

**FAKULTAS KEDOKTERAN
UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” Jakarta**

Skripsi, Desember 2025

**KAYLA YANAKITA KATAN NO. NRP 2210211130
HUBUNGAN AKTIVITAS FISIK DAN KOMPOSISI TUBUH TERHADAP USIA
METABOLIK PADA MAHASISWI FAKULTAS KEDOKTERAN UPN “VETERAN”
JAKARTA**

RINCIAN HALAMAN (x + 86 halaman, 7 tabel, 4 gambar, 6 lampiran)

ABSTRAK

Tujuan

Aktivitas fisik, massa otot, dan massa lemak merupakan faktor yang berperan penting terhadap usia metabolik seseorang. Penelitian ini bertujuan untuk mengetahui hubungan antara aktivitas fisik, massa otot, dan massa lemak terhadap usia metabolik pada mahasiswa Fakultas Kedokteran Universitas Pembangunan Nasional 'Veteran' Jakarta.

Metode

Penelitian ini merupakan studi observasional analitik dengan desain potong lintang. Sebanyak 53 mahasiswa Fakultas Kedokteran UPNVJ menjadi responden penelitian. Data aktivitas fisik diukur menggunakan kuesioner IPAQ-SF, sedangkan massa otot, massa lemak, dan usia metabolik diukur menggunakan alat TANITA MC-980MA dan diolah menggunakan uji *chi-square* dan *fisher's exact*.

Hasil

Sebagian besar responden memiliki aktivitas fisik kategori sedang (50,9%). Pada komposisi tubuh, 83,0% responden memiliki massa lemak tinggi dan 66,0% memiliki massa otot rendah. Selain itu, 77,4% responden memiliki usia metabolik lebih tua dari usia kronologisnya. Hasil analisis menunjukkan tidak terdapat hubungan yang signifikan antara aktivitas fisik dan usia metabolik ($p=0,424$), serta antara massa otot dan usia metabolik ($p=0,730$). Namun, terdapat hubungan signifikan antara massa lemak dan usia metabolik ($p<0,001$).

Kesimpulan

Secara keseluruhan, massa lemak merupakan variabel yang memiliki pengaruh terhadap peningkatan usia metabolik. Masyarakat diharapkan dapat meningkatkan aktivitas fisik secara teratur, mengurangi

waktu sedentari, serta memperbaiki komposisi tubuh yang dapat membantu menjaga usia metabolik agar lebih sesuai dan terhindar dari resiko sindrom metabolik.

Daftar Pustaka : 41 (2015-2025)

Kata Kunci : Aktivitas fisik, massa otot, massa lemak, usia metabolik, mahasiswa kedokteran

**FACULTY OF MEDICINE
UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA**

Undergraduate Thesis, December 2025

KAYLA YANAKITA KATAN, NO. NRP: 2210211130

THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND BODY COMPOSITION TO METABOLIC AGE AMONG MEDICAL STUDENTS AT THE FACULTY OF MEDICINE, UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA

PAGE DETAILS (x + 86 pages, 7 tables, 4 figures, 6 appendices)

ABSTRACT

Objective

Physical activity, muscle mass, and fat mass are key factors influencing a person’s metabolic age. This study aimed to determine the relationship between physical activity, muscle mass, and fat mass with metabolic age among female students of the Faculty of Medicine, Universitas Pembangunan Nasional “Veteran” Jakarta. The specific objective was to identify the relationship between physical activity and metabolic age in this population.

Methods

This study was an analytical observational research with a cross-sectional design. A total of 53 female medical students from UPNVJ participated as respondents. Physical activity data were collected using the IPAQ-SF questionnaire, while muscle mass, fat mass, and metabolic age were measured using the TANITA MC-980MA device. Data were analyzed using the Chi-square and Fisher’s exact tests.

Results

Most respondents had moderate physical activity (50.9%). Regarding body composition, 83.0% of respondents had high fat mass and 66.0% had low muscle mass. Furthermore, 77.4% of respondents had a metabolic age older than their chronological age. The analysis showed no significant relationship between physical activity and metabolic age ($p=0.424$), and between muscle mass and metabolic age ($p=0.730$). However, there was a significant relationship between fat mass and metabolic age ($p<0.001$).

Conclusion

Overall, fat mass is a variable that has an influence on increasing metabolic age. It is recommended that individuals engage in regular physical activity, reduce sedentary time, and improve body composition to maintain an appropriate metabolic age and lower the risk of metabolic syndrome.

References : 41 (2015–2025)

Keywords : Physical activity, muscle mass, fat mass, metabolic age, medical students

