

## The relationship between fair skin and poor serum Vitamin D levels in Pakistani women

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Madam, the European beauty standard of fair skin has plagued Pakistan for centuries. Home remedies and formulated products promising white, youthful skin have increasingly infiltrated homes worldwide, particularly affecting women.<sup>1</sup> However, regardless of creams and lotions, nothing guarantees white skin as effectively as avoidance of the sun does. Unfortunately, an unhealthy fear of sun exposure is commonplace in Pakistani homes, so much so, that their effects can be measured. As of 2020, 53.5% of Pakistani women are vitamin D deficient.<sup>2</sup>

Vitamin D deficiency is multifaceted due to poor diet, lack of vitamin D supplementation, and decreased sun exposure.<sup>3</sup> It is important to note that society's treatment of women with tan skin is a possible underlying force that causes women to fear the sun. A cross-sectional study conducted in Pakistan explored how low self-esteem in Pakistani women is directly linked to their beliefs about the colour of their skin<sup>4</sup>. Millions of women face discrimination in their work environments and social circles because of their skin tone, pushing them to remain conscious of their colour, and further promoting their obsession with fair skin. In Pakistan, a fair skin complexion was found to be statistically significant ( $p=0.041$ ) in contributing to poor serum vitamin D levels<sup>5</sup>. As Pakistan shows more hostility towards women with deeper complexions, they are forced to suffer vitamin D deficiency's mental and physical consequences. While the lasting stigma of dark skin cannot be undone overnight, Pakistanis must understand the dangers of fair skin. Women should be encouraged to celebrate their skin

tone and be able to enjoy the outdoors, without the fear that doing so may change how society perceives them. Federal and local governments should encourage families to spend time in nature and advertise safe sun exposure while pushing for strict legislation against the marketing of whitening products. The Pakistani beauty industry must shift its focus from white skin to healthy skin. An interracial nation like Pakistan should have an equal representation of all skin tones and celebrate the diversity that comes with the vast geography of its country.

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### References

1. Ashraf T, Taneez M, Kalsoom S, Irfan T, Shafique MA, et al. Experimental Calculations of Metals Content in Skin-Whitening Creams and Theoretical Investigation for Their Biological Effect Against Tyrosinase Enzyme. *Biol Trace Elem Res.* 2021; 199: 3562-9. doi: 10.1007/s12011-020-02441-z.
2. Azhar A, Abid F, Rehman R. Polycystic Ovary Syndrome, Subfertility and Vitamin D Deficiency. *J Coll Physicians Surg Pak.* 2020; 30:545-6. doi: 10.29271/jcpsp.2020.05.545.
3. Akhtar S. Mini Review: Prevalence and correlates of vitamin D deficiency-perspectives from Pakistan. *Pak J Pharm Sci.* 2016; 29:1325-30.
4. Roomi MA, Farooq A, Ullah E, Lone KP. Hypovitaminosis D and its association with lifestyle factors. *Pak J Med Sci.* 2015; 31:1236-40. doi: 10.12669/pjms.315.7196.
5. Sharif H, Siddique D. Impact of colorism and self-rated skin tone in predicting self-esteem among women from Pakistan. *Biodemography Soc Biol.* 2020; 66:250-60. doi: 10.1080/19485565.2021.1991777.

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