

**ANALISIS FAKTOR SOSIODEMOGRAFI, KLINIS, DAN LINGKUNGAN  
TERHADAP KOMORBIDITAS TUBERKULOSIS DAN DIABETES  
MELITUS DI PROVINSI SUMATERA BARAT**

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**TESIS**



**PROGRAM STUDI MAGISTER EPIDEMIOLOGI  
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**Tesis, Juni 2025**

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**ANALISIS FAKTOR SOSIODEMOGRAFI, KLINIS, DAN LINGKUNGAN TERHADAP KOMORBIDITAS TUBERKULOSIS DAN DIABETES MELITUS DI PROVINSI SUMATERA BARAT TAHUN 2024**

xii + 118 halaman, 15 tabel, 12 gambar, 9 lampiran

**ABSTRAK**

**Tujuan Penelitian**

Data dari Dinas Kesehatan Provinsi Sumatera Barat menyatakan penderita TB Paru positif yang memiliki penyakit Diabetes Melitus berjumlah 830 orang. Hal ini menunjukkan efek diabetes melitus menjadi salah satu faktor risiko terhadap pengobatan TB aktif. Penelitian ini bertujuan untuk mengetahui pengaruh faktor sosiodemografi, klinis, dan lingkungan terhadap komorbiditas TB-DM di Provinsi Sumatera Barat Tahun 2024.

**Metode**

Jenis penelitian yang dilakukan adalah desain studi *matching* kasus kontrol. Sampel diambil sebanyak 830 orang dengan perbandingan kasus (TB-DM) dan kontrol (TB) 1:1. Data dianalisis secara univariat, bivariat, multivariat.

**Hasil**

Secara univariat, terdapat sebanyak 830 kasus komorbiditas TB-DM dan 830 kasus TB. Usia  $\geq 45$  (81,45%), bekerja (62,53%), wilayah pemukiman urban (47,21%), rujukan fasyankes (12,77%), jenis tuberkulosis paru (98,3%), riwayat TB kambuh (10,72%). Terdapat hubungan umur, pekerjaan, jenis TB, dan riwayat pengobatan TB dengan komorbiditas TB-DM ( $p < 0,05$ ). Tidak terdapat hubungan wilayah pemukiman dan status rujukan dengan kejadian Komorbiditas TB-DM ( $p > 0,05$ ). Faktor risiko paling dominan terhadap kejadian komorbiditas TB-DM adalah umur dengan  $p\text{-value}=0,0001$  dengan nilai OR=11,031 (95% CI: 7.838–45.882).

**Kesimpulan**

Umur, pekerjaan, jenis TB, dan riwayat pengobatan TB berhubungan dengan komorbiditas TB-DM. Wilayah pemukiman dan status rujukan tidak memiliki hubungan dengan kejadian Komorbiditas TB-DM. Umur cenderung probabilitas risikonya pada penyakit komorbiditas TB-DM dibandingkan dengan TB. Disarankan agar dilakukan skrining rutin DM pada pasien TB terutama pada kelompok usia  $\geq 45$  tahun karena kelompok ini memiliki risiko tertinggi mengalami komorbiditas TB-DM.

**Daftar Pustaka : 139 (2016-2025)**

**Kata Kunci : Tuberkulosis, Diabetes Melitas, Komorbiditas**

**FACULTY OF PUBLIC HEALTH  
UNIVERSITAS ANDALAS**

**Thesis, Juny 2025**

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**ANALYSIS OF SOCIODEMOGRAPHIC, CLINICAL, AND ENVIRONMENTAL FACTORS ON TUBERCULOSIS AND DIABETES MELLITUS COMORBIDITY IN WEST SUMATERA PROVINCE IN 2024**

xii + 1 pages, 15 tables, 12 figures, 9 appendices

**ABSTRACT**

**Objective**

According to data from the West Sumatra Provincial Health Office, there are 830 cases of pulmonary tuberculosis (TB) patients with Diabetes Mellitus (DM). This indicates that DM is one of the significant risk factors influencing active TB treatment outcomes. This study aims to analyze the influence of sociodemographic, clinical, and environmental factors on TB-DM comorbidity in West Sumatra Province in 2024.

**Method**

The type of research conducted was a matched case-control study design. A total of 830 samples were taken with a 1:1 ratio between cases (TB-DM) and controls (TB). Data were analyzed using univariate, bivariate, and multivariate methods.

**Result**

Univariate analysis showed 830 TB-DM cases and 830 TB-only controls. Among TB-DM patients, 81.45% were aged  $\geq 45$  years, 62.53% were employed, 47.21% lived in urban areas, and 12.77% received treatment at referral health facilities. Most had pulmonary TB (98.3%) and 10.72% had a history of TB relapse. Bivariate analysis showed significant associations between age, occupation, type of TB, and history of TB treatment with TB-DM comorbidity ( $p < 0.05$ ). No significant associations were found with residential area or referral status ( $p > 0.05$ ). Age was the most dominant risk factor, with a  $p$ -value of 0.0001 and an odds ratio (OR) of 11.031 (95% CI: 7.838–45.882).

**Conclusion**

Age, occupation, type of TB, and history of TB treatment were significantly associated with TB-DM comorbidity. Residential area and referral status were not associated. Individuals aged  $\geq 45$  years had a significantly higher risk of developing TB-DM comorbidity. Routine DM screening is recommended for TB patients, especially those aged  $\geq 45$  years, due to their higher risk of comorbidity.

**References** : 132 (2008-2023)

**Keywords** : Tuberculosis, Diabetes Mellitus, Comorbidity