

HUBUNGAN LINGKAR PINGGANG DAN PERSENTASE LEMAK TUBUH DENGAN FLEKSIBILITAS PADA MAHASISWA

Atika Banowati¹, Neni Trilusiana Rahmawati², Nurina Umy Habibah²

ABSTRAK

Latar Belakang: Peningkatan gaya hidup sedentari pada mahasiswa memicu terjadinya obesitas yang dapat membatasi rentang gerak dan menurunkan fleksibilitas. Penurunan fleksibilitas dapat meningkatkan risiko nyeri punggung bawah yang berdampak pada produktivitas dan efisiensi kerja di masa depan. Oleh karena itu, penting untuk mengkaji hubungan antara lingkaran pinggang dan persentase lemak tubuh sebagai indikator obesitas dengan fleksibilitas pada mahasiswa.

Tujuan: Mengetahui hubungan antara lingkaran pinggang dan persentase lemak tubuh dengan fleksibilitas pada mahasiswa.

Metode: Penelitian ini merupakan studi observasional analitik dengan pendekatan kuantitatif dan desain studi *cross-sectional*. Subjek penelitian berjumlah 180 mahasiswa Universitas Gadjah Mada berusia 18–24 tahun yang diperoleh melalui teknik *convenience sampling*. Data yang dikumpulkan mencakup ukuran lingkaran pinggang, tebal lipatan kulit (bisep, trisep, subskapular, dan suprailiaka) untuk menghitung persentase lemak tubuh, serta hasil *sit-and-reach test* untuk menilai fleksibilitas. Analisis hubungan dilakukan menggunakan uji korelasi Spearman karena data tidak berdistribusi normal.

Hasil: Rerata lingkaran pinggang sebesar 71,5±9,3 cm. Rerata persentase lemak tubuh sebesar 29,5±5,6%. Rerata fleksibilitas sebesar 41,1±12,5 cm. Sebagian besar subjek penelitian memiliki lingkaran pinggang normal (89,4%), persentase lemak tubuh normal (62,2%), dan fleksibilitas kurang (34,4%). Tidak terdapat hubungan bermakna antara lingkaran pinggang dengan fleksibilitas ($p=0,527$; $p>0,05$). Tidak terdapat hubungan bermakna antara persentase lemak tubuh dengan fleksibilitas ($p=0,711$; $p>0,05$).

Kesimpulan: Tidak ditemukan hubungan yang signifikan antara lingkaran pinggang dan fleksibilitas pada mahasiswa. Selain itu, tidak ditemukan hubungan yang signifikan antara persentase lemak tubuh dan fleksibilitas pada mahasiswa.

Kata kunci: fleksibilitas; lingkaran pinggang; persentase lemak tubuh.

¹Program Studi Gizi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada

²Departemen Gizi Kesehatan, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada

THE RELATIONSHIP BETWEEN WAIST CIRCUMFERENCE AND BODY FAT PERCENTAGE WITH FLEXIBILITY AMONG UNIVERSITY STUDENTS

Atika Banowati¹, Neni Trilusiana Rahmawati², Nurina Umy Habibah²

ABSTRACT

Background: *The increasing prevalence of sedentary lifestyles among university students can lead to obesity, which may restrict range of motion and reduce flexibility. Decreased flexibility can increase the risk of lower back pain, potentially affecting productivity and work efficiency in the future. Therefore, it is important to examine the relationship between waist circumference and body fat percentage as indicators of obesity with flexibility among university students.*

Objective: *To determine the relationship between waist circumference and body fat percentage with flexibility among university students.*

Methods: *This study was an analytical observational study with a quantitative approach and a cross-sectional design. A total of 180 students aged 18–24 years from Universitas Gadjah Mada were recruited using a convenience sampling technique. Data collected included waist circumference, skinfold thickness (biceps, triceps, subscapular, and suprailiac) to estimate body fat percentage, and the sit-and-reach test to assess flexibility. The relationship between variables was analyzed using the Spearman correlation test, as the data were not normally distributed.*

Results: *The mean waist circumference was 71.5±9.3 cm. The mean body fat percentage was 29.5±5.6%, and the mean flexibility score was 41.1±12.5 cm. Most participants had a normal waist circumference (89.4%), normal body fat percentage (62.2%), and poor flexibility (34.4%). There was no significant relationship between waist circumference and flexibility ($p=0.527$; $p>0.05$). Similarly, no significant relationship was found between body fat percentage and flexibility ($p=0.711$; $p>0.05$).*

Conclusion: *There was no significant relationship between waist circumference and flexibility among university students. In addition, no significant relationship was found between body fat percentage and flexibility among university students.*

Keywords: *flexibility; waist circumference; body fat percentage.*

¹Bachelor of Nutrition Study Program, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

²Department of Nutrition and Health, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada