

ABSTRACT

THE CORRELATION BETWEEN FAT, CARBOHYDRATE, FIBER INTAKE, AND BODY MASS INDEX WITH TOTAL CHOLESTEROL LEVELS IN EDUCATIONAL STAFF AT THE FACULTY OF MEDICINE, UNIVERSITY OF LAMPUNG

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Background: High total cholesterol levels are a major risk factor for cardiovascular disease, which is often asymptomatic but has a significant impact on mortality rates. These cholesterol levels are influenced by lifestyle factors, such as fat, carbohydrate, and fiber intake, as well as Body Mass Index (BMI). The objective of this study was to determine the relationships among dietary intake (fat, carbohydrate, and fiber), BMI, and total cholesterol levels among the educational staff at the Faculty of Medicine, University of Lampung.

Methods: This was an observational analytic study with a cross-sectional design conducted from September to December 2025 at the Faculty of Medicine, University of Lampung. The sample consisted of 69 educational staff members, selected using the correlation formula and meeting the inclusion criteria. Data on dietary intake were collected using a 2 x 24-hour food recall; body mass index (BMI) was measured by anthropometry; and total cholesterol levels were assessed using the POCT method. Data analysis involved normality testing, followed by Spearman and Pearson correlation tests, and scatter plots.

Results: The mean total cholesterol level of the respondents was 197.46 mg/dL. There was a significant positive relationship between fat intake and total cholesterol levels ($p = 0.002$; $r = 0.371$), and a significant negative relationship between fiber intake and total cholesterol levels ($p = 0.005$; $r = -0.331$). No significant relationships were found between carbohydrate intake ($p = 0.468$) or Body Mass Index ($p = 0.270$) and total cholesterol levels.

Conclusions: Fat and fiber intake are related to total cholesterol, but carbohydrate intake and BMI are not. Educational staff should limit saturated fat and increase fiber to manage cholesterol.

Keywords: Dietary Intake, Body Mass Index, Total Cholesterol Levels, Educational Staff.

ABSTRAK

HUBUNGAN ANTARA ASUPAN LEMAK, KARBOHIDRAT, SERAT, DAN INDEKS MASSA TUBUH DENGAN KADAR KOLESTEROL TOTAL PADA TENAGA KEPENDIDIKAN FAKULTAS KEDOKTERAN UNIVERSITAS LAMPUNG

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Latar Belakang: Kadar kolesterol total yang tinggi merupakan faktor risiko utama penyakit kardiovaskular yang sering kali tidak bergejala namun berdampak besar pada angka kematian. Kadar kolesterol tersebut dipengaruhi oleh faktor gaya hidup, seperti asupan lemak, karbohidrat, serat, serta indeks massa tubuh (IMT). Tujuan penelitian ini adalah untuk mengetahui hubungan antara asupan makan (lemak, karbohidrat, dan serat) dan IMT dengan kadar kolesterol total pada tenaga kependidikan FK Universitas Lampung.

Metode: Jenis penelitian ini adalah analitik observasional dengan desain *cross-sectional* yang dilaksanakan pada bulan September hingga Desember 2025 di Fakultas Kedokteran Universitas Lampung. Sampel penelitian berjumlah 69 tenaga kependidikan yang dihitung menggunakan rumus korelasi sesuai kriteria inklusi. Pengumpulan data asupan makan menggunakan *food recall* 2 x 24 jam, pengukuran indeks massa tubuh melalui antropometri, dan pemeriksaan kadar kolesterol total menggunakan metode POCT. Analisis data dilakukan uji normalitas terlebih dahulu kemudian menggunakan uji korelasi Spearman dan Pearson serta scatter plot.

Hasil: Hasil penelitian menunjukkan rerata kadar kolesterol total responden adalah 197,46 mg/dL. Hubungan antara asupan lemak dengan kadar kolesterol total ($p = 0,002$; $r = 0,371$) dengan arah positif dan hubungan antara asupan serat dengan kadar kolesterol total ($p = 0,005$; $r = -0,331$) dengan arah negatif. Hubungan antara asupan karbohidrat ($p = 0,468$) dan indeks massa tubuh ($p = 0,270$) dengan kadar kolesterol total.

Kesimpulan: Terdapat hubungan antara asupan lemak dan serat dengan kadar kolesterol total, sedangkan asupan karbohidrat dan indeks massa tubuh tidak berhubungan dengan kadar kolesterol total. Disarankan bagi tenaga kependidikan untuk membatasi konsumsi lemak jenuh dan meningkatkan asupan serat pangan guna mengontrol kadar kolesterol darah.

Kata Kunci: Asupan Makan, Indeks Massa Tubuh, Kadar Kolesterol Total, Tenaga Kependidikan.