

ABSTRAK

Raudhatul Arifah. Hubungan Asupan Energi dan Kadar Glukosa Darah dengan Kadar Kolesterol Total pada Penderita Diabetes Melitus di Wilayah Kerja Puskesmas Mandala. Skripsi. Program Studi Gizi. Fakultas Teknik. Universitas Negeri Medan. 2026.

Diabetes melitus termasuk dalam empat prioritas utama penyakit tidak menular. Pada tahun 2024, Indonesia masuk peringkat ke-5 dari 10 negara dengan jumlah penderita diabetes melitus terbanyak, yaitu 20,4 juta jiwa. Faktor risiko diabetes melitus yang bisa diubah, yaitu diet tak sehat dan kenaikan kadar kolesterol total. Data hasil Survei Kesehatan Indonesia tahun 2023 menunjukkan 11,7% penduduk memiliki kadar kolesterol total tinggi. Dari hasil observasi dan wawancara pada 12 penderita diabetes, didapatkan 66,7% memiliki kadar kolesterol total tinggi dengan rata-rata 228,9 mg/dl, 83,3% memiliki kadar glukosa darah puasa tinggi dengan rata-rata 192,7 mg/dL, dan 75% memiliki asupan energi tidak sesuai kebutuhan. Penelitian ini bertujuan untuk mengetahui hubungan asupan energi dan kadar glukosa darah dengan kadar kolesterol total pada penderita diabetes melitus di wilayah kerja Puskesmas Mandala.

Penelitian ini dilaksanakan pada bulan Juli hingga Agustus 2025 di Puskesmas Mandala yang berlokasi di Jalan Cucak Rawa, Tegal Sari Mandala II, Kecamatan Medan Tembung, Kota Medan, Sumatera Utara. Penelitian ini merupakan kuantitatif menggunakan desain *cross sectional*. Teknik pengambilan sampel menggunakan *purposive sampling*, dengan jumlah sampel sebesar 48 penderita diabetes. Pengumpulan data dilakukan melalui wawancara menggunakan kuesioner karakteristik responden serta formulir *food recall* 2x24 jam dan pengambilan darah melalui kapiler menggunakan alat *Easy Touch GCU*. Data dianalisis secara univariat, bivariat menggunakan uji *Rank Spearman*, dan multivariat menggunakan uji regresi logistik.

Hasil analisis *Rank Spearman* menunjukkan terdapat hubungan yang signifikan antara asupan energi dengan kadar kolesterol total pada penderita diabetes ($p=0,001$; $r=0,459$) dan terdapat hubungan yang signifikan antara kadar glukosa darah dengan kadar kolesterol total pada penderita diabetes ($p=0,003$; $r=0,422$). Hasil analisis regresi logistik menunjukkan bahwa asupan energi dan kadar glukosa darah tidak berhubungan secara signifikan dengan kadar kolesterol total pada penderita diabetes melitus (asupan sangat kurang $p=0,999$; asupan kurang $p=0,999$; asupan sesuai $p=0,999$; asupan lebih $p=0,558$; kadar glukosa darah $p=0,057$).

Kata Kunci : Diabetes Melitus, Asupan Energi, Kadar Glukosa Darah, Kadar Kolesterol Total.

ABSTRACT

Raudhatul Arifah. *The Relationship between Energy Intake and Blood Glucose Levels with Total Cholesterol Levels in Patients with Diabetes Mellitus in the Working Area of Mandala Community Health Center. Essay. Nutrition Study Program. Faculty of Engineering. State University of Medan. 2026.*

Diabetes mellitus is among the four main priorities of non-communicable diseases. In 2024, Indonesia ranked 5th among 10 countries with the highest number of diabetes mellitus sufferers, amounting to 20,4 million people. The modifiable risk factors for diabetes mellitus are unhealthy diet and increased total cholesterol levels. Data from the 2023 Indonesian Health Survey shows that 11,7% of the population has high total cholesterol levels. From observations and interviews with 12 diabetes patients, it was found that 66,7% have high total cholesterol levels with an average of 228,9 mg/dl, 83,3% have high fasting blood glucose levels with an average of 192,7 mg/dL, and 75% have energy intake that does not meet their needs. This study aims to determine the relationship between energy intake and blood glucose levels with total cholesterol levels in diabetes mellitus patients in the working area of the Mandala Community Health Center.

This research was conducted from July to August 2025 at Mandala Community Health Center, located on Cucak Rawa Street, Tegal Sari Mandala II, Medan Tembung Subdistrict, Medan City, North Sumatra. This research is quantitative using a cross-sectional design. The sampling technique used was purposive sampling, with a sample size of 48 diabetes patients. Data were collected through interviews using a respondent characteristic questionnaire, a 2×24 hour food recall form, and as well as capillary blood sampling using the Easy Touch GCU device. The data were analyzed univariately, bivariately using the Spearman Rank test, and multivariately using logistic regression analysis.

The results of the Spearman rank analysis show a significant relationship between energy intake and total cholesterol levels in diabetes patients ($p=0,001$; $r=0,459$) and a significant relationship between blood glucose levels and total cholesterol levels in diabetes patients ($p=0,003$; $r=0,422$). The results of the logistic regression analysis showed that energy intake and blood glucose levels were not significantly related to total cholesterol levels in diabetes mellitus patients (very low intake $p=0,999$; low intake $p=0,999$; appropriate intake $p=0,999$; excess intake $p=0,558$; blood glucose levels $p=0,057$).

Keywords: *Diabetes Mellitus, Energy Intake, Blood Glucose Levels, Total Cholesterol Levels.*