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Letter to the Editor

Vitamin D status of children in Kerala: do they have sufficient levels?

Madam

We read with great interest the article by Vijayakumar *et al.*[1], entitled 'Vitamin D status of children in Kerala, southern India', published recently in your journal. In this cross-sectional observation study, the authors studied the plasma vitamin D (25(OH)D) status of children in Kerala and its relationship with various social and demographic variables. We congratulate the authors for their excellent efforts; however, we want to add few additional points.

The sources of vitamin D in breast-feeding infants are breast milk and sunlight exposure. Human milk contains a relatively small amount of vitamin D that depends upon maternal vitamin D status[2], so maternal serum vitamin D levels should have been assessed. The Indian Academy of Pediatrics has recommended vitamin D supplementation of 10 μg (400 IU) daily in infancy[3]. The authors[1] included relatively healthy children from 6 months to 12 years of age and they excluded children who received vitamin D supplementation. In the current scenario, nearly all breast-feeding infants receive oral supplementation and it would have been very difficult to get children less than 1 year old who had not received oral vitamin D supplementation.

The authors[1] divided the children into three subgroups (<5 years, 5–10 years and >10 years). All three groups had nearly similar vitamin D levels. Vitamin D levels are affected by sex, age, season, climate, BMI, place of living, ethnicity and pubertal status[4]. In our opinion, this study cohort probably had lower a number of infants and toddlers, who usually have infrequent sun exposure and their exposure to light is difficult to assess and monitor.

Subgroup 1 (<5 years) probably had highly skewed vitamin D levels, as the interquartile range was larger (39·6–70·9 nmol/l) for this group compared with the others[1]. The Kruskal–Wallis test was used for non-parametric testing and it does not assume a normal distribution of variables. It would have been better to give the mean and SD of vitamin D levels for the different subgroups.

Vitamin D deficiency is pandemic and the estimated prevalence in northern India is 65–95 %[4,5]. Studies from the southern part of the country also showed a high prevalence. Harinarayan and colleagues[6] studied vitamin D status in Tirupati, Andhra Pradesh. Their study included 1294 healthy participants (1148 adults and 146 children) and found that about 90 % of children in both rural and urban areas had deficient or insufficient vitamin D levels. Vijayakumar *et al.*'s[1] study showed only 11·1 % prevalence of vitamin D deficiency in relatively healthy children, which is completely different from the previous studies. Andhra Pradesh is also a coastal state and Tirupati is situated at latitude 13·4°N, longitude 79·2°E with nearly similar climate and food habits to Kerala's. Further studies with a large sample size of children from different socio-economic backgrounds with proper dietary vitamin D intake can give the exact prevalence of vitamin D deficiency in the region.

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Public Health Nutrition

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