The Level of Anxiety of Leprosy Patients in Terms of Demographic Characteristics of Respondents

Sri Wahyuni[1] *, Christina Dewi Prasetyowati[2]

[1, 2] Faculty of Health, Institut Ilmu Kesehatan Bhakti Wiyata Kediri, Indonesia

*E-mail: sri.wahyuni@iik.ac.id

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ABSTRACT

Leprosy is a chronic contagious disease caused by the mycobacterium leprae bacteria which attacks the skin and peripheral nerves. This disease can cause physical disabilities if not treated properly. Physical disabilities that appear can cause psychological problems such as anxiety. The purpose of this study was to analyze the level of anxiety in patients with leprosy based on respondents' demographic characteristics. This type of research is analytic observational with a cross-sectional research design. The sample in this study were 106 leprosy patients, with the accidental sampling technique. Data collection using a questionnaire consisted of demographic characteristics, namely age, gender, occupational education, degree of disability, and the Hamilton Anxiety Rating Scale (HARS) questionnaire. Data analysis used the chi-square statistical test. Results Age, employment, education, and patients' disability degree were associated with patient anxiety (p-value <0.05), while gender was not associated with patient anxiety (p-value> 0.05). Conclusion The variables of age, education, employment, and patients disability degree can affect anxiety in leprosy patients.

INTRODUCTION

Leprosy is a chronic contagious disease where the cause of this disease is the Mycobacterium leprae bacteria which attacks the skin and peripheral nerves, this disease can cause physical disability in patients (Garbin et al., 2015). Leprosy is an infectious disease with a low degree of effectiveness with a long incubation period where most patients acquire this infection in childhood and can cause disability if it is not treated properly (Kunoli and Firdaus, 2013). Disabilities that arise such

as loss of bodily functions, changes in skin color can cause psychological problems such as anxiety in patients (Fajriyah, Dharmawan and Herdiyanto, 2013). Previous studies have stated that 50% of leprosy patients will experience anxiety, and may even have thoughts of committing suicide (Ramasamy *et al.*, 2018).

Leprosy is still a trend today, where new cases of this disease are quite high both in the world and in Indonesia. In the world around 12,000-14,000 each year with second-degree disabilities (World Health Organization, 2012) (Rocha-leite *et al.*, 2014). According to WHO (World Health Organization) (2015), the incidence of leprosy in the world is 210,758 people, where the highest incidence is in Southeast Asia with 156,118 people, then in America as many as 28,806 people and in Africa as many as 20,004 people (Kementrian Kesehatan RI, 2018). In Indonesia, the number of leprosy patients in 2015-2017 there were 11 (32.35%) provinces that had a high number of leprosy patients, and 23 (67.65%) provinces had a low number of leprosy patients and almost all provinces in eastern Indonesia are areas with a high number of people affected by leprosy. East Java is the province with the highest number of leprosy patients, namely 3,373 people, followed by West Java with 1,813 people, Central Java with 1,644 people, South Sulawesi with

1,091 people, and Papua with 968 people (Kementrian Kesehatan RI, 2018).

Leprosy is an infectious disease that can cause disability where the clinical symptoms appear in patients depending on the immune response of each patient (Slim et al., 2011). In developing countries, 25% of leprosy patients have various and persistent forms of disability, where the disabilities that occur in patients affect the patient's involvement in physical, social, and patient involvement in the community. Disability in patients causes stigmatization and discrimination from society which adversely affects patients such as causing anxiety and depression (Dako-gyeke, 2018). The impact of anxiety on leprosy patients will have an overall effect on the patient's life (Ramasamy et al., 2018). In previous research, it was found that the increase in the incidence of leprosy as a health problem can be controlled and detected by strengthening disease control such as age, gender, type of leprosy (Silva *et al.*, 2018).

Identifying the factors that cause anxiety in leprosy patients due to impaired nerve function and physical disabilities is essential so that planning, monitoring, and prioritizing treatment can be done to reduce these impacts (Araujo *et al.*, 2014). There are not many studies explaining the factors that influence anxiety in leprosy patients. So it is necessary to do an analysis that explains the level of

anxiety in patients with leprosy in terms of patient demographic characteristics.

PURPOSE

The purpose of this study was to analyze the level of anxiety in leprosy patients in terms of the demographic characteristics of the respondents.

METHODS AND MATERIALS

This research was a cross-sectional analytic observational research conducted at the Daha Husada Hospital Kediri Poli. The population in this study were all leprosy patients at Daha Husada Hospital Kediri. The samples obtained were 106 leprosy patients who were taken by the accidental sampling technique. Leprosy patients who are selected to be research subjects are explained the research procedure then sign the consent sheet to become respondents if the patient is willing to become respondents.

Data collection in this study used a questionnaire consisting of demographic characteristics, namely age, gender, occupational education, degree of disability, and the Hamilton Anxiety Rating Scale (HARS) questionnaire made by Max Hamilton to assess the degree of anxiety in leprosy patients (Hawari, 2013). Researchers conducted validity and reliability tests to ensure that the instruments used could actually measure what they wanted to measure before the questionnaire was used for research. The validity test was carried out by distributing questionnaires to 25 leprosy patients. The test results are valid and reliable with an average sig r = 0.01 (correlated items = 0.491-0.798) and r alpha value = 0.911. Responses are based on the results of a value score that is <of 14: no anxiety; 14-20: mild anxiety, 21-27: moderate anxiety, 28-41: severe anxiety, and 42-56: very severe anxiety.

Univariate and bivariate tests were analyzed by SPSS software. The univariate test is used to determine the frequency distribution of each variable and is presented in the form of a frequency distribution table. The univariate test was carried out to determine the relationship between the independent variable and the dependent variable using the chi-square statistical test, where if the p-value was <0.05, it was said that there was a relationship between variables.

RESULTS AND DISCUSSION

Characteristics of respondents in this study consisted of age, gender, educational background, type of work and level of disability. The results, and discussion will explain the respondent's characteristic data and explain the characteristic variables related to anxiety in leprosy patients.

Table 1. Characteristics of Respondents

Variable		Criteria	N	%
Age (yr)	1	Young adults (26- 35)	10	9,4
	2	Old adults (36-45)	28	26,4
	3	Early elderly (46-55)	47	44,4
	4	Late elderly (56-55)	16	15,1
	5	Senile (>65)	5	4,7
Gender	1	Male	85	80,2
	2	Female	21	19,8
Educational background	1	Elementary School	50	47,2
	2	Junior high school	31	29,2
	3	Senior High School	24	22,6
	4	College	1	1
Type of Work	1	Not working	59	55,7
	2	Labourer workers/ Private worker	31	29,3
	3	Self-employed	8	7,5
	4	Civil servants/ Office	8	7,5
Level of disability	1	Not disabled	19	17,9
	2	Degree 1	28	26,4
	3	Degree 2	59	55,7
Anxiety level	1	Mild anxiety	40	37,7
	2	Moderate anxiety	51	48,1
	3	Severe anxiety	15	14,2
		Total	106	100

From table 1, it is known that almost half of the respondents (44.4%) are in the early elderly category (46-55 years). Almost all respondents (80.2%) were male. Nearly half of the respondents (47.2%) have a primary school education. Most of the respondents did not work (55.7%). Then most of the respondents (55.7%) with two degrees of disability. The data on the characteristics of respondents in this study were almost the same as in the previous study, namely almost half of the respondents (40.5%) were in the age range (31-45 years), most of the respondents (59.2%) were male, mostly (57.8%) of the respondents were illiterate, almost half (37.7%) did not work only as housewives and almost half (40.2%) of the respondents with grade 2 disability (Govindharaj, Srinivasan and Darlong, 2018).

But the results of the characteristics in this study are slightly different from previous studies, which saw the characteristics of respondents from the sex where most (52.5%) were male, almost half of the respondents

(43.3%) were single and married, almost half The belief of respondents (46.7%) is Catholic, half of the respondents are in the age range <40 (50%) and ≥ 40 (50%), and a small proportion of respondents (15.8%) do not attend school (Rocha-leite *et al.*, 2014).

Previous research results obtained different results from this study, namely most (52.5%) were female, almost half of the respondents (26.3%) were> 60 years old, and almost half of the respondents (32.7%) had high school education (Martins *et al.*, 2016).

Table 2. Analysis of The Factors of Age, Gender, Education background, Type of work , Level of Disability on Leprosy Patient Anxiety

Category	Anxiety level			P-value
	Mild	**Moderate**	**Severe**	
Age				
Young adults	3 (30%)	7 (70%)	-	0,025
Old adults	11 (39,3%)	14 (50%)	3 (10,7%)	
Early elderly	16 (34%)	26 (55,3%)	5 (20,6%)	
Late elderly	8 (50%)	4 (25%)	4 (25%)	
Senile	2 (40%)	-	3 (60%)	
Gender				
Male	31 (35,5%)	41 (48,2%)	13 (15,3%)	0,748
Female	9 (42,9%)	10 (47,6%)	2 (9,5%)	
Educational background				
Elementary School	28 (56%)	21 (42%)	1 (2%)	
Junior High School	10 (32,3%)	16 (51,6%)	5 (16,1%)	0,000
Senior High School	2 (8,3%)	14 (58,3%)	8 (33,3%)	
College	-	-	1 (100%)	
Type of work				
Not disabled	29 (49,2%)	24 (40,7%)	6 (10,2%)	
Labourer workers/ Private worker	11	17	3	0,004
Self-employed	-	6	2	
Civil servants/ Office	-	4	4	
Level of disability				
Not disabled	14 (73,3%)	5 (26,3%)	-	
Degree 1	11 (39,3%)	14 (50%)	3(10,7%)	0,003
Degree 2	15 (25,4%)	32 (54,2%)	12 (20,3%)	

Table 2 shows that age, educational background, type of work, and level of disability are associated with leprosy patient anxiety with a p-value <0.05. Meanwhile, gender is not associated with leprosy patient anxiety with a p-value> 0.05. The results of previous research indicate that the gender and degree of disability of leprosy patients are related to the patient's adaptability, where if the patient is able to adapt, it can reduce anxiety or depression, while economic status (income) can cause psychological problems such as anxiety, depression in leprosy patients (Utami, Haryanto and Sajidin, 2017). The results of this study are also supported by previous research that shows that age and changes in physical form or degree of disability have a significant effect on psychological disorders such as anxiety and depression. Meanwhile, gender and patient education did not have a significant effect on psychological disorders such as anxiety and depression (Jindal *et al.*, 2013).

The psychological problems that occur in leprosy patients are caused by the rejection of the surrounding community or family members, besides the length of the healing process for this disease and the presence of physical disabilities that can increase psychological problems of anxiety in patients (Singh, 2012). Leprosy is a chronic disease that causes physical changes such as disability,

which in this condition often causes patients to experience psychological disorders such as anxiety. Psychological aspects have a very important role in improving the life of leprosy patients in the future (Reis *et al.*, 2014). Psychological disorders such as anxiety have been used as indicators of mental health in public health. According to the results of the research conducted, the results of this study are very important to provide input on improving advanced nursing services for leprosy patients. Where in this study, anxiety problems in leprosy patients are significantly related to age, education level, type of work and level of disability.

CONCLUSIONS AND SUGGESTIONS

This cross-sectional study showed the relationship between age, education level, type of work and level of disability with the anxiety level of leprosy patients. So it is expected that the leprosy patient health service providers pay attention to the patient's psychological problems such as anxiety. This can be done by conducting an initial assessment or screening of anxiety problems in patients so that they can provide initial counseling so that it can reduce anxiety.

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