

## ABSTRAK

### HUBUNGAN TINGKAT KECUKUPAN KALSIMUM DAN FOSFOR DENGAN KADAR KALSIMUM SERUM PADA MAHASISWI DIV ANALIS KESEHATAN UNIVERSITAS MUHAMMADIYAH SEMARANG

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Kalsium darah dapat digunakan sebagai diagnosis awal berkurangnya kepadatan tulang. Konsumsi makanan dalam jumlah yang kurang dapat menyebabkan kadar kalsium darah dalam kurang dari normal. Penelitian ini bertujuan untuk mengetahui hubungan tingkat kecukupan kalsium dan fosfor dengan kadar kalsium serum pada mahasiswa DIV Analis Kesehatan Universitas Muhammadiyah Semarang.

Penelitian ini termasuk pada jenis penelitian analitik dengan pendekatan *cross sectional*. Jumlah sampel pada penelitian ini 50 orang, ditentukan dengan teknik *Purposive sampling*. Tingkat kecukupan kalsium dan fosfor didapatkan melalui wawancara dengan metode *food recall* 24 jam yang dilakukan sebanyak 3 kali. Kadar kalsium serum dianalisis menggunakan metode *cresolphthalein complexone* (CPC). Uji hipotesis dianalisis menggunakan uji statistik korelasi *Pearson*.

Hasil penelitian menunjukkan sebanyak 88% responden memiliki tingkat kecukupan kalsium kurang dengan rata-rata asupan 606,2±198,2 mg/ hari dan 54% responden memiliki tingkat kecukupan fosfor kurang dengan rata-rata asupan 532,4± 94,7 mg/ hari. Kadar kalsium responden kategori normal sebanyak 72% dengan rata-rata kadar kalsium serum sebesar 9,2 ± 0,8 mg/dl.

Terdapat hubungan antara tingkat kecukupan kalsium dan tingkat kecukupan fosfor dengan kadar serum pada responden. Terdapat hubungan yang signifikan antara tingkat kecukupan kalsium ( $p=0,029$ ) dan tingkat kecukupan asupan fosfor ( $p= 0,002$ ) dengan kadar kalsium serum pada mahasiswa

**Kata Kunci :** Tingkat Kecukupan Kalsium, Fosfor, Kalsium serum

**ABSTRACT**  
**CORRELATION OF CALCIUM AND PHOSPHORUS ADEQUANCY LEVEL WITH  
SERUM CALCIUM LEVEL IN FEMALE STUDENT DIV HEALTH ANALYST  
UNIVERSITAS OF MUHAMMADIYAH SEMARANG**

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Blood calcium can be used as an initial diagnosis of reduced bone density. Consumption of food in less amounts can cause blood calcium levels in non-nominal values. This study aims to determine the relationship between the level of adequacy of calcium and phosphorus intake with serum calcium levels in students of DIV health analyst Muhammadiyah University Semarang.

This study was included in the type of analytic research with a cross sectional approach. The number of samples in this study was 50 people, determined by purposive sampling technique. The level of calcium and phosphorus adequacy was obtained through interviews with the 24-hour food recall method which was carried out 3 times. Serum calcium levels were analyzed using the cresolphthalein complexone (CPC) method. Hypothesis testing was analyzed using Pearson correlation statistical test.

The results showed that 88% of respondents had a low level of calcium adequacy with an average intake of  $606.2 \pm 198.2$  mg / day and 54% of respondents had a low level of phosphorus adequacy with an average intake of  $532.4 \pm 94.7$  mg / day.

There is a relationship between the level of calcium adequacy and the level of phosphorus adequacy with serum levels in respondents. There is a significant relationship between the level of calcium adequacy ( $p = 0.029$ ) and the level of adequacy of phosphorus intake ( $p = 0.002$ ) with serum calcium levels in students

**Keywords :** Calcium Adequacy, Phosphorus, Serum Calcium