SELF-STIGMA AS THE TRIGGER OF DEPRESSION FACTOR IN MULTIDRUG - RESISTANT TUBERCULOSIS (MDR-TB) PATIENTS AT A PUBLIC HOSPITAL IN GRESIK

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Abstract

Introduction: *Multidrug-Resistant Tuberculosis (MDR-TB) is a chronic infectious disease that can affect the patient's physical appearance so that it has an impact on the patient's psychosocial condition, including the emergence of anxiety and depression. Anxiety and depression in MDR-TB patients have an impact on the patient's rejection of the diagnosis and they choose to stop the treatment process. The incidence of anxiety and depression in MDR-TB patients is influenced by several factors, one of which is self-stigma. The purpose of this study was to determine the impact of the factor of self-stigma on the incidence of depression in MDR-TB patients.*

Method: *The study design used a cross-sectional approach with a sample of 71 MDR-TB patients undergoing treatment. The study used a questionnaire that was filled out directly by the patient during the treatment process. The sampling technique used purposive sampling by setting inclusion criteria. The bivariate statistical test used in the study was chi-square.*

Results: *The results of the self-stigma study obtained a p-value = 0.000 <0.05 with an OR value of 54.643, meaning that there was a significant relationship between self-stigma and depression in MDR-TB patients.*

Conclusions: *MDR-TB patients with high self-stigma have a higher chance of experiencing depression than patients with low self-stigma. Suggestions in this study are that it is hoped that the family, health workers, community, and government can help reduce the stigma against patients with MDR-TB. Promotive efforts by providing support and education to the community can help to eliminate the stigma so that the incidence of depression in MDR-TB patients can be minimized.*

Keywords: *Self-stigma, depression. Multidrug-Resistant Tuberculosis (MDR-TB)*

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INTRODUCTION

The current challenge of TB treatment is the emergence of drug-resistant tuberculosis or Multidrug-Resistant Tuberculosis (MDR-TB) caused by poor treatment regimens of isoniazid and rifampisin. MDR-TB arises as a result of a TB treatment program that is not following the standards of Directly Observed Treatment Shortcourse chemotherapy (DOTS) (Hasanah et al., 2019). Since the implementation of the DOTS system in hospitals in 1995, the number of new TB case reports is still very low, including MDR-TB reports (Oktamianti et al., 2021). Establishing a diagnosis of MDR-TB is more complex than drug-sensitive TB, the mortality rate is high and the rate of treatment failure is more so it becomes a challenge for the government in the TB control program.

The spread of MDR-TB cases in the world is uneven, the prevalence of MDR-TB is estimated to be three times higher than the cases found (Safitri et al., 2017). Data from the World Health Organization (WHO) in 2016 found 580,000 MDR-TB patients but only 125,000 (20%) were registered for the treatment program. As many as 15,380 suspected cases of MDR-TB were found in Indonesia during 2009-2015, with 1,860 confirmed cases and 1,566 cases treated (Kemenkes, 2016). During the 2009-2016 period in East Java, 1,132 MDR-TB cases were found. MDR-TB requires a long treatment time compared to drug-sensitive TB, so there are still many who have not undergone the correct treatment process (Nawas, 2010). This has an impact on the high number of dropout cases so it needs special attention from the government. This is in line with research conducted in South Korea that cases of dropout of MDR-TB patients increased at the beginning of the treatment process (Seung et al., 2016).

MDR-TB patients can experience physical and psychological problems that affect medication adherence. The physical difficulties experienced also have an impact on the patient's psychosocial condition, including emotional issues, feeling bored, low motivation, anxiety, and depression (Jong, 2011). The national prevalence of mental-emotional disorders is 9.8% and the prevalence of depression is 6.1% (Riskesdas, 2018). The emergence of anxiety and depression in MDR-TB patients can also affect the treatment process.

MDR-TB treatment that is more than three months can directly cause depressive disorders in patients (Bhaware et al., 2014). Bhawere et al. (2014) showed the results of 165 patients, as many as 86 (51.89%) patients experienced depressive disorders. Another study in Pakistan found that 61 (30.3%) patients had moderate depression and 13 (6.5%) patients had severe depression out of a total of 201 patients (Javaid et al., 2017). Research at the Friendship Hospital found data on MDR-TB patients who experienced depression in as many as 32% of patients (Faizah et al., 2016). Depression experienced by patients can increase the morbidity and mortality of the disease (Peltzer et al., 2012).

Stigma is often attached to health problems, including MDR-TB. Research in Haiti revealed that patients with TB were stigmatized in the community related to the process of transmitting the disease and being suspected of having HIV/AIDS, thus affecting the process of care and treatment (Coreil et al., 2010). A total of 113 (81.9%) TB patients in Zambia reported being stigmatized in the community (Cremers et al., 2015).

Stigma in society can lead to negative prejudice in patients. Prejudice and negative treatment are internalized by the patient into himself, giving rise to self-stigma (Corrigan and Rao, 2012). The patient becomes afraid because the disease he is suffering from can be transmitted to other people. Patients form social isolation by withdrawing from the surrounding environment which has an impact on the lack of social support. It also gives rise to anxiety and can even lead to depression. The causes of anxiety and depression in patients with chronic diseases are associated with limited information about the disease and its treatment process, low belief in healing, low self-esteem, stigma, and inadequate social support.

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 diagnosed and having treatment in the Polyclinic of MDR-TB. Preliminary study through interviews with five patients with

MDR-TB who underwent the treatment process showed that four patients were fearful when first diagnosed with MDR-TB, patients felt worried about not being able to carry out a long treatment process and having to 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 suffering from MDR-TB. One out of five 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-stigma factor related with the incidence of depression in patients with Multidrug-Resistant Tuberculosis (MDR-TB).

METHOD

Research Design

This type of research is an analytic correlation with a cross-sectional approach. Data were collected using a questionnaire about self-stigma and depression. The data obtained will be tested using univariate and bivariate analysis to see whether the self-stigma factor is one of the factors associated with the incidence of depression in MDR-TB patients.

The study was conducted on MDR-TB patients at the MDR-TB Poly Hospital Ibnu Sina Gresik. The initial process was carried out by obtaining permits at the Ibnu Sina Hospital and the MDR-TB Poly. After that, the ethical feasibility test was carried out in this study, and permission obtained to conduct the research.

Population, Samples, and Sampling

The population in this study was 86 patients during the last three months with a total sample of 71 MDR-TB patients. The study used inclusion criteria, namely (1) MDR-TB patients who underwent the treatment process, at least one month of treatment, (2) MDR-TB patients who did not take anti-anxiety drugs, anti-depressant drugs, and patients who took drugs regularly such as stroke and diabetes mellitus, (3) MDR-TB patients with complications such as chronic kidney failure and HIV-AIDS.

Instrument

Research measured self-stigma using a questionnaire related to self-stigma or modified self-stigma based on a questionnaire. The Stigma Scale consists of 17 statement items. This study uses a Likert scale with assessment criteria 1 strongly agree to 4 strongly disagree for favorable statements and assessment criteria 1 strongly disagree to 4 strongly agree for unfavorable statements. The distribution of data on the self-stigma questionnaire was normal with a p-value = 0.074>0.05 so that the categories were seen from the cut-off mean value: high self-stigma cut off mean and low self-stigma < cut off mean.

The depression variable was measured using a questionnaire related to signs and symptoms of depression that appeared during the last two weeks. The questionnaire used has been modified based on the Beck Depression Inventory (BDI) which consists of 13 statement items. The BDI is a tool used to help reveal a person's level of depression. Individuals respond to questions according to how they felt during the last two weeks. Each statement item indicated depressive symptoms related to sadness, feelings of punishment, pessimism, past failures, loss of pleasure and interest and decreased energy, feelings of guilt, self-dislike, crying, doubt, worthlessness, sleep pattern changes, irritability, and fatigue. Each consists of choices 0 (never) to 3 (always) for the criteria for unfavorable statements and 0 (always) to 3 (never) for favorable statements. Depression category 17 and not depressed < 17.

Procedure

The research procedure was started by preparing stationery and self-stigma questionnaires and depression questionnaires to be distributed to 71 MDR-TB patients. The initial stage was to apply for a research permit to the General Hospital (RSUD) Ibnu Sina Gresik. The researcher also submitted an ethical error test letter to the Health Research Ethics Commission (KEPK) RSUD Ibnu Sina Gresik.

The research implementation stage was determined by the respondents based on the inclusion criteria that had been set, as many as 71 MDR-TB patients. The researcher introduced himself and explained the purpose, process, and principle of confidentiality so that patients who were respondents could provide complete data and answer honestly according to their experiences. The researcher accompanied the respondent for 30-45 minutes to fill out the questionnaire, the process was carried out while the patient was waiting for the MDR-TB treatment process at the Poly. During the research process, the researcher gave the patient the opportunity to ask if there was something they did not understand by filling out the questionnaire.

Data Analysis

Data analysis in this study was univariate to analyze the tabulation of the respondent's characteristics data including gender, occupation, education, income, length of time for treatment, and information about MDR-TB. The results of the analysis of age and duration of MDR-TB disease are numerical so that they are presented in tabular form with mean, standard deviation, and minimum-maximum values. The results of univariate analysis for the dependent and independent variables are presented in the form of frequency distribution tables and percentages because the data are categorical.

Bivariate analysis was conducted to see the correlation between self-stigma variables and the incidence of depression using the chi square statistical test assisted by the SPSS 20.0 program computerized system. The results are seen based on the p-value and the Odds Ratio (OR) value, where if the p-value <0.05, it means that there is a significant relationship between the independent variable and the dependent variable. OR value to determine the probability of occurrence of risk factors on the effect. The results of the bivariate test obtained were then interpreted.

Ethical Clearance

The research ethics test was carried out by the Health Research Ethics Commission at RSUD Ibnu Sina Gresik and obtained ethics permit with the number 071/05/437.76.46/2019.

RESULTS

The univariate analysis table for general data represents the characteristics of MDR-TB patients consisting of gender, education, occupation, income, length of treatment, information about the MDR-TB disease, age, and length of illness with MDR-TB.

Distribution of MDR-TB patient data based on gender, education, occupation, income, duration of treatment, and information about MDR-TB are presented in the form of percentage and frequency because the data are categorical, while the distribution of age and duration of illness will be presented in the form of minimum, maximum, mean and standard deviation because the data are numeric.

Table 1 shows that some of the MDR-TB patients were male with the education level being primary school (SD). Respondents in this study work with income levels mostly UMR (regional minimum wage). Most of the respondents had been on treatment for > 1 month and had received information or explanation about MDR-TB from health workers.

Table 1. Respondents' Sociodemographic

Respondents' characteristics	Frequency (n)	Percentage (%)
Gender		
Male	45	63
Female	26	37
Education		
Primary School	30	42
Junior High School	12	17
Senior High School	25	35
Diploma-3	4	6

Occupation		
Unemployed	34	48
Employed	37	52
Income		
≤ Regional minimum wage	62	87
≥ Regional minimum wage	9	13
Duration of treatment		
1 month	11	16
>1 month	60	84
Experience in obtaining information about MDR-TB from health workers		
No	16	23
Yes	55	77
Total	71	100

Table 2 shows that the average age of respondents was 45 years old with an average length of MDR-TB for eight months. Specific data consisted of patient distribution data based on the variables of self-stigma and depression. The distribution of MDR-TB patients based on independent variables will be presented in terms of frequency and percentage because the data are categorical.

Table 2. Distribution of Respondents based on Age and Length Suffering MDR-TB

Respondents' characteristics	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 3 shows the distribution of data based on the independent variable of self-stigma and the dependent variable of the incidence of depression. A total of 47 (66%) had high self-stigma and 52 (73%) MDR-TB patients had depression.

Table 3. Distribution of Respondents based on Independent and Dependent Variables

Variables	Category	Frequency (n)	Percentage (%)
Self-stigma (Independent)	High	47	66
	Low	24	34
	Total	71	100
Depression (Dependent)	Not-depressed	19	27
	Depressed	52	73
	Total	71	100

The relationship of independent variables with the incidence of depression

The results of the bivariate analysis consisted of the independent variable self-stigma and the dependent variable the incidence of depression in MDR-TB patients. Table 4 shows that there is a significant relationship between self-stigma and the incidence of depression. The OR value is 54,643, meaning that respondents with high self-stigma have a 54 times higher chance of experiencing depression than respondents with low self-stigma.

Table 4. Analysis of the Relationship of Independent Variables with the Incidence of Depression

Variables	Category	Incidence of Depression		Total	*P-Value*	OR
		Depressed	Not Depressed			
Self-stigma	High	45	2	47		
	Low	7	17	24	0,000	54,643
	Total	52	19	71		

DISCUSSION

The results of the bivariate analysis showed that there was a significant relationship between self-stigma and the incidence of depression in MDR-TB patients. MDR-TB patients in this study preferred not to tell the community about their illness due to the fear of being neglected and isolated when the public found out about their illness (Jangid et al., 2016). Individual status when getting stigmatized will decrease so they choose not to participate in social activities. Patients feel that, when they suffer from MDR-TB, they will become dangerous people because they can transmit the disease to their families and communities. This prejudice creates fear of himself and results in the patient's self-created social isolation which leads to depression. The proportion of patients with high self-stigma who experienced depression was 87%. The odds of developing depression were 54 times higher in patients with high self-stigma.

Self-stigma is reported as a major problem faced by MDR-TB patients, which harms the treatment process. According to Thomas et al. (2016), the effect of self-stigma is social isolation formed by patients because they feel rejected by family members, neighbors, friends, and healthcare providers for fear of spreading the infection to others. This was associated with an increase in depressive symptoms in patients. Patients are vulnerable to negative consequences arising from the stigma in society regarding the discrimination they receive (Costelloe et al., 2015).

Self-stigma arises as a result of different treatment from the family, community, and health workers felt by MDR-TB patients. Someone who forms self-stigma can cause negative emotional feelings in the form of low self-esteem and problems with self-efficacy (Corrigan and Rao, 2012). Self-stigma is associated with detrimental effects, namely the emergence of psychosocial disorders, one of which is depression.

High self-stigma can lead to depression and further contribute to low quality of life (Lien et al., 2018). Lien et al (2018) found that someone who has high knowledge of stigmatizing beliefs has a low risk of quality of life, low self-esteem, and can experience depression. Conversely, if the patient has high knowledge with low self-stigma, it will have a positive impact on the patient. Reducing self-stigma and increasing self-esteem can be done by providing information related to the disease suffered so that the quality of life will increase.

High self-stigma causes emotional changes such as depression and behavioral changes related to the process of seeking appropriate treatment. The depression experienced as a result of the self-stigma formed by the patient affects the level of adherence to treatment (Campbell et al., 2016). Another study states that self-stigma is associated with detrimental mental health, one of which is depression. The inherent self-stigma causes a lack of motivation in the use of health services and drug use (Wohl et al., 2012).

Self-stigma that causes depression can affect the quality of life of individuals who experience it. Research in Austria shows that there is a significant relationship between self-stigma and the quality of life of schizophrenic patients with a negative relationship direction: if self-stigma is high, the quality of life is low (Wardani and Dewi, 2018). Another study conducted in Indonesia on HIV-AIDS patients showed that stigma and discrimination had an impact on improving the quality of life, which

experienced many obstacles. Stigma has a wider impact than the HIV virus itself. About 60% of people with HIV/AIDS (ODHA) experience depression (Lubis et al., 2016).

Depression that arises as a result of self-stigma becomes a negative factor that affects the treatment process. Patients with chronic illness who experience depression can inhibit adaptation to their illness so that it affects their quality of life. Patients become vulnerable to drop-out cases which has an impact on increasing resistance cases (Javaid et al., 2017).

Self-stigma in chronic disease cases can also be influenced by gender and age. The research by Javaid et al. (2017) shows that female patients at a younger age are prone to forming stigma about themselves, so it has an impact on the emergence of depression. This is related to the psychological vulnerability experienced by women, where stigmatization easily makes women feel lonely, belittled, and become worthless so that they fall into a state of helplessness. A different study conducted by Bhawere et al. (2014) showed that the incidence of depression due to stigmatization was found in male patients. Stigmatization is related to their higher economic burden and responsibility to the family. Patients more easily fall into a state of hopelessness and helplessness, causing depression.

A person with a chronic illness causes excessive guilt and disappointment with himself regarding the illness he suffers. Feelings of guilt associated with disease relapse, risk of infection, failure of previous treatment, stigma, and limited social support lead to depression (Javaid et al., 2017). Research in the Czech Republic found that patients who experience depression due to prejudice and discrimination from the social environment make patients deny the appearance of symptoms and delay seeking care, which has an impact on quality of life (Holubova et al., 2016). Research data in Indonesia on pulmonary TB patients found that the magnitude of the incidence of depression was 51.9%; this was related to older age in the prevalence of depression in Tuberculosis patients at Dr. Kariadi Semarang. Depression is very common in TB patients undergoing treatment, especially the elderly who also have complications other than the TB disease itself (Nahda et al., 2017).

Another study on HIV TB cases found that patients had greater emotional and economic burdens than patients with TB or HIV alone. This problem is caused by the higher self-stigma that the patient feels, which makes them helpless and hopeless. Patients choose not to disclose their illness so that the social support they get is inadequate; this also has an impact on decreasing quality of life. Patients become disappointed in themselves so they easily fall into depression (Daftary, 2012).

CONCLUSION

There is a significant relationship between self-stigma and the incidence of depression in Multidrug-Resistant Tuberculosis (MDR-TB) patients at the MDR-TB Poly Hospital Ibnu Sina Gresik; patients with high self-stigma have a high chance of experiencing depression.

Suggestions in this study are that it is hoped that the family, health workers, community, and government can help reduce the stigma against patients with MDR-TB. Promotive efforts by providing support and education to the community can help to eliminate the stigma so that the incidence of depression in MDR-TB patients can be minimized.

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CONFLICT OF INTEREST

The Author(s) declare(s) that there is no conflict of interest.

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