

ABSTRAK

Latar Belakang:

Kebugaran kardiorespirasi (VO_2 maks) mencerminkan kemampuan sistem jantung, paru, dan sirkulasi darah dalam mengantarkan oksigen selama aktivitas fisik. Indeks Massa Tubuh (IMT) yang berlebihan dapat menurunkan efisiensi kerja paru-paru, sistem kardiovaskular, serta penggunaan otot, sehingga berdampak pada penurunan VO_2 maks.

Tujuan:

Mengetahui hubungan indeks massa tubuh dengan kebugaran kardiorespirasi mahasiswa usia 20 – 22 tahun.

Metode:

Penelitian ini menggunakan desain cross-sectional dengan jumlah responden sebanyak 38 mahasiswi. Data IMT diperoleh melalui pengukuran berat dan tinggi badan, sedangkan VO_2 maks diukur menggunakan *6-Minute Walk Test*. Analisis data dilakukan menggunakan uji korelasi Spearman dengan tingkat signifikansi $p < 0,05$.

Hasil:

Rata-rata IMT responden adalah $23,30 \pm 5,14$, sedangkan rata-rata VO_2 maks adalah $25,12 \pm 5,39$. Hasil uji korelasi Spearman menunjukkan adanya korelasi negatif sedang antara BMI dan VO_2 maks ($r = -0,438$; $p = 0,006$).

Kesimpulan:

Terdapat hubungan negatif sedang antara Indeks Massa Tubuh dan VO_2 maks pada mahasiswa. Semakin tinggi IMT, semakin rendah tingkat kebugaran kardiorespirasi.

Kata kunci:

Indeks Massa Tubuh, VO_2 max, kebugaran kardiorespirasi, mahasiswi, korelasi Spearman

ABSTRACT

Background:

Cardiorespiratory fitness (VO₂max) reflects the ability of the heart, lungs, and circulatory system to deliver oxygen during physical activity. Excessive Body Mass Index (BMI) may decrease lungs, cardiovascular, and muscle efficiency, resulting in reduced VO₂max levels.

Objective:

To determine the relationship between Body Mass Index and VO₂max among female students aged 20–22 years.

Methods:

This study used a cross-sectional design involving 38 female participants. BMI was obtained through measurements of body weight and height, while VO₂max was measured using the 6-Minute Walk Test. Data were analyzed using Spearman's correlation test with a significance level of $p < 0.05$.

Results:

The mean BMI of the participants was 23.30 ± 5.14 , while the mean VO₂max was 25.12 ± 5.39 . The Spearman correlation test showed a moderate negative correlation between BMI and VO₂max ($r = -0.438$; $p = 0.006$).

Conclusion:

There is a moderate negative correlation between Body Mass Index and VO₂max among female students, indicating that higher BMI is associated with lower cardiorespiratory fitness.

Keywords:

Body Mass Index, VO₂max, cardiorespiratory fitness, female students, Spearman correlation