

**PERBEDAAN KADAR 25(OH)D SERUM, ASUPAN
VITAMIN D, MAGNESIUM DAN ZINK PADA
MAHASISWI OBESITAS DAN NORMAL
DI FAKULTAS KEDOKTERAN
UNIVERSITAS ANDALAS**

TESIS



**PROGRAM STUDI KEBIDANAN
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ABSTRAK

PERBEDAAN KADAR 25(OH)D SERUM, ASUPAN VITAMIN D, MAGNESIUM DAN ZINK PADA MAHASISWI OBESITAS DAN NORMAL DI FAKULTAS KEDOKTERAN UNIVERSITAS ANDALAS

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Sekitar 50% orang di seluruh dunia dan 95% wanita usia subur di Indonesia mengalami kekurangan vitamin D. Kadar 25(OH)D serum dan asupan mikronutrien seperti asupan vitamin D, magnesium dan zink berkaitan dengan kejadian obesitas. Tujuan penelitian ini adalah mengetahui perbedaan kadar 25(OH)D serum, asupan vitamin D, magnesium dan zink pada mahasiswa obesitas dan normal di Fakultas Kedokteran Universitas Andalas Padang.

Penelitian ini merupakan penelitian observasional dengan desain *cross sectional comparative*, dilaksanakan di Fakultas Kedokteran dan Laboratorium Biomedik Universitas Andalas pada bulan November 2021-Juli 2022. Sampel penelitian berjumlah 64 orang mahasiswa dengan status gizi obesitas dan normal. Teknik pengambilan sampel yaitu *systematic random sampling*. Pengumpulan data dilakukan dengan pengambilan darah dan pengisian kuesioner FFQ. Analisis bivariat menggunakan uji *t test independent*.

Hasil penelitian menunjukkan rerata kadar 25(OH)D serum, asupan vitamin D, magnesium dan zink pada kelompok obesitas adalah $10,98 \pm 2,12$ ng/mL, $5,07 \pm 1,47$ mcg, $166,04 \pm 65,27$ mcg dan $6,88 \pm 2,73$ mcg, sedangkan rerata pada kelompok normal adalah $13,94 \pm 4,57$ ng/mL, $5,92 \pm 1,77$ mcg, $205,88 \pm 92,84$ mcg, dan $7,62 \pm 2,67$ mcg. Rerata kadar 25(OH)D serum, asupan vitamin D, magnesium dan zink lebih rendah pada kelompok obesitas (*p-value* = 0,001, 0,040, 0,044, 0,28).

Simpulan penelitian ini adalah terdapat perbedaan yang bermakna kadar 25(OH)D serum, asupan vitamin D, magnesium pada mahasiswa dengan status gizi obesitas dan normal. Tidak terdapat perbedaan yang bermakna asupan zink pada mahasiswa dengan status gizi obesitas dan normal.

Kata kunci : 25(OH)D Serum, Asupan, Magnesium, Obesitas, Vitamin D, Zink

ABSTRACT

DIFFERENCES IN SERUM LEVEL OF 25(OH)D, INTAKE OF VITAMIN D, MAGNESIUM, AND ZINC IN OBESITY AND NORMAL STUDENTS AT THE FACULTY OF MEDICINE ANDALAS UNIVERSITY PADANG

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About 50% of people in the world and 95% of women of childbearing age in Indonesia are vitamin D deficiency. Serum levels of 25(OH)D and intake of some micronutrients are associated with obesity. This study aims to determine the differences in serum levels of 25(OH)D, vitamin D, magnesium, and zinc intakes in obese and normal students at the Faculty of Medicine, Andalas University, Padang.

This research was an observational study with a comparative cross-sectional design, at the Faculty of Medicine and Biomedical Laboratory, Andalas University on November 2021 to July 2022. Sampling was done by systematic random sampling technique, obtaining 64 female students with obesity and normal nutritional status. Data were collected by physical examination, blood taking and questionnaires. Bivariate analysis used Independent T-test.

The results showed that the mean serum levels of 25(OH)D, vitamin D, magnesium, and zinc intakes in the obese group were 10.98 ± 2.12 ng/mL, 5.07 ± 1.47 mcg, 166.04 ± 65.27 mcg, and 6.88 ± 2.73 mcg, while the mean in the normal group was 13.94 ± 4.57 ng/mL, 5.92 ± 1.77 mcg, 205.88 ± 92.84 mcg, and 7.62 ± 2.67 mcg. The mean of in serum levels of 25(OH)D, vitamin D, magnesium and zinc intakes were lower in obese group (p-value=0.001, 0.040, 0,044, 0,28).

The results of the study show that there are significant differences in serum levels of 25(OH)D, vitamin D intake, and magnesium intake in female students with obese and normal nutritional status. There is no significant difference in zinc intake in female students with obese and normal nutritional status.

Keyword : 25(OH)D Serum, Intake, Magnesium, Obesity, Vitamin D, Zinc