

ABSTRAK

HUBUNGAN ANTARA SKOR PAPARAN MATAHARI DAN ASUPAN VITAMIN D DENGAN KADAR 25(OH)D SERUM PADA WANITA USIA LANJUT
Studi Analitik *Cross-Sectional* pada Komunitas Pedesaan

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Pendahuluan: Indonesia adalah negara tropis yang sepanjang tahun disinari matahari, namun prevalensi defisiensi vitamin D pada wanita usia lanjut masih cukup tinggi dikarenakan kurangnya paparan sinar matahari dan asupan vitamin D. Beberapa penelitian melaporkan bahwa subjek pedesaan memiliki kadar 25(OH)D serum lebih tinggi dibandingkan dengan subjek perkotaan.

Tujuan: Menganalisis hubungan antara skor paparan matahari dan asupan vitamin D dengan kadar 25(OH)D serum pada wanita usia lanjut di komunitas pedesaan

Metode: Penelitian ini menggunakan desain *cross sectional* yang melibatkan 40 wanita usia lanjut di 2 Desa di Kecamatan Wonorejo dan Kraton Kabupaten Pasuruan, pada Bulan Juni 2020 saat musim kemarau. Skor paparan matahari dihitung menggunakan kuisioner paparan matahari. Asupan vitamin D didapatkan dari *food recall* 2 x 24 jam. Kadar 25(OH)D serum diukur menggunakan *Chemiluminescent Immuno Assay* (CLIA). Analisis statistik menggunakan uji korelasi Spearman dan Pearson, dianggap bermakna bila $p < 0,05$.

Hasil: Median usia subjek 70 (60-93) tahun. Subjek yang tidak bekerja sebesar 45%, dan sebagai petani 22,5%. Median skor paparan matahari 14 (0-28), median lama paparan 40 (3-300) menit, 90% terpapar bagian wajah dan tangan, dan seluruh subjek tidak menggunakan tabir surya. Rerata asupan vitamin D $1,73 \pm 3,21$ µg/hari, seluruh subjek memiliki asupan vitamin D kurang, dan sumber utama asupan vitamin D adalah ikan (67,5%) terutama ikan air tawar. Rerata kadar 25(OH)D serum $27,75 \pm 13,25$ ng/mL, dengan prevalensi defisiensi 30%, insufisiensi 40%, dan sufisiensi 30%. Skor paparan matahari berkorelasi positif dengan kadar 25(OH)D serum ($r = 0,425$; $p = 0,006$). Tidak didapatkan korelasi signifikan antara asupan vitamin D dengan kadar 25(OH)D serum ($p = 0,246$).

Kesimpulan: Didapatkan hubungan positif yang bermakna antara skor paparan matahari dengan kadar 25(OH)D serum, namun tidak didapatkan hubungan yang bermakna antara asupan vitamin D dengan kadar 25(OH)D serum.

Kata kunci: asupan vitamin D, kadar 25(OH)D serum, skor paparan matahari, wanita usia lanjut.

ABSTRACT

***CORRELATION OF SUN EXPOSURES SCORE AND VITAMIN D INTAKE WITH
SERUM 25(OH)D LEVELS IN ELDERLY WOMEN
A Cross-Sectional Observation Analytic Study in Rural Community***

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Introduction: Indonesia is a tropical country, but the prevalence of vitamin D deficiency in elderly women is high due to lack of sunlight exposure and vitamin D intake. Some studies have reported that rural subjects have higher serum 25(OH)D levels compared to urban subjects.

Objective: The purpose of this study was to analyze the correlation between sun exposure score and vitamin D intake with serum 25(OH)D levels in elderly women in rural community.

Methods: This was a cross sectional study involving 40 elderly women in 2 villages, Wonorejo and Kraton Districts, Pasuruan Regency, on June 2020 during the dry season. The sun exposure score was calculated using a sun exposure questionnaire, vitamin D intake was obtained using the 2x 24-hour food recall, and serum 25(OH)D levels were measured using the Chemiluminescent Immuno Assay. The statistical analysis used the Spearman and Pearson correlation test, with p value <0.05 that considered to be statistically significant.

Results: The median of the age was 70 (60-93) years old. Subjects who are not working were 45%, and as farmers were 22.5%. The median of sun exposure score was 14 (0-28). The median of time spent outdoors was 40(3-300) minutes, 90% were exposed to the face and hands, and all of subjects did not use sunscreen. The mean of vitamin D intake was 1.73 ± 3.21 $\mu\text{g/day}$, all of subjects had low vitamin D intake, and the main source of vitamin D intake was fish (67.5%) especially freshwater fish. The mean of serum 25(OH)D levels was 27.75 ± 13.25 ng/mL, with the prevalence of vitamin D deficiency was 30%, insufficiency was 40%, and sufficiency was 30%. The sun exposure score was positively correlated with serum 25(OH)D levels ($r = 0.425$; $p = 0.006$). The vitamin D intake did not correlate with serum 25(OH)D levels ($p = 0.246$).

Conclusions: There is a significant positive correlation between sun exposure score and serum 25(OH)D levels, but no significant correlation between vitamin D intake and serum 25(OH)D levels.

Keywords: elderly women, serum 25(OH)D levels, sun exposure score, vitamin D intake