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ANALYSIS OF PSYCHOSOCIAL STATUS AND QUALITY OF LIFE IN THE ELDERLY WITH OSTEOARTHRITIS DURING THE COVID-19 PANDEMIC: A CROSS SECTIONAL STUDY

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ABSTRACT

Introduction: Along with increasing age, there will also be an increasing tendency to get sick and have physical limitations (disabilities) due to a drastic decline in physical abilities. These conditions are the leading cause of high mortality and morbidity in the elderly, especially during the Covid-19 pandemic. The current study aims to analyze the relationship between psychosocial status and the quality of life of the elderly with osteoarthritis during the Covid-19 pandemic.

Materials and Methods: This cross-sectional study was located at a nursing home in Jambi, involving 351 randomly selected participants. Measure the psychosocial status of the elderly using the Indonesian version of the Self Reporting Questionnaire (SRQ) and the quality of life using the Indonesian version of the World Health Organization Quality of Life-Old (WHOQOL – OLD) questionnaire.

Results: Most elderly have a good quality of life, as many as 229 (65.1%), while a poor quality of life, as many as 30 people (8.5%). In the psychosocial variables, most respondents did not experience mental health disorders, as many as 260 people (74.1%). The Mann-Whitney test showed a significant relationship between Quality of Life and Psychosocial Status, in particular we obserbed in subjects without mental disorders in comparison to subjects with mental disorders a better quality of life, i.e. the elderly who do not suffer from mental disorders will show a tendency for a good quality of life.

Conclusions: Psychosocial status related to quality of life in the elderly with osteoarthritis during the Covid-19 pandemic. The elderly who do not suffer from mental disorders will show a tendency for a good quality of life.

Keywords: Elderly; Covid-19; Psychosocial; Quality of life

INTRODUCTION

Qualified elderly are elderly who, through the aging process, remain healthy and optimal physically, socially, and mentally to remain prosperous throughout life and participate in improving the quality of life as members of society [1,2]—osteoarthritis in the elderly results in limitations in carrying out daily activities independently. A study revealed that 2.6% of the elderly experienced total dependence, 1.2% with moderate support, and 96.3% with mild reliance [3]. Dependence, coupled with lifestyle changes, is one of the factors causing stress in the elderly [4,5].

The elderly with osteoarthritis who experience stress tend to experience sadness, and the body becomes weak, with reduced appetite and interest in all things [6,7]. As a result, they will experience delays in treatment, especially in the second year of the Covid-19 pandemic, where there is a statistical increase in cases in various parts of the world, including some areas in Indonesia, where the elderly are a group that is vulnerable to infection. The number of deaths continues to increase, especially in the elderly group [8–10]. If this condition is allowed to drag on, it will trigger depression. In addition, the elderly will find it difficult to motivate themselves to recover. The adaptation process that must undertake to all the changes experienced makes the elderly vulnerable to psychological disorders such as unstable emotional conditions, depression, or anxiety, and it may reduce the quality of life of the elderly [11,12].

Crisis in the elderly can be expressed as a condition of psychosocial disorders with characteristics including dependence on others, isolating themselves, or withdrawing from social activities for various reasons. The reasons include undergoing retirement, severe and prolonged illness, the death of a spouse, and undergoing health protocols during the Covid-19 period, where everyone must keep their distance and isolate themselves [6,13]. For the elderly, changing roles in the family, socio-economic, and social community resulted in setbacks in adapting to the new environment and interacting with the social environment [11,14].

Quality of life is a strategic issue that reflects the condition of the elderly in enjoying the rest of

their life and preparing to die peacefully. Therefore, factors affecting the quality of life of the elderly should be accommodated by the elderly, families, and health providers [15,16]. One of the health service providers on the first line is the Public Health Center (PHC). PHC as a health service provider and acting as a center for community health development in its working area should develop health programs based on problems that develop in the community [17,18].

Psychological factors, as assessed by the Geriatric Depression Scale, and sociodemographic characteristics, such as marital status, income and leisure activities, had an impact on quality of life [19]. Other studies show that apart from social demographic factors, social organization and social support affect the quality of life of the elderly [20], and the ability to perform daily routine activities is the strongest predictor [21]. In addition to the aforementioned factors, it is necessary to explore the effects of the psychosocial status of the elderly during the Covid-19 pandemic because the elderly are prone to depression. Preliminary research shows an increase in depression, post-traumatic anxiety, and adjustment disorders in the elderly, and the risk of suicide increases sharply. Stress can also lower the body's immunity, worsening the condition of the elderly who are already physically weak. Patients with a previous psychiatric disorder will tend to experience worsening [3,20].

The elderly group is very vulnerable to contracting Covid-19, plus declining physical health conditions are increasingly impacting the decline in the quality of life of the elderly, increasing mortality rates in the elderly group. For this reason, it is necessary to survey psychosocial health status, response, and quality of life during the Covid-19 pandemic. This study explores the psychosocial problems of the elderly with osteoarthritis during the Covid-19 pandemic.

MATERIALS AND METHODS

Study design

The type of research is analytic observational using the research design is cross sectional study.

Study Population

This study was conducted at the Jambi Nursing Home involving 351 randomly selected participants with the following sample criteria including age 55 years, living in Jambi Nursing Home for at least one year.

Instruments

Psychosocial status was measured using the Indonesian version of the Self-Reporting Questionnaire (SRQ), which consisted of 29 questions about the respondent's condition during the last 30 days [21]. The Indonesian version of the SRQ-20 has 5 dimensions, namely energy, cognitive, depression, physiology, and anxiety. The YES answers to items 1 to 20 (symptoms of neurosis) indicated a psychological problem, and item number 21 meant using a psychoactive substance. One YES answer from items 22 to 24 (psychotic symptoms) indicates a severe problem and needs further treatment. One YES answer to items 25-29 indicates the presence of symptoms of PTSD (Post Traumatic Stress Disorder).

Psychosocial status was categorized into suffering and not suffering from mental disorders. A mental disorder is declared if at least 5 neurotic symptoms are found or there is at least 1 psychotic or PTSD (Post Traumatic Stress Disorder) symptom on the Self-Reporting Questionnaire (SRQ). Meanwhile, it is declared not suffering from mental disorders if there are only 4 items of neurotic symptoms and there are no psychotic symptoms or PTSD (Post Traumatic Stress Disorder) symptom on the Self-Reporting Questionnaire (SRQ). The variable “Psychosocial status” assigning the scores: 1 = suffering and 0 = not suffering for mental disorders.

Measurement of quality of life used the Indonesian version of the World Health Organization Quality of Life-Old (WHOQOL – OLD) questionnaire, which contains the respondents' living conditions in the last four weeks consisting of 26 questions [22]. The variable “Quality of Life”, assigning the scores: 1 = poor, 2= moderate, 3 = good, and 4 = very good for each subject.

The Indonesian version of the World Health Organization Quality of Life-Old (WHOQOL – OLD) questionnaire consists of the Herth Hope Index, Perceived Social Support from Friends (PSS-Fr), Perceived Social Support from Family (PSS-Fa) [22]. The Indonesian version of the WHOQOL-BREFF questionnaire has been tested for validity and reliability by Priastana et al. [22] with a r_{count} value (0.361) and a Cronbach Alpha value = 0.965, so researchers do not need to test the validity and reliability again.

Sample size

The number of samples involved was 351 participants who were randomly selected from the population. Calculating the number of samples is determined using the Slovin formula [23], where from 2.880 people in the population, d = 0.05, the number of samples is 351.

Ethical Consideration

No economic incentives were offered or provided for participation in this study. The study protocol matched the Declaration of Helsinki ethical guidelines for clinical studies. This research has been approved by the Health Research Ethics Commission of the Health Polytechnic of the Jambi Ministry of Health with the number LB.02.06/2/111/2022.

Statistical analysis

Data are presented as number and percentage for categorical variables, and continuous data expressed as the mean ± standard deviation (SD) or median with Interquartile Range (IQR). The results of data normality analysis using the Kolmogorov Smirnov test showed that the data were not normally distributed. We found the relationship between Quality of Life and Mental disorders using the Mann–Whitney test (ordinal data vs dichotomous).

We considered all tests with P-value< 0.05 as significant. The statistical analysis was performed by SPSS software version 16.0.

RESULTS

The distribution of the characteristics of the research respondents is presented in table 1.

Variables	N	%
Age (years)		
[55-65[	186	53
[65-75[	165	47
Gender		
Male	225	64.1
Female	126	35.9
Educational level		
Basic	33	9.4
Junior School	68	19.4
High school	227	64.7
Bachelor	23	6.5

Table 1. *Distribution of the Respondents characteristics*

Table 1 show that most respondents were 55-64 years, as many as 186 (53%). Most sexes are male, with as many as 225 (64.1%) respondents. Most respondents had a high school education, with 227 (64.7%).

Table 2 shows that most elderly have a good quality of life, as many as 229 (65.1%), while a poor quality of life, as many as 30 people (8.5%).

In the psychosocial variables, most respondents did not experience mental health disorders, as many as 260 people (74.1%).

Variables	Median (Q1, Q3)	N	%
Quality of Life	65 (52, 77)		
21 - 40 (Poor)		30	8.5
41 – 60 (Moderate)		85	24.4
61 – 80 (Good)		229	65.1
81 – 100 (Very Good)		7	1.0
Psychosocial Status	3 (2, 8.5)		
No mental health problems		260	74.1
Neurotic symptoms		10	2.8
Psychotic symptoms		3	0.9
PTSD (Post Traumatic Stress Disorder)		78	22.2

Table 2. *Distribution of study variables*

Table 3 shows that of the 91 respondents who do have mental disorders, there are 46 respondents with a moderate quality of life category. Of the 260 respondents with not mental disorders, there are 218 respondents have a good quality of life category

Psychosocial Status	Quality of Life					
	Poor N (%)	Moderate N (%)	Good N (%)	Very good (%)	Total N (%)	Median (Q1, Q3)
Mental disorders	29(31.9)	46(50.0)	11(12.1)	5(5.5)	91(100)	2(1, 2)
No mental disorders	2(0.8)	38(14.6)	218(83.8)	2(0.8)	260(100)	3(3, 3)
Total	31(8.8)	84(23.9)	229(65.2)	7(2.0)	351	

Table 3. *Relationship between Psychosocial Status and Quality of Life in the Elderly*

The Mann-Whitney test showed a significant relationship between Quality of Life and Psychosocial Status, in particular we obserbed in subjects without mental disorders in comparison to subjects

with mental disorders a better quality of life (median: 3 vs 2, p<0.0001), i.e. the elderly who do not suffer from mental disorders will show a tendency for a good quality of life.

DISCUSSION

Elderly stress arises from anxiety about various diseases, including Covid-19. The current study aims to analyze the relationship between psychosocial conditions and the quality of life of the elderly with osteoarthritis during the Covid-19 pandemic.

The results of this study reported that on the psychosocial variables of the elderly, most of the elderly did not experience mental health disorders, as many as 260 people (74.1%) and the elderly and around 25.9% of the elderly experienced mental disorders ranging from PTSD (Post Traumatic Stress Disorder), neurotic and psychotic. Mental disorders experienced by the elderly include the elderly avoiding interacting with other people, decreasing interest in routine activities, always remembering the impact of Covid-19 and feeling disturbed, lack of appetite, not sleeping well, and feeling anxious. Symptoms of this health disorder significantly interfere with the quality of life of the elderly [24].

Anxiety, as a symptom of stress in the elderly in the Covid-19 pandemic situation, should receive support from spouses and family members by being willing to listen to the complaints of the elderly, being able and having time always to be near and accompany the elderly. Elderly family members are also responsible and act as friends of the elderly in dealing with their day-to-day. Likewise, in elderly stress, there is family support to maintain health by supporting the health of the elderly [25].

The increasing number of Covid-19 cases harms everyone's mentality, especially the elderly. SARS-CoV-2 is highly contagious. Even some cases develop into respiratory failure, which will progress to death. Deterioration of the patient's condition is more common in the elderly and those with previous co morbidities (hypertension, diabetes, heart disease) [26,27]. The elderly group (elderly)

has physical and psychological weaknesses during the Covid-19 pandemic. About 20% of deaths with Covid-19 in China are over 60 years old [28].

The effects of quarantine are loneliness, sadness, and prolonged stress. Preliminary research suggests an increase in depression, post-traumatic stress, adjustment disorders in the elderly, and the risk of suicide [29]. Stress lowers immunity. This situation can worsen the condition of the elderly, who are already physically weak. Patients with previous psychiatric conditions will tend to experience worsening, one of which is the problem of osteoarthritis [30].

The main problem often experienced by the elderly with osteoarthritis is joint pain. Pain will increase when doing activities, which limits a person's activities. The decrease in physical activity will affect the patient's daily life activities and the quality of his life. A further consequence of osteoarthritis is decreased functional activity, especially difficulty rising to a sitting position, walking, and going up and down stairs [31,32]. The elderly with osteoarthritis will experience joint and muscle dysfunction, so they will experience limited movement, decreased strength, and muscle balance. About 18% experience difficulties and limitations in activities, loss of function of work capacity, and decreased quality of life [33,34].

According to Hong's study [35], the elderly with osteoarthritis have a poorer quality of life than the elderly without osteoarthritis. This condition is associated with decreased physical function due to joint inflammation caused by joint damage. Therefore, it is highly recommended that families take care of the mental health of the elderly during Covid-19 so that it does not affect their physical health. Maintaining the mental health of the elderly during the Covid-19 pandemic requires assistance from all parties. Families, health workers, the government, and the elderly must cooperate. In addition, the knowledge, attitude, and behavior of the elderly need to be improved to deal with the Covid-19 pandemic. Adaptation and survival are the keys to overcoming this pandemic condition [29].

The primary strategy is to ensure that the elderly always maintain physical distance, wash their

hands, use masks, eat nutritious foods, and do light exercise [36,37]. Other activities that can be done indoors, such as reading books, painting, or watching movies, can still be done. Explanations should be given as concisely as possible to the elderly. If the elderly understand, they will feel safe and peaceful and improve their quality of life. Social relations with family and friends must still be carried out through communication tools. Emotional support is crucial for the elderly who live alone. They are prone to anxiety and confusion during this uncertain period [9,38].

Visits to the doctor should be replaced with telemedicine. Patients can consult via Whatsapp, telephone, short message, Zoom, or any application. All planned surgeries should be postponed, such as cataracts, hernias, and kneecap replacements [38]. Any redundant information about Covid-19 should be reduced to prevent panic and misunderstanding. Information should focus on preventive measures, not on myths alone. Health information, updates about Covid-19, and psychological consultations should be provided by telephone or online by the government [30,39]. Although the elderly may appear weak from the outside, the family must try to give them a sense of freedom, respect, and genuine care. The elderly must still be involved in decision-making [40].

The World Health Organization (WHO) emphasizes the importance of psychosocial needs for the elderly [38]. The government is expected to provide basic needs for the elderly, especially those less well off financially and psychologically. The items that is important to prepare including food, medicines, and disinfectants. The need for security is essential and should not be ignored [41].

The strength of this study is that the two questionnaires used, namely the Self Reporting Questionnaire (SRQ) and the World Health Organization Quality of Life-Old (WHOQOL – OLD) questionnaire, have used the Indonesian version of the questionnaire to reduce research bias.

CONCLUSION

Psychosocial status related to quality of life in the elderly with osteoarthritis during the Covid-19 pandemic. The elderly who do not suffer from mental disorders will show a tendency for a good quality of life.

LIMITATIONS

The research location only involves 1 place so that it cannot compare the results of similar studies in different populations, so in the future research must be carried out involving several regions. Another limitation is the cross-sectional research design because it only measures the current condition of the variables, so it can cause research results to be biased.

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COMPETING INTERESTS STATEMENT

There are no competing interests for this study.

AUTHORS' CONTRIBUTION

All authors equally contributed to preparing this article.

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