

ABSTRACT

Background: The prevalence of diabetes mellitus (DM) shows a significant upward trend. If not addressed promptly, it could lead to serious health and economic consequences for individuals and communities in Indonesia, particularly those on the island of Java. The study aims to identify risk factors and spatial autocorrelation based on the 2023 SKI data.

Method: This study is a secondary data analysis using a hybrid ecological design with SKI 2023 data, conducted from October 2024 to March 2025. A sample of 178,372 individuals was selected using systematic sampling. The dependent variable is type 2 diabetes, and the independent variables include age, gender, central obesity, physical activity, and consumption of high-risk foods. Data analysis used Chi-Square, Logistic Regression, Global Moran's, and LISA to identify risks and autocorrelation.

Results: The prevalence of type 2 diabetes among individuals aged ≥ 15 years was 1.3% (95% CI: 1.2%–1.3%). The variables of age [Adj POR = 12.481 (95% CI: 9.614 – 16.204)], central obesity [Adj POR = 2.369 (95% CI: 2.093 – 2.683)], physical activity [Adjusted POR = 1.367 (95% CI: 1.146 – 1.632)], and risky foods [Adjusted POR = 0.111 (95% CI: 0.080 – 0.325)] were associated with type 2 diabetes. Meanwhile, gender [Adjusted POR = 0.192 (95% CI: 0.793 – 1.048)] is not associated with type 2 diabetes. A total of 45 districts/cities on Java Island have a high prevalence of type 2 diabetes with positive spatial autocorrelation between central obesity and risky foods and type 2 diabetes.

Conclusion: Age is the primary factor influencing type 2 diabetes among individuals aged ≥ 15 years. The government needs to enhance screening and health education programs targeting individuals over 40 years of age. Forty-five districts/cities on Java Island are at high risk and require preventive interventions and control measures.

Keywords: Type 2 Diabetes, Risk Factors, Autocorrelation

ABSTRAK

Latar Belakang: Prevalensi DM menunjukkan tren peningkatan yang cukup signifikan. Jika tidak segera diatasi dapat mengakibatkan dampak serius bagi kesehatan individu maupun ekonomi masyarakat di Indonesia terutama masyarakat di Pulau Jawa. Penelitian bertujuan untuk mendapatkan faktor risiko dan autokorelasi spasial berdasarkan data SKI 2023.

Metode: Jenis penelitian ini adalah *secondary data analysis* dengan rancangan *hybrid ecological* menggunakan data SKI 2023, dilakukan Oktober 2024 – Maret 2025. Sampel 178.372 orang dipilih secara *systematic sampling*. Variabel dependen adalah DM tipe 2 dan variabel independen berupa usia, jenis kelamin, obesitas sentral, aktivitas fisik, dan konsumsi makanan berisiko. Analisis data menggunakan *Chi-Square*, *Regression Logistic*, *Global Moran's*, dan LISA untuk mengidentifikasi risiko serta autokorelasi.

Hasil: Prevalensi DM tipe 2 pada penduduk usia ≥ 15 tahun sebesar 1,3% (95% CI: 1,2% – 1,3%). Variabel usia [Adj POR = 12,481 (95% CI: 9,614 – 16,204)], obesitas sentral [Adj POR = 2,369 (95% CI: 2,093 – 2,683)], aktivitas fisik [Adj POR = 1,367 (95% CI: 1,146 – 1,632)], dan makanan berisiko [Adj POR = 0,111 (95% CI: 0,080 – 0,325)] berhubungan dengan DM tipe 2. Sementara jenis kelamin [Adj POR = 0,192 (95% CI: 0,793 – 1,048)] tidak berhubungan dengan DM tipe 2. Sebanyak 45 kabupaten/kota di Pulau Jawa memiliki proporsi DM tipe 2 tinggi dengan autokorelasi spasial positif antara obesitas sentral dan makanan berisiko terhadap DM tipe 2.

Kesimpulan: Usia menjadi faktor utama yang memengaruhi DM tipe 2 pada penduduk usia ≥ 15 tahun. Pemerintah perlu meningkatkan skrining serta edukasi pola hidup sehat terhadap masyarakat usia >40 tahun. Sebanyak 45 kabupaten/kota di Pulau Jawa berisiko tinggi dan perlu intervensi pencegahan serta pengendalian.

Kata Kunci: DM Tipe 2, Faktor Risiko, Autokorelasi