

Assessing Quality of Life in Patients with New and Recurrent Pulmonary Tuberculosis: A Cross-Sectional Study from Garut, Indonesia

Abstract

Background: This study compared the Quality of Life (QoL) between new and recurrent pulmonary tuberculosis (TB) patients, a crucial indicator for those undergoing treatment. **Materials and Methods:** A cross-sectional comparative study was conducted at eight community health centres in Garut, West Java, Indonesia. Convenience sampling was used to recruit patients aged >15 years with new or recurrent pulmonary TB. QoL was assessed using the WHOQOL tool. Data were analyzed using an independent *t*-test. **Results:** 54 new and 60 recurrent pulmonary TB patients participated. Recurrent TB patients Mean(SD) scored significantly higher in the psychological domain 58.30 (10.63) compared to new TB patients 53.70 (10.31) ($p < 0.05$, *t*-test: -2.34). **Conclusions:** New pulmonary TB patients experience greater psychological burden, highlighting the need for targeted psychological support to improve their overall QoL.

Keywords: Psychological wellbeing, quality of life, recurrence, tuberculosis

Introduction

Tuberculosis (TB) remains a major global health threat, with Indonesia ranking second in TB burden worldwide.^[1] Despite modest improvements in treatment success rates,^[2] TB significantly impacts patients' Quality of Life (QoL), affecting physical, psychological, and social wellbeing.^[3] However, TB's effect on QoL still needs to be studied,^[4] particularly in Indonesia.

QoL reflects an individual's subjective perception of the life circumstances.^[5] Active TB is linked to diminished health status and QoL, effects that often persist post-treatment.^[4] Poor QoL can lead to treatment delays or interruptions.^[6] Evaluating QoL offers valuable insights into TB's broader impact and treatment effectiveness of its treatments, beyond mere clinical outcomes.^[5]

Previous studies in Indonesia have examined QoL in TB patients,^[6,7] but none have compared new versus recurrent cases. Therefore, this study aims to fill this gap by analyzing QoL differences between these groups in Garut to help shape more effective patient support strategies and improve TB management in the region.

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Materials and Methods

This cross-sectional study was conducted in 2019 at eight community health centres in Garut, West Java, Indonesia. Participants were patients aged >15 years with new or recurrent pulmonary TB undergoing treatment,^[8] recruited by convenience sampling. Exclusion criteria included incomplete treatment, extrapulmonary TB, or physical/cognitive limitations. QoL was assessed using the validated Indonesian version of the WHOQOL-BREF.^[5,9] Data were analyzed using IBM SPSS 29.0. Chi-square tests compared respondent characteristics, and independent *t*-tests compared QoL scores between groups. Significance was set at $P < 0.05$.

Ethical considerations

The study was approved by the Health Research Ethics Committee of Universitas Padjadjaran (No. 181/UN6.KEP/EC/2019).

Results

The demographic profiles of new and recurrent pulmonary TB patients in this study exhibited no statistically significant differences across age, gender, education, employment, or marital status ($P > 0.05$).

How to cite this article: Yani DI, Pujhiyani PS, Rahayu ES, Eriyani T. Assessing quality of life in patients with new and recurrent pulmonary tuberculosis: A cross-sectional study from Garut, Indonesia. *Iran J Nurs Midwifery Res* 2025;30:447-8.

Submitted: 01-Oct-2021. **Revised:** 07-Nov-2024.

Accepted: 23-Dec-2024. **Published:** 08-May-2025.

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Access this article online

Website: <https://journals.iwv.com/ijnmr>

DOI: 10.4103/ijnmr.ijnmr_373_21

Quick Response Code:



Moreover, recurrent patients scored significantly higher in psychological health ($t_{1,112} = -2.34$, $P < 0.05$, Table 1). However, no significant differences were found in other QoL domains, such as physical health, social relationships, and environment.

Discussion

This study found that recurrent TB patients had significantly higher psychological health scores than new TB patients, contrasting with previous studies that reported satisfactory psychological health among TB patients generally.^[6,10] This unexpected result may be due to recurrent patients developing better coping strategies, familiarity with treatment, and stronger support networks.

However, other research highlights unmet psychosocial needs among TB patients in Indonesia, including TB stigma and depression.^[7,11] The complex relationship between TB recurrence, psychological health, and support systems warrants further investigation.

Research constraints encompass limited participants, one-time assessment, and self-disclosed information. Subsequent investigations should examine particular adaptive strategies employed by recurring tuberculosis sufferers and their potential application in assisting newly diagnosed individuals. Targeted psychological interventions, especially for newly diagnosed patients, are recommended.

Conclusion

QoL scores were similar between new and recurrent pulmonary TB patients in most domains. However, recurrent TB patients scored significantly higher in the psychological domain. This suggests that new TB

patients may need more mental health support during treatment.

Acknowledgements

We would like to thank Mr. Umar Sumarna, the community health centers, staffs and all the patients.

Financial support and sponsorship

Nil.

Conflicts of interest

Nothing to declare.

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Table 1: Quality of life comparison

Variable	New pulmonary TB* (n=54) Mean SD	Recurrent pulmonary TB (n=60) Mean (SD)	p	Independent t-test
Physical health	54.56 (7.81)	55.02 (9.62)	0.78	-0.28
Psychological health	53.70 (10.31)	58.30 (10.63)	0.02	-2.34
Social relationship	61.44 (13.09)	63.93 (14.48)	0.34	-0.96
Environment	56.31 (7.72)	55.42 (9.42)	0.58	0.55
Quality of life	56.50 (7.15)	58.17 (7.01)	0.21	-1.26
Total				

*TB=Tuberculosis