Abstract

Reem Alotaibi

◆ ◆ ◆

Vitamin D deficiency is common in Saudi Arabia despite abundant sunshine, but data on young women at university are limited. This study estimated the prevalence of vitamin D deficiency among female university students in Riyadh and examined its association with sun exposure, diet and supplement use. In a cross-sectional study conducted in 2025, we measured serum 25-hydroxyvitamin D in 312 female students at one university and collected data on daily sun exposure, clothing, diet and supplements with a structured questionnaire. Deficiency was defined as a level below 20 ng/mL, and associations were examined with logistic regression. Overall, 68% of participants were deficient (median 16.2 ng/mL). Students who spent less than 15 minutes a day in the sun were more likely to be deficient (adjusted odds ratio 2.4, 95% CI 1.4–4.1), while regular supplement use was associated with lower odds (0.38, 95% CI 0.21–0.69). Dairy intake was not significantly associated with vitamin D status. These findings suggest that deficiency is widespread in this group and that supplementation may be a more practical strategy than increased sun exposure.

Written with HumanProse