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The Hope Therapy Effect Toward Depression, Anxiety, and Stress of Tuberculosis Patients with Multi-Drug Resistance at Jayapura's Healthcare Center, Papua

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ABSTRACT

Background: Indonesia is the third country with a high-rate case of tuberculosis with multi-drug resistance, for a percentage of 5% per 100.000 population. In Papua, TB-MDR becomes the main problem of health with a successful percentage of medication at 68.7%, an indicator of WHO higher than 85%. The complexity and the prolonged occurrence make the patients to have mental health illnesses, such as depression, anxiety, and stress. The field data of depression cases consisted of 65 patients. 50% with had mild depression, 20% with moderate, and 25.55 with severe. Patients with anxiety ranged from 16.7% to 37.29%. Patients with severe stress consisted of 20%. The mental illness health problems for TB-MDR patients required the roles of the nurses, such as counseling based on HOPE therapy.
Purpose: Analyzed the effects of HOPE therapy to manage depression, anxiety, and stress levels.
Methods: Quasi-experimental research applied a systematically assigned control group. The population consisted of patients with TB-MDR receiving medication at Jayapura's healthcare center, 40 individuals.
Results: HOPE therapy effects for depression, stress, and anxiety levels applied the Wilcoxon test. The obtained result was a p-value lower than 0.05. The results indicated the effect of HOPE therapy medication on depression, stress, and anxiety levels. The intervention group had decreased depression, stress, and anxiety levels with p-values of 0.043 and 0.012. The results contradicted the control group. The obtained p-value was higher than 0.05, indicating no effect. The p-values were 0.721, 0.532, and 0.670.
Conclusion: HOPE therapy was useful for TB-MDR patients with mental illness. The administered HOPE therapy for patients could improve their confidence and hopes to live better and recover.

Keywords: anxiety, depression, HOPE therapy, multi-drug resistance, tuberculosis

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BACKGROUND

Tuberculosis with Multi-Drug Resistance, TB-MDR, refers to a chronic-infectious disease that may lead to death (Fitrianur, 2018). TB-MDR becomes a global health problem and hinders the effectiveness factor of TB medication (Kulkarni et al, 2020). WHO reported that TB-MDR cases increased from 2012 with 84.000 cases to 153.000 cases in 2017 (Lange et al, 2019). Globally, tent countries, 75%, had the drop-out records, including Indonesia. The data mentioned that Indonesia is ranked three, with 10% new cases (Parrenas, Waller & Sinsiri, 2018). WHO also reported that TB-MDR cases in Indonesia in 2017 were 5% of the average 100.000 population (Kemenkes, 2019). In Papua, the TB-MDR cases in 2019 reached a percentage of 64.8% or 355 cases for the 100.000 population. The successful rate of TB medication in Papua did not reach the given indicator by WHO, higher than 85%. The successful scope in Papua only reached 68.75%. This value indicated the primary health problem in Papua.

TB-MDR medication required prolonged time to improve mental illness problems. The suffered mental illness of TB-MDR patients included difficulties working and socializing, negative stigma from families and friends, depression, anxiety, and stress (Das et al., 2014; Javaid et al., 2017a; Morris et al., 2016; Walker et al., 2017, 2019). the psychological impacts for TB-MDR patients also influenced their life quality. Aini found a percentage of 51.7% of TB-MDR patients suffer from severe depression. This situation influenced their life quality (Aini et al., 2015). Singh found 65 TB-MDR patients, or 50% of patients suffering from mild depression, 20% with moderate depression, and 25.5% with severe depression (V. Singh et al., 2018). TB-MDR became the hindering factor in consuming the medicine (Walker et al., 2017, 2019) TB-MDR patients also suffered from anxiety, 16.7% to 37.29% (N. K. Singh et al., 2019). Depression and anxiety would be severe if the patients also had comorbid diseases (Nahda et al., 2017; Walker et al., 2017). Patients suffering from stress had 20% of the suffering from severe stress (N. K. Singh et al., 2019). Sweetland, cited by Javaid, explained that the mental illness of TB-MDR patients happened due to the stigma from families and friends, lack of system support, social isolation, diagnostic denial, medication denial, the anxiety of losing a job, feeling dying, and feeling afraid to be left (Javaid et al., 2017a; Khanal et al., 2017; Morris et al., 2016; Thiruvalluvan et al., 2017).

The mental illness problems of TB-MDR patients require management to reach well-being. The roles of the nurses were to provide psycho-social support, such as counseling. (Baral et al., 2014; Chalco et al., 2006; Khanal et al., 2017) The counseling therapy administration improves motivation while completing the medication. One of the group-based counseling therapy to improve emotional status is HOPE therapy. Chan explains that the HOPE intervention significantly managed depression in patients suffering from cancer (Chan et al., 2019). The administration of HOPE therapy for TB-MDR patients was limited to apply to chronic and non-communicable diseases to improve subjective well-being (Chan et al., 2019; Khaledisardashti et al., 2018). The applied modality therapy for TB patients was psycho-education therapy to decrease depression, anxiety, and stress (Suryani et al., 2016) Therefore, HOPE therapy could manage the mental illness problems of TB-MDR patients.

This research aimed to 1) determine the characteristics of TB-MDR patients and the improved characteristics of depression, anxiety, and stress; 2) determine the correlation between HOPE therapy and the levels of depression, anxiety, and stress; and 3) determine the effect of HOPE therapy on depression, anxiety, and stress levels of TB-MDR patients.

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METHOD

This quasi-experimental research applied a systematic assigned control group design. The researchers analyzed the effects of HOPE therapy on the levels of depression, anxiety, and stress of TB-MDR patients by comparing the pretest scores and posttest scores of the intervention and control groups.

The population consisted of all TB-MDR patients at Jayapura's Healthcare Unit, 30 individuals. The researchers applied inclusion and exclusion criteria to take the research sample. In this research, the researchers applied a total sampling technique by taking all samples from the population based on the inclusion and exclusion criteria. Here are the inclusion criteria: 1) TB-MDR patients visiting Jayapura's healthcare unit, 2) cooperative TB-MDR patients, 3) TB-MDR patients with a second medication timeline for minimally two months, 4) not being inpatient, and 5) willing to be respondents. On the other hand, the applied exclusion criteria were: 1) TB patients, 2) TB-MDR patients with diligence medical visits but deemed dropped out, 3) TB-MDR patients visiting hospitals, and 4) TB-MDR patients with only a single visit.

The research variables were the varied characteristics among research subjects. The independent variable was the HOPE therapy while the dependent variables were depression, anxiety, and stress levels of TB-MDR patients.

The research instrument applied the Adult Hope Scale, AHS, consisting of 12 items with a Likert scale. The applied indicators were four indicators of agency assessment items (2, 9, 10, 12), and 4 pathway assessment items (1, 4, 6, 8).

The researchers also used 4 items to determine the distractor and a questionnaire of Depression Anxiety Stress Scale, DAAS, consisting of 42 items with an ordinal scale. The normal level of depression ranged from 0-9, anxiety from 0-7, and stress from 0-14. The mild depression level ranged from 10-13, anxiety from 8-9, and stress from 15-18. The severe depression ranged from 21-27, and anxiety from 15-19, stress from 26-33. The extreme depression ranged from depression higher than 28, anxiety higher than 20, and stress higher than 34.

The intervention stage explained the activities for the respondents. Then, the researchers provided informed consent for the respondents. The researchers grouped the respondents into some groups and began HOPE therapy teaching within 4 sessions. The HOPE intervention lasted for 4 days for each group. Every session of the groups lasted for 120 minutes. The researchers provided opportunities for the respondents to promote the HOPE therapy at home, three times a week. Then, in the fourth week, the researchers shared a posttest.

The researchers analyzed the data by editing, coding, tabulating, entrying, and clearing. The researchers analyzed the data with univariate and bivariate tests on SPSS and applied the Wilcoxon statistic test. The given criterion was $p \leq 0,05$.

RESULTS

The researchers lasted 12 sessions. The first three sessions were attempts to deliver the permission letters to four healthcare units in Jayapura. The other two meetings were for the control group and four meetings were for the intervention group. For the intervention group, the researchers focused on 15 respondents at Sentani Healthcare. Then, for the control group, the researchers gathered the data from 3 regions of Kanda, Sawoi, Genyem, and Sentani health care units. Here are the data descriptions.

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Characteristics of Respondents

The table shows the characteristics of TB-MDR respondents based on sex types, ages, religions, years of medications, incomes, and marital statuses for both groups in the working areas of Sentani, Kanda, Sawoi, and Genyem health care units in Jayapura, 2022.

Table 1. The Frequency Distribution of TB-MDR Respondents' Characteristics at Sentani, Kanda, Sawoi, and Genyem Health Care Units in Jayapura (n=30)

Variables	Groups		Total
	Intervention	Control	
Sex Types			
Males	11 (73%)	6 (40%)	17 (57%)
Females	4 (27%)	9 (60%)	13 (43%)
Ages			
12-21 years old	9 (60%)	6 (40%)	15 (50%)
22-45 years old	1 (6,6%)	7 (46,6%)	8 (26,6%)
46-59 years old	1 (6,6%)	0 (0%)	1 (3,3%)
older than 60 years old	4 (2,6%)	2 (13,3%)	6 (20%)
Religion			
Christian	15 (100%)	15 (100%)	30 (100%)
Years of Medications			
Less than 9 months	9 (60%)	5 (33%)	14 (47%)
9-18 months	3 (20%)	1 (7%)	4 (13%)
19-24 months	1 (6,7%)	5 (33%)	6 (20%)
Longer than 24 months	2 (13,3%)	4 (27%)	6 (20%)
Incomes			
lower than 3 million	4 (27%)	1 (7%)	5 (16,6%)
Having no income yet	11 (73%)	14 (93%)	25 (83,3%)
Marital status			
Unmarried	10 (66,6%)	6 (40%)	16 (53%)
Married	5 (33,4%)	9 (60%)	14 (47%)

Source: Primary Data, 2022

Table 1 shows 73% of respondents are male, in the intervention group; and 60% females, in the intervention group. A percentage of 60% of respondents aged between 12 and 21 years old for the intervention group. Then, a percentage of 46.6% of respondents aged between 22 and 45 years for the control group. All respondents from both groups are Christian. Most patients newly received the medication, lower than 60% with the range months lesser than 9 months for the intervention group. Then, for the control group, the patients newly received medication for less than 9 months. Patients with drop-out medication history, for more than 24 months, consisted of 33%, 73%, and 93%. These patients had no excellent incomes for both group. A percentage of 66.6% of respondents, from the intervention group, was not married while 60% of respondents, from the control group, were married. The data normality test results found the data were not homogeneous, with a p-value of 0.000 lower than 0.05.

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Specific Data

Table 2. The Expectation Levels of TB-MDR Patients in Jayapura's Health Care Region

Groups	The Expectation Levels			*Mean* ± Standard Deviation
	High Expectancy	Moderate Expectancy	Low Expectancy	
Control	5 (33,3%)	5 (33,3%)	5 (33,3%)	2 ± 0,845
Intervention	8 (53,3%)	7 (46,6%)	0 (0%)	1,40 ± 0,507

Source: Primary Data, 2022

Table 2 shows the mean of a control group, 33.3%, which has high, moderate, and low expectancy levels. For the intervention group, a percentage of 53.3% of individuals had a high expectancy level. The mean score and the standard deviation of the control group are 2 ± 0,845. On the other hand, the intervention group obtains a mean and standard deviation score of 1,40 ± 0,507.

Table 3. The Depression Levels of TB-MDR Patients at Jayapura's Health Care Unit

Groups	Depression Level					*Mean* ± Standard Deviation
	Normal	Mild	Moderate	Severe	Extremely Severe	
Control	5 (33,3%)	2 (13,3%)	3 (20%)	3 (20%)	2 (13,3%)	2,67 ± 1,163
Intervention	8 (51,85%)	3 (16,67%)	2 (11,11%)	2 (9,26%)	0 (11,11%)	1,87 ± 1,125

Source: Primary Data, 2022

Table 3 shows a percentage of 33% of respondents in the control group who have no depression status or normal. In the intervention group, the table shows 51.85% of respondents have no depression or normal. The mean score and standard of deviation on the expectancy levels of a control group are 2,67 ± 1,163. Then, the mean score and standard deviation of the intervention group is 1,87 ± 1,125.

Table 4. The Anxiety Levels of TB-MDR Patients at Jayapura's Health Care Unit (n = 30)

Groups	Anxiety Levels					*Mean* ± Standard Deviation
	Normal	Mild	Moderate	Severe	Extremely Severe	
Control	5 (33,3%)	2 (13,3%)	3(20%)	3 (20%)	2 (13,3%)	4.00 ± 1,134
Intervention	8 (51,85%)	3 (16,67%)	2 (11,11%)	2 (9,26%)	0 (0%)	2,93 ± 11,486

Source: Primary Data, 2022

Table 4 shows 33.3% of participants in the control group have no anxiety status or normal. In the intervention group, 51.85% of participants have no anxiety or normal. The mean and the standard deviation of the control group's expectancy level is 4.00 ± 1,134. For the intervention group, the mean and the standard deviation are 2,93 ± 11,486.

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Table 5. The Stress Level of TB-MDR Patients at Jayapura's Health Care Unit (n = 30)

Groups	Stress Level					***Mean* ± Standard Deviation**
	Normal	Mild	Moderate	Severe	Extremely Severe	
Control	3 (20%)	4 (26,7%)	5 (33,3%)	1 (6,7%)	2 (13,3%)	2,67 ± 1,291
Intervention	9 (60%)	3 (20%)	2 (13,3%)	1 (6,7%)	0 (0%)	1,67 ± 0,967

Source: Primary Data, 2022

Table 5 shows 33.3% of participants in the control group have no stress status or normal. In the intervention group, 60% of participants have no stress or normal. The mean and the standard deviation of the control group's expectancy level is 2.67 ± 1,291. For the intervention group, the mean and the standard deviation are 1,67 ± 0,967.

Table 6. The HOPE Therapy Capability of TB-MDR Patients on the Depression Level at Jayapura's Health Care Region (n = 30)

Groups	*Mean* ± Standard Deviation	
	Pre-Test	*Post-Test*
Intervention	*`12,67±8.235*	*24.40±13,747*
Control	*19,73± 10,025*	*20,07±9,830*

Source: Primary Data, 2022

Table 6 shows the TB-MDR patients in the control group have an average HOPE therapy capability on the depression level of 19.73 before the intervention and 20.07 after the intervention. The mean of HOPE therapy before the intervention, in the control group, is 12.67 while after the intervention is 24.0.

Table 7. The HOPE Therapy Skill of TB-MDR Patients on the Anxiety Level at Jayapura's Health Care Unit (n = 30)

Groups	*Mean* ± Standard Deviation	
	Pre-Test	*Post-Test*
Intervention	*10,93±10.025*	*20,07±6.606*
Control	*19,73± 2,588*	*20,07±9,830*

Source: Primary Data, 2022

Table 7 shows the TB-MDR patients in the control group have an average HOPE therapy capability on the depression level of 19.73 before the intervention and 20.07 after the intervention. The mean of HOPE therapy before the intervention, in the control group, is 10.93 while after the intervention is 20.07.

Table 8. The HOPE Therapy Capability of TB-MDR Patients on Stress Levels at Jayapura's Health Care Unit (n = 30)

Groups	*Mean* ± Standard Deviation	
	Pre-Test	*Post-Test*
Intervention	*10,93±8,722*	*21,73±6,606*
Control	*19,73± 9.825*	*20,07±9,664*

Source: Primary Data, 2022

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Table 8 shows the TB-MDR patients in the control group have an average HOPE therapy capability on the depression level of 19.73 before the intervention and 20.07 after the intervention. The mean of HOPE therapy before the intervention, in the control group, is 10.93 while after the intervention is 21.73.

Table 9. The Depression Levels of TB-MDR Patients at Jayapura's Health Care Unit

Groups	*Mean* ± Standard Deviation		*P value*
	Pre-Test	*Post-Test*	
Control	*`12,67±8.235*	*24.40±13,747*	0,721
Intervention	*19,73± 10,025*	*20,07±9,830*	0.043

Source: Primary Data, 2022

Table 9 analyzes the depression levels of TB-MDR patients before and after the HOPE therapy for both groups with the Wilcoxon test. The obtained p-value is 0.721, indicating no significant differences between before and after one-month intervention for the control group with a p-value higher than 0.05. On the other hand, for the intervention group, the result shows a significant difference between before and after the intervention with a p-value of 0.043, lower than 0.05. The results showed that HOPE therapy significantly decreased depression levels in TB-MDR patients. The decreased depression was observable from the increased mean score of the pretest and posttest on the intervention group, -0.34 with a decreased standard deviation for SD= ±0,195.

Table 10. The Anxiety Levels of TB-MDR Patients at Jayapura's Health Care Unit (n = 30)

Groups	*Mean* ± Standard Deviation		*P value*
	Pre-Test	*Post-Test*	
Control	*10,93±10.025*	*20,07±6.606*	0,532
Intervention	*19,73± 2,588*	*20,07±9,830*	0.043

Source: Primary Data, 2022

Table 10 analyzes the anxiety level of TB-MDR patients, before and after the HOPE therapy, for both groups with the Wilcoxon test. The obtained p-value is 0.532, indicating no significant differences between before and after one-month intervention for the control group, p-value higher than 0.05. On the other hand, for the intervention group, the result shows a significant difference between before and after the intervention with a p-value of 0.043, lower than 0.05. The obtained value indicated that HOPE therapy significantly decreased the anxiety of TB-MDR patients. The decreased anxiety was observable from the increased mean from the pretest and posttest of the intervention group, -0.34 with the increased standard deviation of SD= ±7,242.

Table 11. The Stress Level of TB-MDR Patients at Jayapura's Health Care Unit (n = 30)

Groups	*Mean* ± Standard Deviation		*P value*
	Pre-Test	*Post-Test*	
Control	*10,93±8,722*	*21,73±6,606*	0,670
Intervention	*19,73± 9.825*	*20,07±9,664*	0.012

Source: Primary Data, 2022

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Table 11 analyzes the stress level of TB-MDR patients, before and after the HOPE therapy, for both groups with the Wilcoxon test. The obtained p-value is 0.670, indicating no significant differences between before and after one-month intervention for the control group, p-value higher than 0.05. On the other hand, for the intervention group, the result shows a significant difference between before and after the intervention with a p-value of 0.012, lower than 0.05. The obtained value indicated that HOPE therapy significantly decreased the stress of TB-MDR patients. The decreased stress was observable from the increased mean from the pretest and posttest of the intervention group, -0.34 with the decreased standard deviation of SD= ±0,066.

Table 12. shows the differences in depression levels in TB-MDR patients after the HOPE therapy in both groups at Jayapura's health care unit (n = 30).

Groups	*Mean*	*Mean Difference*	Sum Rank		*p-value*
			Negative Rank	Positive Rank	
Control	16.53	-1.00	8,50	1,00	0,001
Intervention	17,53				

Source: Primary Data, 2022

Table 12 analyzes the depression level differences of TB-MDR patients in both groups. The obtained p-value is 0.001, lower than 0.05. The value indicates significant differences in decreased depression in the TB-MDR patients from both groups. The mean depression rank score of TB-MDR patients, in both groups after HOPE therapy, is negative and higher than 8.50 than the positive rank with the value of 1.00.

Table 13. shows the differences in anxiety levels in TB-MDR patients after the HOPE therapy in both groups at Jayapura's health care unit (n = 30).

Groups	*Mean*	*Mean Difference*	Sum Rank		*p-value*
			Negative Rank	Positive Rank	
Control	20,07	-4,33	9,55	105,00	0,010
Intervention	24,40				

Source: Primary Data, 2022

Table 13 analyzes the anxiety level differences between TB-MDR patients in both groups. The obtained p-value is 0.001, lower than 0.05. The value indicates significant differences in decreased anxiety in the TB-MDR patients from both groups. The mean anxiety rank score of TB-MDR patients, in both groups after HOPE Intervention Group therapy, is negative and higher than 8.50 than the positive rank with the value of 1.00.

Table 14. shows the differences in stress levels in TB-MDR patients after the HOPE therapy in both groups at Jayapura's health care unit (n = 30).

Groups	*Mean*	*Mean Difference*	Sum Rank		*p-value*
			Negative Rank	Positive Rank	
Control	20,60	-1,13	8,00	120,00	0,001

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Intervention	21,73

Source: Primary Data, 2022

Table 14 analyzes the stress differences between TB-MDR patients from both groups. The obtained p-value is 0.001, lower than 0.05. The value indicated a significant difference in the decreased stress on TB-MDR patients from both groups. The mean depression rank score of TB-MDR patients, in both groups after HOPE Intervention Group therapy, is negative and higher than 8.50 than the positive rank with the value of 1.00.

DISCUSSION

Various factors influenced the psychological problems of TB-MDR patients. One of the influential factors the TB-MDR patients' health is - sex type. The results showed that the sex types of both groups were dominated by males than women. This matter dealt with the responsibilities of males as family leaders to keep working even though they were receiving medication. This matter decreased the resting time or sleeping time for the males. They also had unhealthy habits, such as smoking and drinking alcohol. Thus, their nutrition got lower and was easily exposed to air pollution while working (Bawonte et al., 2021; Samsugito & Hambyah, 2018). The researchers found this condition while interviewing the respondents. Most respondents explained that they did not pay attention to their health and were lazy to visit doctors. They also had to work to make living. McQuaid found most TB patients were female than male with a risk factor of 1.16 (1.06-1.28). The influential factor in the TB-MDR case increase in males is an unhealthy lifestyle (Finn McQuaid et al., 2020). The other influential factor for psychological problems is - the age of TB-MDR patients. The results showed that most TB-MDR patients were aged between adolescents and adults, 12 to 50 years old. This matter dealt with medication adherence. The increased TB-MDR case among youngsters was correlated with treatment failure due to lack of monitoring, patient-follow up, mortality, and social-behavior-related resistance (Lee et al., 2020).

The other influential factor in the increased psychological problems for TB-MDR patients is - medication status. The research results showed that most TB-MDR patients were new patients, lesser than 9 months. The psychological problems of new patients mostly found the statuses of depression, stress, and mild anxiety. On the other hand, the longest medication was longer than 24 months. In this case, the patients had severe depression records. The psychological problems of TB-MDR patients would be more severe if the patients received a negative stigma and lack of family support (Numpong et al., 2022; Rachma et al., 2022).

The statistical test found that the mean score data of depression level before the intervention was 2.67, anxiety with 3.93, and stress with 3.20. In this case, the researchers found two respondents with severe depression, 6 respondents with severe anxiety, and 7 respondents with severe stress. For the control group, the mean score data showed a depression level of 2.67, an anxiety level of 2.93, and a stress level of 3.20. In this case, the researchers found two respondents with severe depression, 6 respondents with severe anxiety, and 7 respondents with severe stress. Javaid explains that the depression level of TB-MDR patients is correlated with the first diagnosis of the TB-MDR, socio-economic status, prolonged medical visits, comorbidity, and low medication success or dropout (Javaid et al., 2017b; Liu et al., 2021).

TB-MDR patients with prolonged medication would increase their anxiety and stress. This matte made the patients frightened that they could not be recovered from their diseases. Numpong explained that TB-MDR patients had emotional difficulties, such as fear of death, fear of community stigma, and prolonged sadness at the initial diagnosis (Numpong et al.,

2022). The other causes of depression for TB-MDR patients were the unknown transmission process. The results were relevant to the interview results. The interview also showed the respondents did not realize the transmission source of the diseases. TB-MDR patients suffering from depression hindered the medication process, anti-tuberculosis due to poverty, excellent nutrition intake, immune-suppression, and behavioral management (Lara-Espinosa & Hernández-Pando, 2021; Liu et al., 2021).

TB-MDR patients with psychological problems influenced their medication processes. Many TB-MDR patients with psychological problems had drop-out records which led to mortality. This matter also transmitted the diseases to other family members. The psychological health problems of TB-MDR patients would decrease the life quality of the patients due to the influential social events from the surrounding. In this case, the patient's conditions also influenced social events, such as the intention to isolate from the community, to behave negatively by drinking alcohol, feeling afraid of losing earnings and jobs, losing mindset due to the disease, and social stigma. The interview results with the respondents also found low expectancy and life purpose loss due to TB-MDR patients. The patients thought they could not be cured. This situation was strongly correlated with the perception of the disease. (Lara-Espinosa & Hernández-Pando, 2021; Sulistiyani et al., 2021).

TB-MDR patients with psychological problems required therapy to improve their self-esteem and expectancy to fully recover. One of them is - HOPE therapy. The administration of HOPE therapy encouraged the patients to introspect, find positive values, and determine life purposes. Some patients could accurately manage their psychological problems. The results found the intervention group participants, with one-month therapy, had no severe depression, stress, and anxiety. The statistical test results with Wilcoxon also obtained p-values of 0.001 and 0.010, indicating significant influence. Rahimipour also found HOPE therapy could significantly decrease depression, anxiety, and stress in chronic disease patients (Rahimipour et al., 2015). Besides that, HOPE therapy for TB-MDR patients could improve their confidence to interact socially (Musavi & Khaleghipour, 2020). On the other hand, HOPE therapy could improve mental health for patients with long-term care or potentially injuring diseases. HOPE therapy allowed patients to plan their futures after they recovered (Abadi et al., 2017).[33] The interview results also found the patients were happy after receiving HOPE therapy. A study on women with terminal diseases also found the influence of HOPE therapy on their happiness (Kondori Fard et al., 2021). HOPE therapy for patients with pain-killer consumption also significantly influenced the administration of anti-pain medication (Sadeghi et al., 2015).

CONCLUSION

HOPE therapy could relieve the depression, anxiety, and stress of TB-MDR patients. HOPE therapy could also improve the self-esteem and self-confidence of TB-MDR patients to succeed in their medication. The impacts of psychological problems on TB-MDR patients could hinder the medication process. Thus, nurses should administer the therapy for the patients to improve their life quality, expectancy, and life purposes during the medication and once they were fully recovered.

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CONFLICTS OF INTEREST

No Conflict of Interest

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