provided must be able to provide encouragement, especially psychological support interventions, especially in terms of prevention.





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

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BIOGRAPHIES OF AUTHORS






Iswatun     is a lecturer at the Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia. She received a Bachelor's degree in Nursing from Universitas Airlangga and a Master of Medical Family degree from the Universitas Sebelas Maret, Surakarta. Her research focuses on public health, family, and gerontic nursing. She can be contacted at email: iswatun@vokasi.unair.ac.id.






Ah. Yusuf     is a Full Professor and Senior Researcher at the Faculty of Nursing, Airlangga University, Surabaya, Indonesia. He has published more than sixty scientific articles in Scopus indexed journals. He has written several books on mental health and psychiatric nursing. Her research focuses on public health, mental health, and psychiatric nursing. He can be contacted at email: ah-yusuf@fkip.unair.ac.id.






Joko Susanto    is a lecturer at the Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia. He received a Bachelor's degree in Nursing from Universitas Gadjah Mada and a Master of Medical Family degree from the Universitas Sebelas Maret, Surakarta. His research focuses on public health, family, geriatric and gerontic nursing. He can be contacted at email: jsusanto@vokasi.unair.ac.id.






Makhfudli    is a lecturer at the Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia. He received a Master's degree in Tropical Disease Medicine, Faculty of Medicine, Universitas Airlangga after researching Tuberculosis. He graduated from the Universitas Airlangga Postgraduate Program: Doctoral Education Program, Faculty of Medicine whose main interests are Community Health Nursing, Family, and Gerontic. His research focuses on community health, family, and gerontic nursing. He can be contacted at email: makhfudli@fkp.unair.ac.id.



Abd. Nasir    is a lecturer at the Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia. He received a Bachelor's degree in Nursing and a Master of Nursing degree from Universitas Brawijaya Malang, whose main interests are psychiatric nursing. His research focuses on public health, mental health, and psychiatric nursing.. He can be contacted at email: abdoel.nasir@vokasi.unair.ac.id.



Amellia Mardhika    is a lecturer at the Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia. She received a Bachelor's degree in Nursing from Universitas Airlangga and a Master of Public Health degree from the Universitas Airlangga. Her research focuses on public health, maternity, and pediatric nursing. She can be contacted at email: ameliamardhika@vokasi.unair.ac.id.