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Self-Esteem as Predictor of Anxiety and Depression on Patients of Multidrug Resistant Tuberculosis (MDR-TB)

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Abstract

Multidrug Resistant Tuberculosis (MDR-TB) is one of the stressor that causes anxiety and depression related to disease, the treatment process, drugs consumed and side effects that caused by it, thus it affects the life quality of sufferers. The purpose of this study was to analyze self-esteem factors related to the incidence of anxiety and depression in MDR-TB patients.

This study was observational analytic with cross sectional approach. The population in this study was patients with MDR-TB who was undergoing treatment process with a total sample of 71 people obtained through purposive sampling technique. Data collection technique was conducted through questionnaires. Data were analyzed using univariate and bivariate analysis.

The results of bivariate analysis used Chi-square test that showed a significant correlation between self-esteem with the incidence of anxiety in patients with MDR-TB, with p value of p=0.005 with an OR of 4. There was a significant correlation between self-esteem with the incidence of depression in patients with MDR-TB, with the p value of p=0.000 and OR of 26 There was a correlation between self-esteem with the incidence of anxiety and depression in patients with MDR-TB who were undergoing treatment process.

The suggestion for health worker in order to be able to control these factors was by conducting intervention in the form of health education and motivation to improve self-esteem in patients with MDR-TB.

Keywords: *self-esteem, anxiety, depression, MDR-TB*

Background

Multidrug Resistant Tuberculosis (MDR-TB) includes into the type of bacilli resistance of TB against anti-tuberculosis drugs (OAT), which are isoniazid and rifampicin. The diagnosis of the MDR-TB is more difficult than drug-sensitive TB, the high mortality rate and the increased number of treatment failure become a challenge for the government in TB control programs[(1)]. World Health Organization (WHO) in 2016 found the 580,000 patients with MDR-TB, but only 125,000 (20%) who following treatment program. The Ministry of Health (2016) recorded as many as 15,380 expected cases of MDR-TB in Indonesia during 2009-2015, and 1,860 cases were confirmed and 1,566 cases were treated.

MDR-TB is one of a medical condition that can be effecting physical and gives rise to anxiety and depression so it influences complience treatment. MDR-TB is a caused stressor of anxiety and depression that related with the disease, the treatment process, the drug is consumed as well as side effects. Individuals in this case should to adapt to emerged psychosocial disorders[(2)]. Anxiety may be temporary, if there is a stressor or stimulation of the anxiety may resurface[(3)]. Anxiety which is not given intervention would be aspects of harmful illness causing severe emotional disorders such as depression[(4)]. The patient will reject the diagnosis and choose to quit the treatment process, thus impacted on the patient's quality of life[(5)]. The newly

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diagnosed patients will show a common emotion such as fear and discomfort that can lead to stress and anxiety. The study result in Turkey showed there was 26% of newly patients with MDR-TB diagnosed with anxiety[6]. Another study in India, showed that out of a total of 165 patients were 62 people (37.29%) experienced anxiety[7].

The treatment for MDR-TB which is more than 3 months can directly cause depression[7]. Bhawere (2014) in his research showed the results 86 out of 165 patients (51.89%) had a depressive disorder. Another study in Pakistan found a total of 61 patients (30.3%) had moderate depression and 13 patients (6.5%) had severe depression from a total of 201 patients[8]. Patients with chronic illnesses showed depressive disorder related with the treatment process that takes a long time[6]. Depression on patients also recognized as a cause of poor adherence to the treatment process and can increase morbidity and mortality in the disease[9].

Patients with chronic infectious diseases such as MDR-TB susceptible to low self esteem. MDR-TB is a chronic disease that can cause physical weakness. Patients experiencing limitations in an activity that makes it a no-confidence[10]. There were 82 patients with TB (65.1%) in Nigeria were found to have low self-esteem[11]. Another study by Eller et al., (2014), as many as 43.2% of individuals with HIV/AIDS who have depression associated with low self-esteem. Low self-esteem in individuals who suffer from chronic diseases poses a negative vibes on himself. Individuals feel useless and not confident to perform activities that also will affect the quality of life[12].

Outpatients at General Hospital of Ibnu Sina are 18,533, and 86 people of them are MDR-TB patients, or 16% of total outpatients. Each month there are 10 new patients are diagnosed and have treatment in Polyclinic of MDR-TB. Preliminary study through interviews with 5 patients with MDR-TB who underwent the treatment process showed that 4 patients were fear when diagnosed with MDR-TB at the first time, patients felt worried about not being able to carry out long treatment process and consume more drugs than ever before. Patients also felt unsure to recover from the MDR-TB disease suffered and felt unable to face the difficulties that would be experienced during suffer from MDR-TB. One out of 5 patients even attempted suicide by drinking insecticide. Patients felt hopeless as a result of previous treatment processes that did not show changes, resulting in loss of motivation to continue treatment. The aim of the research was to analyze the self-esteem factor that related with the incidence of anxiety and depression in patients with Multidrug Resistant Tuberculosis (MDR-TB).

Methodology of Research

This study was observational analytic with cross sectional approach. The population in this study was patients with MDR-TB who were undergoing treatment in Poly of MDR-TB in General Hospital of Ibn Sina Gresik with total of 86 people. Total sample of 71 people chosen by purposive sampling technique. Inclusion criteria used in this study was patients with MDR-TB who were undergoing treatment process at least 1 month, willing to become respondents with a signed informed consent, and being able to read and write. Exclusion criteria were patients with MDR-TB who were taking anti-anxiety and anti-depressants, patients with complications such as chronic renal failure and HIV/AIDS, and patients with other physical impairments that should take medication regularly, such as stroke and diabetes mellitus. Collecting data using a questionnaire that had been modified from Self Esteem Scale to measure the level of self-esteem as much as 9 items of questions, the Hamilton Rating Scale for Anxiety (HARS) to measure anxiety as much as 10 questions, and the Beck Depression Inventory (BDI) to measure depression as many as 13 items of statement. The data analysis in this study was used univariate and bivariate analysis by utilizing Chi-square test.

Result

Results of univariate analysis

The results of univariate analysis consisted of demographic data, distribution of self-esteem level, incidence distribution of anxiety and depression on respondents.

Table 1. The demographic data of respondents

Characteristics of respondents	Frequency (n)	Percentage (%)
Gender		
Male	45	63
Female	26	37
Total	71	100

Cont... **Table 1. The demographic data of respondents**

Education		
Elementary School	30	42
Junior High School	12	17
Senior High School	25	35
Diploma-III	4	6
Total	71	100
Occupation		
Has no job	34	48
Has job	37	52
Total	71	100
Income		
≤ UMR	62	87
≥ UMR	9	13
Total	71	100
Duration of treatment		
1 month	11	16
> 1 month	60	84
Total	71	100
Ever get information about MDR-TB from health workers		
Not	16	23
Yes	55	77
Total	71	100

Table 1 showed that the majority of respondents were male with the level of education of elementary school. Most of respondents in this study were working with the income level which less than ≤ UMR (regional minimum wage). The most duration of treatment that had been undertaken by the respondents was more than >1 month and most of the respondents never had information about the MDR-TB from health workers.

Table 2. Distribution of respondents based on age and the length suffering MDR-TB

Characteristic of respondents	N	Mean ± SD	Min-Max
Age	71	45.15 ± 14.36	16-73
The length of illness	71	8.11 ± 6.35	1-18

Table 2 showed that the average age of respondents was 45 years old with an average length of MDR-TB for 8 months.

Table 3. Distribution of respondents based on self-esteem

Self-esteem	Frequency (n)	Percentage (%)
Mean ± SD = 24.2 ± 3.6, Min-Max=15-36		
Self-esteem is high (> mean)	25	35
Self-esteem is low (≤ mean)	46	65
Total	71	100

Table 3 showed that almost of the respondents who received treatment had a low self-esteem.

Table 4: Distribution of respondents based on the incidence of anxiety

The level of anxiety	Frequency (n)	Percentage (%)
Mean±SD = 12.9 ± 4.7, Min-Max=2-30		
Not anxiety (<mean)	27	38
Anxiety (≥ mean)	44	62
Total	71	100

Table 4 showed most of the respondents who received a treatment had an anxiety.

Table 5. Distribution of respondents by the incidence of depression

level of Depression	Frequency (n)	Percentage (%)
Mean ± SD = 19.7 ± 6.5, Min-Max=1-29		
Not depressed (<mean)	24	34
Depressed (≥ mean)	47	66
Total	71	100

Table 5 showed that most of respondents who take medication during the last two weeks of depressed.

Bivariate analysis

Table 6. Analysis result of correlation between self-esteem with the incidence of anxiety and depression

Independent variabel	Anxiety		P	OR	Depression		P	OR
Self esteem	Yes	No	0,005	4,250	Yes	No	0,000	25,967
Low (≤mean)	34	12			41	5		
High (> Mean)	10	15			6	19		

Table 6 showed that there was a significant correlation between self-esteem with the incidence of anxiety and depression. Which meant that patients with low self esteem had 4 times higher chance to experience anxiety and had a 26 times higher chance to experience depression than patients with high self esteem.

Discussion

Someone who had low self-esteem would bring less active behavior and not confident, thus these individuals were not able to express theirselves. Low self-esteem made a person sees himself as a worthless person, then he could not interact a social interaction. Low self esteem was also considered as a factor that could influence the anxiety and depression. Individuals with low self esteem were prone to stress, anxiety and depression, and poor coping[13].

The results showed a significant correlation between self-esteem with the incidence of anxiety in patients with MDR-TB. Patients with low self esteem had 4 times higher chance to experience anxiety than patients who had high self esteem. MDR-TB was a chronic disease that affected the sufferer physically that was considered as a dangerous threat. Patients assumed themselves as negative and useless person, which this had impact on declining self-esteem. Studies conducted on HIV/AIDS cases showed that the patients who had low self-esteem related with chronic illness suffered. The disease ias considered as a threat that made patients thoungt negatively about him that he was useless[14]. Patients would withdraw from the environment as a result of perceived anxiety that disturb the social interaction with the community.

Anxiety was defined as an emotional experience that come when facing pressure or threaten their event with a shorter duration. Anxiety was a natural response that appearred when someone was faced certain situations and symptoms appearred during such situations. A person who was experiencing high anxiety affected his interpersonal relationships as well as threaten the dignity[3]. Anxiety could emerge as a result of trauma that occurred in the life cycle. The process of treatment and the side effects that arised as a result of drugs consumed into the trauma itself for MDR-TB patients. Research conducted in cancer patients showed that low self esteem was affected by the trauma of chemotherapy. The longer the disease process and treatment which were done, the more trauma[15]. Patients become powerless thus anxiety appeared resulting from the uncertainty of treatment and the amount of drugs consumed[8].

Anxiety could be settled within oneself depended on the extent to which they considered the situation dangerous for him. Anxiety that last a long time and did not do a good intervention would be harmful illness aspects for the patient, causing chronic emotional problems, one of which depression[4]. The results showed a significant correlation between self-esteem with the incidence of depression in patients with MDR-TB. Patients with low self esteem had a 26 times higher chance to experience depression than patients with high self esteem.

Someone who was depressed, there would be changes in the usual patterns and responses as well as their behavior changes[16]. Depression occurred also related to cognitive vulnerability of individuals who experienced it. Someone who was depressed would create a constant negative judgment against himself, the world, and the future. Patients were becoming more sensitive to the opinions of others and became concerned with how others view and rate them. This led to the

emergence of a sense of loneliness, sadness, shame, and not capable of doing a good job and get a negative perception about themselves.

Orvwigho et al., (2016) stated that a person with a chronic disease would consider himself to be a burden to others, thus it would affect his self-esteem. These individuals were less confident because of fear of being a burden to his family. It was associated with prolonged treatment process that could be time consuming by family. The average MDR-TB patients in this study had followed the treatment for 8 months. The long treatment process made patients feel a person who failed then affected his self-esteem.

The young age proned to low self-esteem and was reported to have a high prevalence of depression. Bhawere (2014) stated that the age of 45-55 years old was more commonly experienced psychosocial problems. Javaid et al., (2017) reported a patient vulnerable to loss of self-esteem and courage, causing a depressive disorder which was related with longer treatment, expensive, consume more drugs and the side effects that required special attention. They could not withstand serious situations such as the burden of disease, and discrimination obtained. Low self esteem could be a predictor mentioned the emergence of depression in cases of chronic disease. The relationship between self-esteem and depression was stronger than self-esteem with anxiety.

Conclusion

Low self esteem was related with the emergence of anxiety and depression in patients with MDR-TB who were undergoing treatment process. There was a significant correlation between self-esteem with the incidence of anxiety and depression in patients with MDR-TB. It could be a reference for health workers to be able to control these factors by intervention in the form of health education and motivation to improve the self-esteem of MDR-TB patients to minimize the incidence of anxiety and depression that emerged.

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