Effects of Counseling on the Quality of Life of MDR Lung TB Patients

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Abstract

Tuberculosis (TB) is a directly infectious disease caused by the bacterium mycobacterium tuberculosis which can attack various organs, especially the lungs. Pulmonary TB can be transmitted through the air, the longer and closer a person's contact with the source of transmission, the greater the chance of contracting it. This study tried to study the effect of the counseling model on improving the quality of life of MDR-TB patients in Undata Hospital, Palu. This type of research is a quasi-experimental design with a pretest and post-test randomized design. The sample in this study amounted to 38 respondents who were randomly selected then the data were analyzed using the two different tests means the Wilcoxon test and the two different tests mean independent namely the Mann-Whitney test. The results showed that there was a counseling model for the quality of life of patients with MDR-TB both in the domain. (Physical health), domain 2 (Psychological Conditions, Domain 3 (Social Environment) Domain 4) The fourth quality of life domain for MDR TB patients p-value (0.001) is smaller 0.05 MDR before and after the permission given to the patient MDR-TB which gives good priority to the quality of output.

Keywords: MDR-TB, Quality of Life, Counseling Model

Introduction

Tuberculosis is still one of the world's public health problems even though efforts to control the DOTS strategy have been implemented. Data is available for 202 countries and regions covering more than 99% of the world's population with TB cases, in 2017 there are an estimated 10.4 million new TB cases (incidents) of which 5.9 million (56%) are among men, 3, 5 million (34%) are women and 1 million (10%) are children. People living with HIV accounted for 1.2 million (11%) of all new TB cases. Prevalence overview in six countries accounted for 60% of new cases are; India, Indonesia, China, Nigeria, Pakistan, and South

Africa. Global progress depends on the progress of TB control in the six countries[1]. Indonesia faces a major problem with TB. Indonesia has a high burden based on indicators of TB, TB / HIV, and MDR-TB (Multi-Drug Resistant). The tuberculosis prevalence survey in 2014 showed that Indonesia was ranked second in the world as the largest contributor to TB sufferers after India. The prevalence of TB with bacteriological confirmation is 759 per 100,000 population aged 15 years and over, while the Palu area is 338 per 100,000 population[2].

TB drugs are a major public health problem threatening progress in TB care and control. Drug resistance arises due to the misuse of antibiotics in chemotherapy for TB patients who are susceptible to the drug. Basically, drug resistance arises in areas with weak TB control programs. A TB patient who is resistant to the drug can transmit TB to others. WHO estimates that around 480,000 cases of MDR-TB in 2013 with a mortality rate of around 150,000 cases annually TB ranks fifth among the leading causes of death after stroke, heart disease, diabetes, and hypertension. In 2002-2020 it is estimated that around 2 billion people will be infected with tuberculosis, 5-10% of infections will develop into diseases, 40% of those who are sick can end in death[3].

Tuberculosis needs special treatment to prevent transmission and higher mortality. In addition, the treatment phase for MDR-TB sufferers is longer compared to cases of pulmonary TB that are not resistant to Anti Tuberculosis (OAT) drugs. Drug resistance is a problem in tuberculosis management strategies and is currently a global public health problem that requires follow-up efforts. Basically, this resistance results from the treatment of inadequate TB patients as well as transmission from OAT-resistant TB patients[4].

Proper identification and diagnosis of MDR-TB patients can help in the care and recovery of MDR-TB patients. Long treatment will be very tedious for patients by consuming OAT for approximately 2 years, so the support from the next of kin will provide life support for MDR-TB patients so that this affects medication adherence and quality of life. Counseling or psychotherapy can be used in dealing with MDR TB patients. This technique can be chosen to meet the needs of a case, use systematically from a broader range of interventions to deal with specific problems such as MDR-TB patients so that patients have a good quality of life and improve their health status[5].

Principally, complete individual counseling, interviews carried out are all stages of counseling starting from the stage of relationship development, the preparation of counseling problem models, the preparation of counseling objectives for strategy implementation and follow-up or evaluation[6]. The quality of life of MDR-TB patients is greatly influenced by several factors, but studies on the quality of life of patients who are also seen from changes in conversion are still lacking. The implementation of counseling in Indonesia has been running for more than 30 years, however, the problems that occur in the world of guidance and counseling now are not much different from the problems that occurred in the past society. Often the guidance and counseling programs that are organized are ignored and not even desirable.

One of the factors causing the above problems occurs because the patient does not understand the disease makes the various counseling and guidance programs unattractive and not needed by the patient. For that reason, before we discuss more in guidance and counseling we need to discuss the problems in organizing the counseling program and the problems regarding counseling itself. Guidance and counseling program problems need to be done to improve the quality of life of patients by using modules or guidelines for guidance and

counseling. Therefore, this study aims to look at the effect of counseling on changes in the quality of life of MDR-TB patients.

Materials and Methods

This type of research is a quasi-experimental design with Randomized Pretest and Post Test Control Group Design. The samples in this study were 38 Undata Palu Hospital patients from May-November 2019 that were randomly selected and then the data were analyzed using the two mean difference test, the Wilcoxon test, and the two mean individual difference tests, namely the Mann Whitney test.

Results

The results of research conducted at the Undata Hospital in Palu from May-November 2019, the number of MDR Pulmonary TB patients as many as 38 patients, obtained the following results:

Table 1. Characteristics of MDR Lung TB Patients

Variable	n	%
Groups		
Interventions	20	52,6
Controls	18	47,4
Sex		
Males	21	55,3
Females	17	44,7
Ages (years)		
20-30	6	15,8
31-40	13	34,2
41-50	8	21,1
51-60	11	28,9
Education		
Elementary	8	21,1
Junior High School	5	13,2
Senior High School	17	44,7
Higher Education	8	21,1
Profession		
Housewives	12	31,6
Civil Servants	5	13,2
Private jobs	21	55,3
Earnings		
Enough	29	76,3
Less	9	23,7
Smoking Habit		
Smoking	12	31,6
Not smoking	26	68,4
Total	38	100

Sources: Primary data, 2019

MDR Lung TB patients from the intervention group were 20 (52.6%) patients and from the control group were 18 (47.4%) patients. MDR Lung TB patients are male as many as 21 patients (55.3%) while female patients are 17 patients (44.7%). Most MDR pulmonary TB patients came from the age group of 31-40 years as many as 13 (34.2%) patients and the least of the 20-30 years age category were 6 (15.8%) patients. The highest level of education in pulmonary TB patients is SMA as many as 17 patients (44.7%) and the least number of SMP is 5 (13.2%) patients. Most MDR pulmonary TB patients have private sector work in 21 (55.3%) patients, and the fewest are PNS 5 (13.2%) patients. Patients who had the highest income were 29 (76.3%) and low income were 9 (23.7%). Patients who had the habit of smoking were 12 (31.6%) and not smoking 26 (68.4%).

Table 2. Mann Whitney Test Results from Post-test Intervention and Quality Control Groups for MDR TB Patients

Two groups independent test	Sig.
Interventions and controls Groups	0,001

Sources: Primary data, 2019

Table 2 explains that the p-value (0.001) is smaller than 0.05, so there is a significant difference between the quality of life of MDR TB patients who are counseled with the control group, so it can be concluded that the counseling given has an influence on the quality of life of MDR TB patients.

Table 3. Results of the Wilcoxon Quality of Life Test for the MDR TB Patient Intervention Group

Two groups dependent test	Sig.
Quality of life	0,001

Sources: Primary data, 2019

Table 3 explains that the p-value (0.001) is smaller than the value of 0.05, so there is a significant difference between the quality of life of MDR TB patients before and after being given counseling, meaning that counseling given to MDR TB patients has a good influence on the quality of life.

Table 4. Wilcoxon Quality of Life Test Results Based on Domain Intervention Groups for MDR TB Patients

Two groups dependent test	Sig.
Domain 1	0,007
Domain 2	0,001
Domain 3	0,001
Domain 4	0,001

Sources: Primary data, 2019

Table 4 explains that the p-value of the four domains of quality of life for MDR TB patients is smaller than the value of 0.05, so there is a significant difference between the quality of life

of MDR TB patients before and after being given counseling, meaning that counseling given to MDR TB patients has a good influence on quality of life-based on the four domains of quality of life.

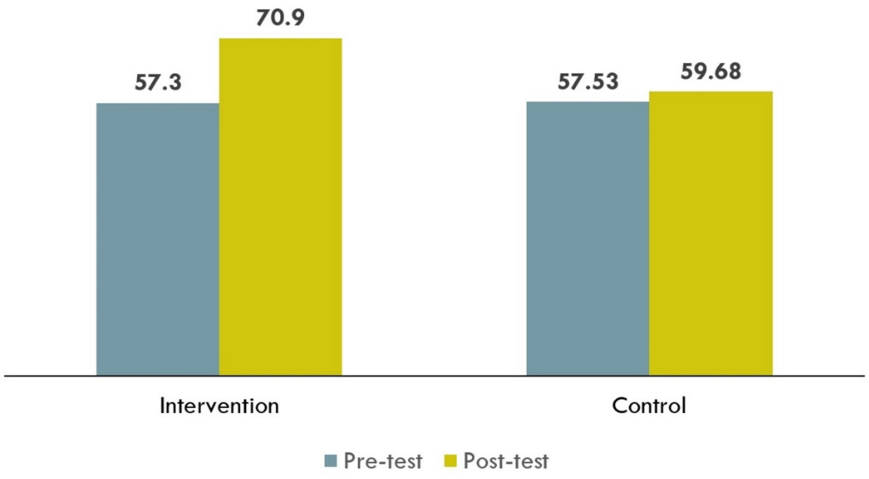

Figure 1. Graphic Comparison of Mean Quality of Life of MDR-TB Patients before and after counseling

Discussions

The problem of TB in the world is caused by poverty, malnutrition, endurance, slum living conditions, insufficient health facilities, delay or lack of TB program costs, in Indonesia is still difficult to control because it is related to social and economic problems. MDR Lung TB patients are more male than female, this is because men have a greater risk than female patients. Male patients have more smoking habits than women, which worsens health conditions, especially lung conditions. TB attacks many productive ages and increases the mortality rate in the community, especially in developing countries. Productive age is the age where a person is at a stage to work/produce something both for oneself and others. MDR pulmonary TB patients aged over 40 years, at that age if you experience pulmonary TB then it can result in individuals being no longer productive or even a burden to their families.

Some countries such as Bangladesh, Vietnam, and Thailand have differences in the notification of pulmonary TB in men and women, this happens because of the stigma of the disease. Women do not go to health services because they are worried about the wrong evaluation from the community. Pulmonary TB occurs in men because men have a smoking habit that makes it easier to contract pulmonary TB. Smoking can worsen TB symptoms, as well as passive smokers who smoke cigarette smoke, will be more easily infected with TB germs, because cigarette smoke adversely affects the resistance of the lungs to bacteria[7].

TB is a major public health problem in Indonesia. Public health problems cannot be separated from poverty problems. At least about 1.3 billion people in the world are poor people, those who have to live on less than 1 US $ per day. The relationship between disease and poverty can be like vicious cycles. Because it is poor, a person will be malnourished, live

in an unhealthy place, and cannot properly maintain health. Income is a measure that is often used to look at economic conditions in a group of people. The better the socio-economic conditions of the community the higher the percentage of people who use health services. The use of health services will improve one's health status so that it improves the quality of life[8].

The results show that family income affects the quality of life of TB and is often associated with decreased bodily function. Although MDR-TB treatment is given free as part of a government program, other costs of illness and treatment (such as lost wages, travel to health service facilities, laboratory examinations, emergency management, etc.) have responsibilities by patients and / or members family. One-third of MDR-TB patients in India are forced to stop school or start work to contribute to finances. Patients and families also sometimes have to use part of their savings, or borrow money and sell household items to fund their treatment. Patients can choose to return to work rather than continue their treatment. Patients may choose to return to work rather than continue treatment as a result of this large fee. A sizeable proportion of patients (80%) suffer financial constraints due to tuberculosis and quality of life can deteriorate if the patient is also the sole or primary breadwinner for the family[9].

Quality of life is an individual's perception of his position in life in accordance with the cultural context and values in which they live and in relation to life goals, expectations, standards and concerns. This is a broad concept that affects a person's physical health, psychological state, level of dependency, social relationships, personal beliefs and their relationship with future desires for their environment[10].

Counseling is a form of psychotherapy that is used to help a patient overcome the psychological problems he faces. Counseling is a process where someone who has difficulty is helped to feel and then act in a way that is more satisfying to him, through interaction with someone who is not involved, namely the counselor. The counselor provides information and reactions to encourage clients to develop behaviors to relate more effectively to themselves and the environment[11].

The duration of counseling is between 8 to 10 meetings which are usually held 2 or 3 times a week with a meeting time of 30 to 60 minutes, which depends on the dynamics of counseling that occurs. In helping to alleviate problems with the client (counseling usually the counselor will do a good schedule between 8 to 10 meetings that will be held for several weeks to produce a productive counseling[12].

Health-related quality of life (HRQoL) is a different construct that refers to the impact that their symptoms and health conditions have on the quality of life of individuals. In the context of health, the term HRQoL is preferred over the quality of life because the focus is on health. HRQoL can be defined as health status and is seen as an increasingly complex continuity in patient outcomes, both biological/physiological factors, symptoms, functions, general health perceptions and overall well-being or quality of life[13].

Quality of life is defined as an individual's perception of his position in life seen from the cultural context and value system in which they live and is related to their attention, expectations, the standard of living, pleasure, and purpose in life. This is a broad concept that summarizes the complex includes physical health, psychological conditions, degrees of freedom, social relations, individual beliefs and one's relationship with the environment[14].

The quality of life of MDR-TB patients is a patient's perception of his position in his life, covering four domains, namely the physical, psychological, social and environmental domains. These four domains consist of various factors that are closely related. The physical

domain consists of an assessment of his needs in therapy, how far physical pain prevents him from doing activities, vitality in daily activities, work, satisfaction in sleep and ability to get along with the surrounding environment. While the psychological domain consists of accepting one's own condition, assuming that he is meaningful or dissatisfied with himself and in the social domain only consists of support from friends, sexual conditions and satisfaction with personal relationships. Environmental domain how far the patient is comfortable with his environment. Regarding his health, availability of information, finance, recreation and so on.

There are many things that cause poor quality of life in MDR-TB patients so that only 18% contribute to smoking history and medication adherence to the quality of life of MDR-TB patients. Microbiological factors, clinical factors, health worker factors, patient behavior factors or other disease factors are some of the causes of poor quality of life of MDR-TB patients.

Limitations experienced by the study while conducting this research include, the measurement of quality of life is only done at the end of the study, not done at the beginning of the study, retrospective data retrieval is conducted so this research is vulnerable to information bias, some respondents have difficulty in increasing information back that has occurred In the past, records in the hospital status book were still incomplete, so many respondents' addresses were rather difficult to trace, the number of samples in this study was limited, so as to reduce the level of precision in the study results.

Conclusions and recommendations

Providing counseling for MDR Lung TB Patients at Undata Palu Hospital has an influence on improving the quality of life of MDR Lung TB patients in Palu Undata Hospital so that continuous counseling is needed for MDR Lung TB patients and can reduce the incidence of MDR TB

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