



Quality of Life Determinant Factors in Tuberculosis Patients in Indonesia: Literature Review

Liena Sofiana^{1*)},²; Sri Achadi Nugraheni²

^{1*)}Fakultas Kesehatan Masyarakat Universitas Ahmad Dahlan

²Program Studi Doktor Kesehatan Masyarakat Universitas Diponegoro

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ABSTRACT

Tuberculosis patients undergo treatment and care for a long time which will have an impact on their well-being. Good patient welfare will have an impact on the patient's quality of life in their daily lives. The quality of life possessed by tuberculosis patients is important because it can affect the success of treatment. The purpose of this study was to analyze the factors that influence the quality of life of tuberculosis patients in Indonesia. The research design used is a literature review using keywords based on PICO using a database of research articles, namely ScienceDirect, ProQuest, PubMed, Google Scholar and Garuda from 2016-2021. There were 13,782 articles with 18 relevant articles for review and analysis. The low quality of life of tuberculosis patients is influenced by factors of age, education, stress, depression, stigma, medication adherence and social support.

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*) corresponding author

Liena Sofiana

Fakultas Kesehatan Masyarakat, Universitas

Ahmad Dahlan

Program Studi Doktor Kesehatan

Masyarakat Universitas Diponegoro

Email: liena.sofiana@ikm.uad.ac.id

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ABSTRAK

Pasien tuberkulosis menjalani pengobatan dan perawatan yang cukup lama yang akan berdampak pada kesejahteraan yang dialaminya. Kesejahteraan pasien yang baik akan berdampak pada kualitas hidup pasien dalam kesehariannya. Kualitas hidup yang dimiliki oleh pasien tuberkulosis merupakan hal yang penting, karena dapat mempengaruhi kesuksesan pengobatan. Tujuan penelitian ini adalah untuk menganalisis faktor-faktor yang mempengaruhi kualitas hidup pasien tuberkulosis di Indonesia. Desain penelitian yang digunakan merupakan literature review dengan menggunakan kata kunci berdasarkan PICO dengan menggunakan data base artikel penelitian yaitu ScienceDirect, ProQuest, PubMed, Google Scholar dan Garuda dari tahun 2016–2021. Didapatkan 13.782 artikel dengan 18 artikel yang relevan untuk dikaji dan dianalisis. Rendahnya kualitas hidup yang dimiliki oleh pasien tuberkulosis dipengaruhi oleh faktor usia, pendidikan, stres, depresi, stigma, kepatuhan pengobatan dan dukungan sosial.

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INTRODUCTION

Tuberculosis (TB) is still a global health problem. The burden of a tuberculosis disease can be measured by the incidence of cases and deaths (Kemenkes RI, 2021). Globally, the incidence of tuberculosis is decreasing, but not rapid enough to achieve the target of reducing cases in 2020. This is because the decline in cases is only 20% during the period 2015 to 2020. There are still many countries that have

tuberculosis cases, including eight countries as contributors by two-thirds of the global total with Indonesia in the second place (8.5%) after India. Another problem is deaths caused by tuberculosis. In 2019, there were 1.4 million deaths with a cumulative number of deaths between 2015-2019 of 14%. In 2017, new TB cases in Indonesia were 319 per 100,000 population, with the death rate of 40 per 100,000 population, while the number of TB cases found in 2018 was 566,623, up from all cases in 2017 (World Health Organization, 2020).

Patients Treatment for tuberculosis patients will take a long time, at least 6 months for new patients and those who have an impact on decreasing patient productivity and quality of life. When comparing people with active TB with those without TB in terms of health-related quality of life, people with active TB have poorer health status, especially in terms of physical function (Brown et al., 2015). The main determinants affecting the quality of life of tuberculosis patients are gender, level of education, medication adherence, HIV status, alcohol consumption and economic conditions (Pokam et al., 2020). Stress experienced by patients also makes the risk of decreasing the quality of life of tuberculosis patients, the more severe the stress experienced will worsen their quality of life (Putri et al., 2018). Marital status, employment status, place of residence and habits smoking affects the health-related quality of life in tuberculosis patients (Kakhki & Masjedi, 2015). Several studies that examined this matter found that the majority of tuberculosis patients experienced a low quality of life which would later have an impact on success in treatment, so based on this, this study aims to determine to examine what factors influence the low quality of life in tuberculosis patients in Indonesia by using a literature study.

Based on the phenomenon of the quality of life possessed by many tuberculosis patients who have a poor quality of life, it is necessary to study the article. This review of the literature review will discuss the determinants of the quality of life of tuberculosis patients by summarizing and analyzing the results of the articles obtained related to the types of determinants related to the quality of life of tuberculosis patients.

METHOD

In this study, the literature review approach was used. The results of scientific articles published between 2017 and 2021 were gathered by scanning five databases, including

Science Direct, ProQuest, PubMed, Google Scholar, and Garuda, using keywords based on the Patient, Intervention, Comparison, and Outcome (PICO). Determinant factors and quality of life of TB patients in Indonesia OR health and quality of life factors of tuberculosis patients OR predisposing factors OR enabling factors OR reinforcing factors are all keywords used in each database. According to the screening results, twenty articles met the inclusion criteria and were related to the study topic (Figure 1). The following are the inclusion criteria for this literature review: (1) responders must be TB patients, (2) the study must be a research article (cross-sectional, case control, or cohort), and (3) it must have been published within the last five years. Non-Indonesian and non-English published studies were eliminated when the exclusion criteria were (1) non-Indonesian and non-English published studies (2) duplicate studies (3) publications that did not satisfy the study subject, (4) incomplete text, and (6) unopened access articles. Data analysis used reviewing articles, reducing data using a literature review matrix that includes various important things from research articles, compiling data from data reduction results, presenting data, validating data using credibility tests, using reference materials in the form of theories discovered, and drawing conclusions are all examples of data analysis used descriptively.

RESULT AND DISCUSSION

Based on the results of a literature search on a search engine, 18 articles were found (figure 1; table 1). These 18 articles generally examine factors related to the quality of life of tuberculosis patients in Indonesia, including age, education, stress, depression, stigma, medication adherence, and social support. Most of the articles studied used a cross sectional design as many as 17 articles (94.4%) with the number of respondents ranging from 22-259 tuberculosis patients.

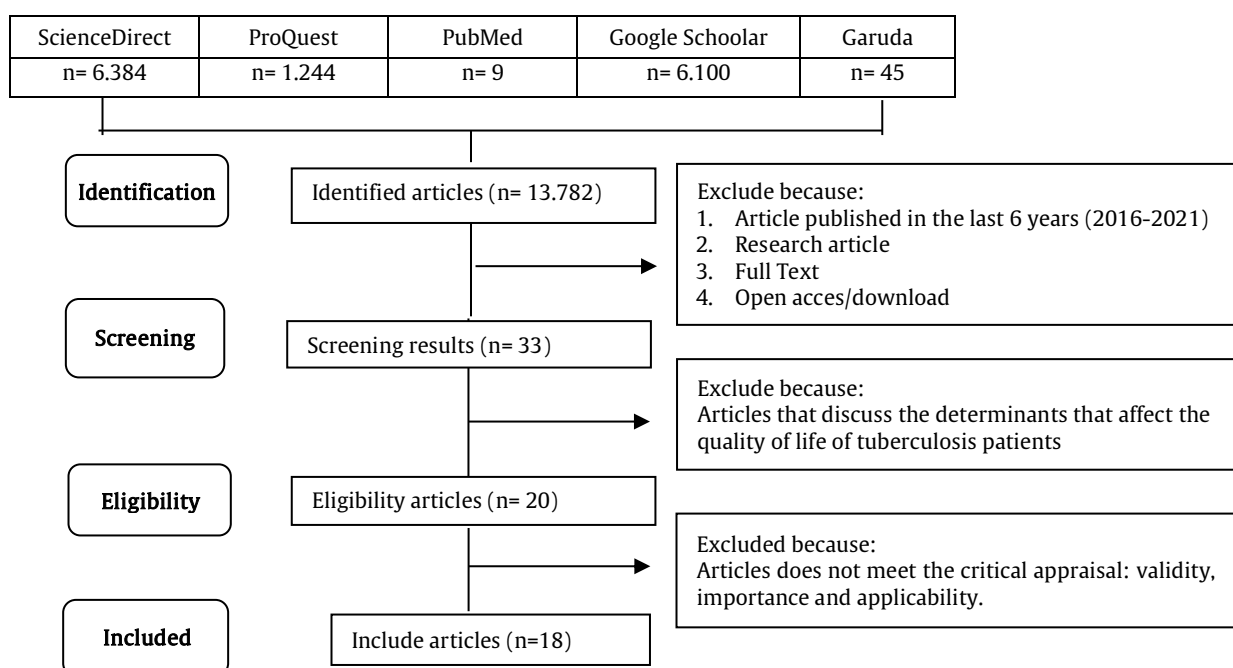


Figure 1. The search process on the article search engine

Tabel 1.
Characteristics of the findings of articles included in the research on the determinants of the quality of life of tuberculosis patients in Indonesia

No	Author and Years	Journals	Title	Research Design	Sample	Result
1	(Muflihatin et al., 2018)	Jurnal Ilmu Kesehatan, 6 (2): 141-151	The Relationship between Drug Adherence and Quality of Life of Tuberculosis Patients in the Region	Cross sectional	46 respondents	There is a relationship between medication adherence and quality of life of Tuberculosis patients (p= 0.000)
2	(Putri et al., 2018)	Jurnal Kedokteran Diponegoro, 7 (2): 499-506	The Relationship between Stress Levels and Quality of Life in Tuberculosis Patients At Dr. Hospital. Kariadi Semarang	Cross sectional	60 respondents	There is a significant relationship
3	(Endria & Yona, 2019)	Jurnal Riset Kesehatan Nasional, 3 (1): 21-28	The Relationship between Stress Levels and Quality of Life in Tuberculosis Patients at Dr Kariadi Hospital, Semarang	Cross sectional	96 respondents	between stress level and quality of life of tuberculosis patients at Dr Kariadi Hospital, Semarang (p= 0.006; r= 0.486)
4	(Papeo et al., 2021)	Indonesian Journal of Pharmaceutical Education, 1 (2): 86-97	TB Depression and Stigma with Quality of Life in Pulmonary Tuberculosis Patients	Cross sectional	75 respondents	There is a significant relationship between depression (p= 0.000; r= -0.666) and stigma (p= 0.000; r=-0.421) with the quality of life of pulmonary tuberculosis patients.
5	(Diamanta et al., 2020)	Cendana Medical Journal, 19 (1): 44-50	The Relationship Between Medication Adherence (MMAS-8) and Quality of Life (WHOQOL-BREF) of Tuberculosis Patients at Public Health Centers in Bandung City	Cross sectional	87 respondents	There is a significant relationship between medication adherence and quality of life of tuberculosis patients in the psychological domain (p= 0.001), social domain (p= 0.060) and environmental domain (p= 0.090), while in the physical health domain there is no correlation (p= 0.180).
6	(Jasmianti et al., 2017)	Jurnal Ners Indonesia, 7 (2): 22-30	The Relationship between Stress Levels and Income Levels with Quality of Life of Pulmonary Tuberculosis Patients in Kupang City	Cross sectional	67 respondents	Stress level was related to the quality of life of TB patients (p = 0.000; r = 0.628), while income level was not related to the quality of life of TB patients (p = 0.409; r = - 0.090).
7	(Abrori & Ahmad, 2018)	Berita Kedokteran Masyarakat, 34 (2): 55-61	Relationship between Family Support and Quality of Life in Pulmonary TB Patients	Cross sectional	22 respondents	Family support is related to the quality of life of pulmonary TB patients. (p= 0.018; OR= 6.000)
8	(Ledjepjen et al., 2019)	Cendana Medical Journal	Quality of Life of Patients with Drug Resistant Tuberculosis in Banyumas Kabupaten	Cross sectional	84 respondents	Patients with drug-resistant TB have a poorer quality of life and less social support
9	(Pratama et al., 2019)	Medula 10 (1): 171-174	The Relationship between Depression Levels and Quality of Life of Tuberculosis Patients in Adults in Kupang City	Cross sectional	68 respondents	There is a relationship between depression and quality of life of adult TB patients in Kupang City (p= 0.040, r= 0.224)
10	(Juliasih et al., 2020)	Journal of Multidisciplinary Health Care 3: 1475-1480	Factors Affecting Tuberculosis Patients' Quality of Life in Surabaya, Indonesia	Cross sectional	157 respondents	There is a relationship between the stage of treatment with the quality of life of MDR-TB patients in RSUD Dr. H. Abdul Moeloek Lampung Province (p=0.001; OR=5.9)

11	(Sartika et al., 2019)	Journal of Global Infectious Diseases, 11 (3): 102-106	Assessment of health-related quality of life among tuberculosis patients in a public primary care facility in Indonesia	Cross sectional	81 respondents	Quality of life includes 8 domains, namely general health, pain, social functioning
12	(Pandia et al., 2019)	Open Access Macedonian Journal of Medical Sciences 7(9): 1536-1539	The Relationship between Concordance Behaviour with Treatment Compliance and Quality Of Life of Patients with Pulmonary Tuberculosis in Medan	Cross sectional	259 respondents	physical functioning, role limitation due to physical health, role limitation due to emotional problems, energy and emotional well being.
13	(Saadah et al., 2019)	Jurnal Menara Medika 1(2)	Relationship between Family Support and Quality of Life for Pulmonary TB Patients	Cross sectional	54 respondents	Age affects general health (p= 0.018); education level showed a significant effect only on role restriction due to emotional problems (p= 0.014). Mental distress showed a significant effect on quality of life in all domains. Gender, employment status, monthly income and BMI did not significantly affect the quality of life in all domains.
14	(Priambada et al., 2019)	Cendana Medical Journal, 17 (2): 178-185	Relationship of Social Support and Education Level with Quality of Life of Pulmonary Tuberculosis Patients in Kupang City	Cross sectional	80 respondents	Factors of age, gender and dosage form are not related to quality of life in all domains (physical health, psychological health, social relationship and environmental health)
15	(Wijaya et al., 2019)	KnE Life Science, page: 529–534	The Relationship of Stress Level and Quality of Life Among Patients with Tuberculosis in Makassar, Indonesia	Cross sectional	37 respondents	Education was significantly associated with quality of life in the environmental health domain (P=0.01), while in the other three domains it was not related
16	(Lusmilasari et al., 2017)	Belitung Nursing Journal 3 (1): 41-51	Relationship of Adherence, Self Efficacy, Social Support, Quality of Health Care and Psychological Response of Parens Towards Quality of Life of Children qith Tuberculosis in Yogyakarta, Indonesia	Cross sectional	41 respondents	There is no relationship between treatment suitability and quality of life (sig = 0.63)
17	(D. P. Sari et al., 2018)	Jurnal Online Mahasiswa	Relationship between drug adherence and quality of life for MDR TB patients at Arifin Ahmad MDR TB Poly Pekanbaru	Cross sectional	47 responden	There is a relationship between support
18	(Anisah et al., 2020)	Global Journal of Health Science, 12 (12): 112-120	The Influence of Social Support to the Quality of Life of Tuberculosis Patients in Depok, West Java Province, Indonesia	Cohort	209 responden	Social support was associated with the quality of life of TB patients (p= 0.000; OR= 7.91). Social support consists of: 1. Family support (p= 0.000; OR= 19.7) 2. Friendship support (p= 0.000; OR= 2.7) 3. Doctor support (p= 0.001; OR=0.5) 4. Other social support (P= 0.000; OR= 2.6) Family, friendship, doctor and other social support are related to the quality of life of TB patients

DISCUSSION

Age and Quality of Life of Tuberculosis Patients

Age is related to the quality of life of tuberculosis patients. It is stated that age affects the quality of life in the physical domain of tuberculosis patients (Juliasih et al., 2020). Those who suffer from tuberculosis are those who are in productive ages, where at this age they have high activity and mobility compared to other ages so that exposure to Mycobacterium is possible tuberculosis is high due to exposure to other people who already have TB germs in their bodies (Namuwali, 2019). Adult tuberculosis patients have a poorer quality of life than adolescents with tuberculosis (Abrori & Ahmad, 2018). A person's quality of life decreases with age. This is related to the decline in the physical, social, and mental capacities of the elderly so that the older they get, the less likely they are to be able to do many things that contribute to their happiness and improve their quality of life. If this is not treated effectively, it is likely that the quality of life will deteriorate further, leading to an increase in morbidity due to tuberculosis (Ita et al., 2020).

Tuberculosis Patient Education and Quality of Life

The research study found that the quality of life differs depending on the education level of tuberculosis patients (Wahyuni et al., 2018). The findings suggest that a person's education level affects their quality of life when their role is limited due to emotional problems. Someone with higher education is more likely to gain new knowledge (Juliasih et al., 2020). In addition to having an effect on the emotional domain, education is also associated with quality of life in the environmental health domain. 64.2% of tuberculosis patients have attended junior high school, high school or college, it is possible that the longer the school year, the better the quality of health life so that they can reduce psychological discomfort (Sartika et al., 2019). A person's level of education can affect how they receive information, the implication is that educational attainment will affect their quality of life in carrying out treatment obediently (Ita et al., 2020).

Stress and Quality of Life of Tuberculosis Patients

The stress experienced by tuberculosis patients has a major impact on the quality of life in all four domains. This is due to an increase in the number of clinical symptoms and a decrease in the physical condition they experience which will have an impact on self-acceptance so that it can become mental suffering which will then affect the quality of life (Juliasih et al., 2020). Other research found that the lower the stress level of the patient, the higher the quality of life, this is because the level of stress experienced is relatively low so that he is not burdened by his tuberculosis, but for patients with moderate to severe stress levels have a lower quality of life because the patient cannot control the situation. experience that makes it impossible for him to have a high quality of life (Wijaya et al., 2019). The higher the level of stress and anxiety, the lower the level of quality of life (Lusmilasari et al., 2017).

Depression and Quality of Life of Tuberculosis Patients

Depression is related to the quality of life of tuberculosis patients who are undergoing treatment, a study states that 12 of them have poor quality of life, this shows that the

lower the level of depression, the higher the quality of life (Endria & Yona, 2019). Patients who do not experience depression or mild depression are able to live life without discomfort, on the other hand, patients who have the wrong perception about tuberculosis is a deadly and incurable disease is one of the causes of depression so that it will affect the quality of their daily life (Ledjepen et al., 2019). Long duration of tuberculosis treatment causes depression, resulting in poor mental health scores on poor quality of life and treatment of patients (Jaber et al., 2016).

Stigma and Quality of Life of Tuberculosis Patients

Stigma is related to the quality of life of tuberculosis patients (Endria & Yona, 2019). High societal stigma can lead to a state of being rejected and feeling excluded in the community so that it can lead to depression (Suriya, 2018). Patients who experience depression will have a positive effect on their quality of life (Ledjepen et al., 2019). Stigmatization and duration of treatment for six months are predictors of the mental health domain on the quality of life of tuberculosis patients, and some patients experience lower mental health in patients who experience stigma compared to those who do not (Jaber et al., 2016). Tuberculosis patients who experience stigma have a poor quality of life, both in the domains of physical health, psychological health, social relationships and the environment because they feel ashamed of the impact of the changes experienced after being diagnosed with tuberculosis (Y. Sari, 2019).

Treatment Compliance and Quality of Life of Tuberculosis Patients

The proportion of tuberculosis patients who do not comply with the treatment carried out is experienced by patients who have a poor quality of life. It is possibly due to the low level of knowledge they have (Azalla et al., 2020). Treatment adherence is related to the psychological health domain on the quality of life of tuberculosis patients (Nurhayati et al., 2020). The impact of tuberculosis on physical changes that occur perceived by the patient as causing disturbances in the quality of life in the domain of psychological health, namely shame and decreased self-confidence, but after appropriate and obedient therapy and treatment can change the ability to accept the condition for the better, be able to communicate and socialize again with family (Papeo et al., 2021).

Social Support and Quality of Life for Tuberculosis Patients

Social support is significantly related to the quality of life of tuberculosis patients (Priambada et al., 2019), this also occurs in drug-resistant tuberculosis patients who have a lower quality of life because they have low social support (Abrori & Ahmad, 2018). Social support is a risk factor for having a low quality of life, TB patients who have low social support have a 7.91 times greater risk of having a low quality of life compared to TB patients who have good social support (Anisah et al., 2020).

CONCLUSIONS AND RECOMMENDATION

The factors that influence the low quality of life of tuberculosis patients in Indonesia based on literature studies in the articles sampled in this study include age, education,

stress, depression, stigma, medication adherence and social support. After knowing the factors related to the quality of life of tuberculosis patients, a strategy or intervention model can be carried out as an effort to improve the quality of life based on the findings obtained.

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Conflict of Interest Statement

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