

Socioeconomic Status and Tuberculosis Incidence in India and Indonesia: A Narrative Review of Two High-Burden Countries

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Background

- WHO (2022), approximately 10 million people fall ill with TB, with 1.5 million deaths occurring worldwide.
- India and Indonesia rank first and second in the global TB burden.
- Socioeconomic factors significantly influence TB risk, but their impact in these two high-burden regions has not been clearly synthesized.

Objectives

- To review evidence on the relationship between socioeconomic status and TB incidence in India and Indonesia.

Methods

- Design: Narrative review of peer-reviewed studies (2015–2025).
- Search string:
allintitle: ("socioeconomic" OR "income" OR "poverty")
AND ("tuberculosis" OR "TB") AND ("India" OR "Indonesia")
- Screening:
Titles/abstracts screened, followed by full-text review.
Two reviewers (FR, MC) independently assessed eligibility. Disagreements resolved by discussion.

Discussion

- Poverty strongly drives TB risk in both India and Indonesia.
- Higher education is protective; low parental education increases child TB.
- Informal workers, farmers, and laborers are more vulnerable.
- Overcrowded, poorly ventilated housing amplifies transmission.
- Smoking, malnutrition, and geographic disparities (e.g., South Papua) worsen risks.
- In India, multidimensional poverty is key; in Indonesia, local SES and environment dominate.

Conclusion

- TB is a social disease with biomedical consequences.
- Control requires poverty reduction, education, housing improvement, and social protection alongside medical care.
- Policies must align with the WHO End TB Strategy and SDGs 2030, focusing on children and vulnerable groups.

Reference

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Table. Summary of Reviewed Studies on Socioeconomic Status and Tuberculosis in India and Indonesia

No	Author, Year	Country	Study Design / Data	SES Factors Analyzed	Key Findings
1	Saputra & Herlina, 2021	Indonesia	Literature review (15 journals)	Income, housing, nutrition	Consistent link: low income, poor housing, and undernutrition increase TB risk.
2	Kusumaningrum et al., 2023	Indonesia	Secondary analysis (Indonesian Family Life Survey 2014)	Income, education, home environment	Household income < Rp600,000 and low education increase TB risk; housing conditions not significant.
3	Rianto, 2018	Indonesia	Cross-sectional, Puskesmas Sukasari (100 outpatients)	Income, smoking	85% had low income; smoking (74%) strongly linked to TB; both SES and smoking associated.
4	Rianto et al., 2017	Indonesia	Cross-sectional, Puskesmas Sukasari	Income, smoking	Low income → 2.1× odds of TB; smoking adds risk; majority of TB cases from poor households.
5	Wardani & Wahono, 2018	Indonesia (Bandar Lampung)	Cross-sectional, 166 smear-positive TB patients	SES, housing density, education, nutrition	Low SES, high housing density, poor education drive TB clustering in low-income neighborhoods.
6	Cana et al., 2024	Indonesia (Lampung)	Case-control + spatial analysis (2020–2022)	Income, housing, population density, access to health	Significant: housing density, per capita income, poor housing. Not significant: access to health services.
7	Santoso et al., 2024	Indonesia (Lampung)	Case-control (58 respondents)	Income, home hygiene	Economic status (p=0.009) and poor household hygiene (p=0.001) significantly associated with TB.
8	Pathak et al., 2021	India	National Family Health Survey (NFHS-4, 2015–16; 628,900 households)	Multidimensional poverty (education, health, living standards)	TB prevalence higher among multidimensionally poor (480 vs. 250/100,000). Odds 1.82× higher.
9	Kustanto, 2020	Indonesia (national)	Econometric analysis	Poverty, GRDP per capita, literacy, sanitation	Poverty and population density ↑ TB cases; literacy and GRDP ↓ TB. Sanitation effects weak.
10	Rukmini et al., 2025	Indonesia (IHS 2023, n=239,353 children)	National health survey (children 0–14 yrs)	Household income, education, occupation, rurality	TB prevalence 241/100,000 overall; highest in Papua region (327-699/100,000). Higher risk in rural areas; low parental education and income ↑ risk; farmers/laborers most affected.