Self-Efficacy with the Quality of Life of Pulmonary Tb Patients

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Abstract

Aim: It is known that the relationship between self-efficacy and quality of life in patients with pulmonary tuberculosisat Pertamina Bintang Amin Hospital in Bandar Lampung 2020.**Methods:** This type of research was quantitative with a cross sectional approach. The population was all pulmonary TB patients at the Pertamina Bintang Amin Hospital Bandar Lampung, with a sample size of 62 people. Data analysis in this study used the chi-square test.**Results:** The results of the univariate analysis showed that most of the respondents' self-efficacy was in poor condition, namely as many as 33 people (53.2%). Most of the respondents' quality of life was in the medium category, namely 27 people (43.5%). The results of the bivariate analysis showed that the p-value = 0.001). 1) demographic factors such as the type of education level are an indicator of the potential vulnerability of pulmonary TB infection, 2) Most of the respondents' self-efficacy was in poor condition, namely 33 people (53.2%). Most of the respondents' quality of life was in the medium category, namely 27 people (43.5%), and 3) there was a relationship between self-efficacy and the quality of life of patients with pulmonary tuberculosis.

Keywords:*Self-Efficacy, Quality Of Life, Pulmonary Tuberculosis*

Introduction

In this globalized world era, the health level of a country will affect the health level of other countries. In other words, the health level of a country will influence each other. This is due to one of the fast growing tourism industries. The tourism industry encourages people to move from one place to another.

Move people by themselves along with the overall health level of these people, like TB disease, a disease caused by bacteria. A disease caused by infectious bacteria that has serious potential, especially affecting the lungs.

The bacteria that bring about TB are outspread when contaminated person hoops or sneezes. Nearly all people who are contaminated with the bacteria that induce tuberculosis possess no indications. When indications do occur, they are ordinarily hoop (sometimes spotting), mass loss, evening perspiration, and feverishness. Medication isn't constantly required for persons without indications. Sufferers with active indications shall require a long route of medication

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incriminate some antibiotics.

Given that TB treatment requires a long and tiring duration, preventive measures are the wisest actions. WHO as a world institution must monitor and encourage member countries to always take preventive measures against TB disease because the health level of a country contributes to the level of health globally. In order to provide additional information that is comprehensive and complex treatment of TB disease, this research is important to carry out in order to provide data on the ins and outs of TB disease sufferers. This research was conducted in Lampung Province, Indonesia. This research is also intended for WHO to put pressure on health stakeholders in Indonesia to continue to care for and be responsive to this pulmonary TB disease.

Tuberculosis is one of the very significant contagious sicknesses to paying attention to, with so major morbidity and death globally[1]. The World Health Organization (WHO) approximates that there were 10.4 million new TB occurrences and 1.4 million TB deaths globally in 2015[2]. Mycobacterium tuberculosis is the causative factor of TB, and while it could cause infection in biological structures there out the lungs, such as the lymph nodes, bones, and meninges, M. tuberculosis mainly contaminates the lungs and leads to pulmonary TB[3]. With a large number of individuals with pulmonary TB sufferers, they will be in pain even more if they are exposed to Covid-19. TB sufferers will be in pain multiple times and could induce death.

Pulmonary TB disease

Pulmonary TB disease

The person's body is occupied by a large number of commensal bacteria (macrobiotic) which is in contact closely with the person's invulnerable structure and exerts an important effect on a person's physical fitness. Numerous contagious and non-contagious illnesses are connected to the human macrobiotic, particularly the intestine macrobiotic[4]. Designated the tight relation between the intestine macrobiotic and illnesses of the neural structure, liver, and lungs, the intestine macrobiotic is put forward to be implicated in the intestine-brain (Foster & Neufeld, 2013), intestine-liver[5], intestine-liver[6]gut-lung [6], and intestine-lung [5,7], the ending is known one [7-9]. Much research has centered on revealing the role of this axis in the expansion of lung illness, such as asthma[10], chronic obstructive pulmonary disease (COPD) [11], and pneumococcus and Staphylococcus aurous pneumonia [12,13].

So far, some attempts have been taken to disclose changes in the intestine microbiota after M. tuberculosis contamination utilizing murine specimen or clinical models[14,18]. However, if there is a microbiota signature in the microbial structure of the gut or the metabolic potential that may differentiate healthy from M. tuberculosis contamination has not been assessed. Here, we characterize shifts in the intestine microbiota in stool specimen of clinical pulmonary TB sufferers. We notice substantial shifts in the construction and metabolic pathways of the intestine microbiota in TB sufferers, and illustrated that bacterial execution in the intestine could likely be used to differ healthy from TB patients.

The 2017 Global Tuberculosis Report shows that new tuberculosis cases aggregated to 6.3 million, or the equivalent of 61% of tuberculosis occurrences (10.4 million). Tuberculosis is still one of the big ten inducesof death in the globe with an predicted death rate of 1.3 million sufferers [19]. Further, most of the predictedoccurrences of tuberculosis happened in the Southeast Asia Region (45%), and 25% in Africa. The five countries with the highest incidence of cases with incidence estimates based on samples taken (best estimate value) are India (2,790), Indonesia (1,020), China (0.895), the Philippines (0.573), and

Pakistan (0.405) (Indonesian Ministry of Health, 2018) . Indonesia is one of the 5 countries that have the biggest burden of tuberculosis [19]. Data for 2017 shows that the sum of tuberculosis cases was 425,089 cases, this number increased when compared to the incidence in 2016 which was 360,565 cases [20].

Meanwhile, the incidence in Lampung Province, referred to the results of the Tuberculosis Commonness Survey for 2013-2014, was 1,600,000 cases, while the incidence was 1,000,000 cases and the mortality was 100,000 cases [21]. Whereas for Bandar Lampung City in 2018, the prevalence of pulmonary TB based on a doctor's diagnosis history, has a higher prevalence than the average of districts/cities in Lampung Province, namely 0.48% of the weighted value of 3,878 people [20].

Self-Efficacy and Quality of Life

To be able to cope with the growth rate of TB sufferers and carry out treatment efforts, it is important for all health stakeholders to know the factors that cause it. As the results of[22]research on the causes of TB at the LubukAlung TB Special Hospital, West Sumatra, it is closely related to the patient's quality of life. The grade of life of pulmonary TB patients at the LubukAlung Special Hospital, West Sumatra, shows that more than half (62.5%) of pulmonary TB sufferers have a poor grade of life.

Quality of life is an indicator factor because quality of life is the main criterion in evaluating the success of health service interventions [23]. Factors that affect quality of life include coping skills with life pressures, identification of new roles, opportunities and availability of social support, demographic, socio-economic factors, cultural and value influences, health factors, self-efficacy, role tension and family burdens, and programs. health training [24].

Factors that can improve the quality of life include self-efficacy. Self-efficacy is part of personality attitudes, which are related to personal beliefs about self-competence and abilities [25]. [26]describe the results of two experimental tests of behavior change self-efficacy theory. Study one investigated the hypothesis that systematic desensitization effects change avoidance behavior by creating and reinforcing personal efficacy expectations. The reduction in total arousal anxiety to threat visualized by desensitization treatment resulted in a marked increase in self-efficacy. As expected, microanalysis of the suitability between self-efficacy and performance revealed self-efficacy to be a very accurate predictor of behavior change assessment after complete desensitization. These findings also support the view that self-efficacy mediates arousal anxiety. The second study investigated the efficacy process and behavior change during treatment with a participant model. Self-efficacy was shown to be a superior predictor of the number of behavioral improvement phobias obtained from mastery of multiple threats at different phases of treatment.

Research conducted by [27-29], regarding the relations between self-efficacy and quality of life of pulmonary tuberculosis patients at RSUP Haji Adam Malik Medan, found that there was a connection between self-efficacy and grade of life. People who own right self-efficacy have a 5,850 times opportunity of showing a better grade of life than people who own poor self-efficacy.

Researchers identified knowledge gaps about the causes of TB, unfitting healthcare-seeking behavior, and the disgrace against TB. Around 83% of TB suspects had heard of TB which is similar to research done in Northern Ethiopia where 86% of research contributors were aware of TB[30]but under than the 99.1% notified from India[31].

A small proportion of people with traditional faith such as animist and religious beliefs, such as Satan and sorcery are the most common causes of TB. This is

not only the case in the Indonesian context. This is the case in Tanzania, a large amount of people as well as mention that magic can be the cause of TB[32]. Freezing air, alcohol, smoking and shortage of sanitation were usual causes felt in different researches[30,32]. These traditional beliefs may have contributed to the dissemination of TB because nearly all people with such beliefs can not have visited health easinesses. A research from Ethiopia indicated that 46% of suffers looking for care in a health easiness did so after informal treatment had failed. In addition, bad suffers though of TB causes such as the "bad eye" were related to long puts off in looking for medical care[33],although it was not statistically significant in this study. In our study, only 33.7% of respondents were aware that TB was caused by microorganisms higher than those found in Vietnam (22%)[34]. People who are literate are more likely to undrstand the causes of TB which are consistent with prior reports[30,32]. Men are more likely to know the causes of TB than women. Bad knowledge among women and uneducated personals about the causes of TB shall lead to unsuitable health care looking for behavior[35].

A large amount of research contributors felt the disgrace of TB on possibility for marriage, community relations and reproduction relations. larger than half of the contributors felt that others will take into account them inferior and a third thought that others will keep away from them because of their diseases. Such perceptions may have a profound effect on the community, psychic and mental well-being of victims and their families. This could have terrible effect in communities where informal social organization plays an important role in the everyday life of personals. TB sufferers may by design hide their position to stay away isolation. They may try to live with it as long as possible, becoming a source of contagion to others. The social isolation of TB patients was also described in Ghana[36] and Nepal [37]. In Ghana, people feel that TB sufferers shall not sell their products in the market. In Nepal, there is a common presumption that healthy persons should not meet someone who has TB and not go to see a home where there is a family member who has TB. In the research, disgrace was not affected by gender and other socio-demographic variables. Many studies however indicated that women have more damage self-esteem, social isolation and disgrace compared to men[38].

The healthcare-seeking conduct of the research contributors was bad. A large number of them do not look for aid for their disease because of wrong understanding and shortage of financial resources, mainly for transportation. Most of them did nothing because they thought the disease was not serious. Alike arguments are addressed in Northwestern Ethiopia[39], Vietnam[34] and China[40]. In this study, health care seeking behavior was not influenced by gender, reading and writing ability, marital status, and knowledge of the causes of TB, information about TB medication, perceptions of disgrace, age, job, or acquaintance with TB patients. But those who have been on anti-TB medications are more likely to take appropriate action for their disease. Alike the findings were reported from another study in Northwestern Ethiopia[39]. In a study from Tanzania, apprehended disgrace was also not included with a specific type of healthcare-seeking conduct[41]but in another research, healthcare-seeking conduct was influenced by understanding[34,42], gender [34, 45] and education [34,46].

In research, the researcher attempted to evaluate several attitude factors connected to knowledge and disgrace against TB in rural communities that could potentially become barriers to the national TB control program. Nevertheless, this study was not without drawbacks. First, the researchers did not conduct focus group discussions to triangulate findings. Second, the disgrace questionnaire was not validated[47].

Accordingly, still there is little knowledge of TB in the society area of TB in many countries. We looked

at inappropriate healthcare-seeking behavior and stigma against TB. Alike to the TB control program in Ethiopia should educate rural communities, especially women and uneducated individuals, about the causes and importance of early diagnosis and treatment of TB [47].

Based on the presurvey at the Lung Poly Hospital, Pertamina Bintang Amin hospital Bandar Lampung, the number of pulmonary TB patients increased from 1,648 patients in 2018 to 1,733 in 2019. Based on the results of interviews with 10 pulmonary TB patients, it was found that 7 people (70%) had a poor quality of life. In addition, as many as 6 people (60%) have personal beliefs about self-efficacy or lack of self-efficacy. The purpose of this study was to describe 1) what were the characteristics of the respondents with pulmonary TB 2) what was the respondent's health condition based on self-efficacy, and 3) how was the relationship between respondents with pulmonary tuberculosis and self-efficacy, Lung at the hospital Pertamina Bintang Amin Bandar Lampung in 2020?

Everyone tries to contribute to life. However, to be able to contribute requires good self-condition. In fact, his health is supported by many factors. One of them is self-efficacy. Self-efficacy is very effective in overcoming various problems, including health. Curing a disease is not enough only from medical factors but also non-medical factors: self-efficacy. For this reason, the treatment of the patient's disease must also be accompanied by an increase in the patient's self-efficacy. Many patients are afraid of pre-treatment programs, such as what happened to women with cervical cancer. However, several factors need to be controlled in a self-efficacy improvement program including considering their region of origin, background, and focus on giving women confidence to overcome barriers to cervical cancer screening [48, 49].

Additionally, two studies reported their findings from two experimental tests of behavior change self-efficacy theory. The first study concluded that the reduction in anxiety was due to overall sensitization of the threat of increased self-efficacy. Microanalysis becomes a very accurate predictor of the rate of behavior change after complete desensitization of self-efficacy and performance. These findings also support the view that self-efficacy mediates anxiety. The second trial investigated the process of efficacy and behavior change during treatment. The conclusion is that self-efficacy has been shown to be a superior predictor of increased phobic behavior obtained from mastery of multiple threats at various phases of treatment [26]. Thus we conclude that self-efficacy plays a major role in survival and management of all the factors that make poor health conditions better.

In order for this research to be focused, the researcher asks research questions as a guide, namely, 1) what are the characteristics of the respondent? 2) What is the respondent's health condition based on self-efficacy? 3) How is the relationship between respondents with pulmonary tuberculosis and self-efficacy?

Research Methods

This study used a cross sectional study design. The population in this study were all patients with pulmonary TB and visited the hospital. Pertamina Bintang Amin Bandar Lampung in 2020 with a sample of 62. Data collection used a questionnaire. The statistical test used is the Chi Square test using the SPSS version 25.0 application and data processing uses the SPSS version 20 application.

Research Result

1. Characteristics of Respondents

Table 1.Frequency Distribution of Respondents by Gender, Age, Education, Occupation

Respondent Characteristics	Amount	Percentage
Gender		
Man	34	54,8
Women	28	45,2
Age		
<20	8	12,9
20-45	36	58,1
45-60	18	29,0
Education		
Primary school	5	8,1
Junior High	31	50,0
High school	24	38,7
College	2	3,2
Profession		
Labor	18	29,0
Private employees	4	6,5
Farmer	10	16,1
Civil servants	1	1,6
Jobless	16	25,8
Entrepreneur	13	21,0
Total	62	100,0

Based on table 1, it is known that most of the respondents were male, as many as 34 people (54.8%). Most of the respondents were 20-45 years old, as many as 36 people (58.1%), most of the respondents had junior high school education, as many as 31 people (50%), and most of the respondents worked as

entrepreneurs, namely 18 people (29%).

2. Univariate Analysis

Table 2. Frequency Distribution of Respondents based on self-efficacy and quality of life

Self-Efficacy	Total	Percentage
Low	24	38,7
Moderate	27	43,5
High	11	17,7
Quality of Life		
Not good	33	53,2
Good	29	46,8
Total	62	100,0

Based on table 2, it is known that most of the respondents' self-efficacy was in poor condition, namely as many as 33 people (53.2%) and the quality of life of the respondents was mostly in the moderate category, namely as many as 27 people (43.5%).

3. Bivariate Analysis

Authors present the relationship between Self Efficacy and Quality of Life for Patients with Pulmonary TB as shown in table 3.

Table 3. Relationship between Self Efficacy and Quality of Life for Patients with Pulmonary TB

Self-Efficacy	Quality of Life						Total		Pvalue
	Low		Medium		High				
	n	%	n	%	N	%	N	%	
Not good	19	57,6	12	36,4	2	6,0	33	100	0,002
Good	5	17,2	15	51,7	9	31,1	29	100	
Total	24	38,8	27	43,5	11	17,6	62	100	

The results showed that respondents with self-efficacy were in the poor category, as many as 19 people (57.6%) had a low quality of life, 12 people (36.4%) had a moderate quality of life, and 2 people (6.0%) had a moderate quality of life. high quality of life. In addition, respondents with self-efficacy were in the good category, as many as 5 people (17.2%) had a low quality of life, 15 people (51.7%) had a moderate quality of life, and 9 people (31.1%) had a high quality of life. high life. Chi square test results, obtained p value = 0.001, so that the p value <α (0.001 <0.05), then Ha is accepted. So it can be concluded that there is a relationship between self-efficacy and quality of life for patients with pulmonary tuberculosis in the hospital Pertamina Bintang Amin Bandar Lampung in 2020.

Discussion

With regard to research question 1, what are the characteristics of the respondents?

Based on table 1, it is known that most of the respondents were male, as many as 34 people (54.8%). Most of the respondents were 20-45 years old, as many as 36 people (58.1%), most of the respondents had junior high school education, as many as 31 people (50%), and most of the respondents worked as heads of households with irregular income. , namely as many as 18 people (29%).

As many as 54.84% of male sufferers described that in a patrilineal setting where men are tasked with earning a living, it means that men work outside the home. This research contradicts the results of research which states that most of the cadres are: women; the highest age group is 21-45 years[50]. With regard to men who work as breadwinners, this situation is very dangerous because it relates to the condition of family welfare. Family in Indonesia currently has two children, so there are approximately 102 people who live with economic disabilities and are under threat of pulmonary TB virus. Even worse, the sufferer is at a very productive period, at the age of 20-45 years. This situation can predict Indonesia's gloomy future [51].

It seems that education is an important factor in improving public health conditions. This can be seen from the data which shows that 58.1% have a junior high school education. This result is in line with research conducted even though it was carried out at one level above it, namely a high school graduate[50]. From the results of these studies, schools need to be encouraged to campaign for a healthy lifestyle to avoid pulmonary TB infection. Educational factors are in fact directly proportional to the economic ability of the sufferer.

With regard to research question 2) what is the respondent's health condition based on self-efficacy?

The results of this study are in accordance with the theory put forward by [25], self-efficacy is a person's belief in their ability to organize and carry out the actions needed to achieve goals. In other words, people who have strong efficacy believe that they are more confident in their capacity to carry out a behavior. Beliefs about self-efficacy have a significant impact on goals and achievement by influencing personal choices, motivations, and emotional patterns and reactions. Sources of self-efficacy include prior experience (prior experience). Previous experiences are previous successful experiences that will happen over and over again. It is seen as a very effective way of developing a strong sense of self-efficacy.

According to research, most of the respondents' self-efficacy was inadequate due to the lack of self-confidence of respondents about their ability to organize and carry out actions in order to achieve recovery from the pulmonary tuberculosis. Self-efficacy can be influenced by age where the higher the age, the more experience. Then self-efficacy is also influenced by the environment, where the support

system in the family environment will increase one's self-confidence.

With regard to research question 3) how is the relationship between the responses of pulmonary TB patients to self-efficacy?

The outcomes of this research are in accordance with the thesis proposed by[52], pulmonary tuberculosis is an contagious disease induced by Mycobacterium tuberculosis which strikes the lungs and almost all other biological structurs of the body. These bacteria can enter through the respiratory area and digestive area (GI) and open wounds on the skin. But mostly through respiration of droplets that come from people who are contaminated with these bacteria. Pulmonary tuberculosis, which is one of the chronic diseases, will certainly have an influence on the quality of life of the sufferer. Ekasari, Riasmini [24], that the quality of life is an individual's thought of their life in society in the context of existing culture and value oders related to goals, expectations, standards, and also attention. Quality of life in this case is a very broad concept which is influenced by the physical condition of the individual, psychologically, and the level of independence. as well as individual relationships with the surroundings.

The outcomes of this research are in line with [22] research on factors related to the quality of life of pulmonary TB patients at the Lubuk Alung Special Hospital, West Sumatra, showing that 62.5% of pulmonary TB patients have a poor quality of life.

According to the researchers, most of the respondents' quality of life was in the moderate category because not all respondents who had pulmonary tuberculosis had decreased their quality of life. The physical, psychological, and level of independence of each individual will differ from one another, where most are still able to live their lives in a moderate quality due to the chronic course of pulmonary tuberculosis. Based on the answers to the questions posed through the questionnaire, it is stated that the quality of life of the respondents is that there are still many respondents who are not satisfied in enjoying their daily lives due to pulmonary tuberculosis.

The outcomes of this research are in accordance with the opinion expressed by self-efficacy, which refers to an individual's belief that he is capable of carrying out a task. The higher the self-efficacy, the more confident a person will be in his ability to succeed. Thus, people with low efficacy were more likely to reduce efforts or give up. Meanwhile, people with high self-efficacy will try harder to master challenges. Self-efficacy can create positive energy to engage in their tasks which will increase efforts and motivation to achieve goals.

In addition, according to [53]; In [23], an increase in the quality of life also occurs in clients who are given mentoring treatment such as psycho education or social support as a basis for increasing the self-efficacy of clients who are undergoing treatment and need routine control which takes up a lot of time. Self-efficacy can be maximized if the client is willing to accept the illness and carry out therapy regularly so that it can improve the client's standard of life.

The outcomes of this research are in line with the research conducted by[29], regarding the relationship between self-efficacy and quality of life for pulmonary tuberculosis patients at Haji Adam Malik General Hospital Medan. It was proved that there was a relations between self-efficacy and quality of life (p-value = 0.016 (p <0). , 05), OR = 5.850 (95% CI = 1.554-22.023).

Accordingly, there is a relationship between self-efficacy and quality of life for pulmonary tuberculosis patients because self-efficacy is one of the factors affecting the quality of life of respondents

who experience pulmonary tuberculosis where the higher the level of self-efficacy, a person will be more confident in his ability to carry out the recommendations in achieve healing. Conversely, respondents with low efficacy are more likely to reduce efforts or give up. This is consistent with the results of the study where respondents with self-efficacy in the poor category tended to have a low quality of life (57.6%), while respondents with self-efficacy in the good category had a moderate quality of life (51.7%). Self-efficacy will create positive energy for respondents in undergoing medical therapy so that it will motivate them to make treatment efforts. For this reason, health education and support systems are needed, especially from families in order to increase self-efficacy in patients with pulmonary tuberculosis in undergoing routine treatment and control so that with confidence in themselves that patients are able to carry out regular therapy will be able to improve the standard of life of these patients.

Conclusion

Based on the exposure, this study presents the conclusion that 1) demographic factors such as the type of education level are an indicator of the potential vulnerability of pulmonary TB infection, 2) Most of the respondents' self-efficacy was in poor condition, namely 33 people (53.2%). Most of the respondents' quality of life was in the medium category, namely 27 people (43.5%), and 3) there was a relationship between self-efficacy and the quality of life of patients with pulmonary tuberculosis.

Suggestion

1. It is hoped that health workers will intervene in improving the quality of life of patients with pulmonary tuberculosis by carrying out health education and also providing family education as a support system in order to increase self-efficacy in patients with pulmonary tuberculosis health education and support systems, especially from families in in order to improve self-efficacy in patients with pulmonary tuberculosis. As a matter of consideration for the health office with regard to efforts to improve the quality of life of pulmonary TB patients by providing counseling on self-efficacy in pulmonary TB patients.

2. It is hoped that the respondent will add information, insight and knowledge to patients with pulmonary tuberculosis about the importance of self-efficacy in healing the disease so that it can improve the quality of life of pulmonary TB sufferers who are under treatment.

3. For this reason, it is suggested that this study be used as a reference for further research, and it is hoped that further researchers can expand the scope of research or examine other factors not examined in this study.

Ethical Clearance : The researcher conducted an ethical test has been carried out with the number No. 1288 / EC / KEP-UNIMAL / XII / 2020

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