

Abstract

A Cross-Sectional Study on Micronutrient Adequacy and Associated Factors among School-Going Adolescent Girls [†]

Priyanka Pareek ^{*}, Aparna Thorat and Chethana Chandrasekar

Mahatma Gandhi Mission School of Biomedical Sciences, MGM Institute of Health Sciences, Navi Mumbai 410209, India; aparnathorat88@gmail.com (A.T.); chethana.rd@gmail.com (C.C.)

^{*} Correspondence: priyankapareekcn1681@gmail.com

[†] Presented at the 14th European Nutrition Conference FENS 2023, Belgrade, Serbia, 14–17 November 2023.

Abstract: Background: Micronutrient deficiency is also referred as hidden hunger, and it increases the global disease burden. Adolescent girls need nutritional care, and their poor dietary intake leads to micronutrient deficiency and poor maternal outcomes. Therefore, there is an urgent need to assess the micronutrient intake among adolescent girls to plan and promote healthy eating behavior and break the malicious cycle of intergenerational malnutrition. Objective: To assess the micronutrient adequacy and associated factors among school-going adolescent girls. Methodology: A school-based, cross-sectional study was conducted among 300 adolescent girls in the suburban area of Navi Mumbai, Maharashtra, India. A simple random-sampling technique was used to select the study participants. A structured questionnaire was used to assess sociodemographic profiles and other factors. The heights and weights of the participants were measured through a standardized method, and their BMI was calculated. Their dietary intake was assessed by taking 24-h recall for three consecutive days, including the weekend. Nutrient adequacy was assessed as the amount of nutrients per 1000 kcal of the participants' diet that met the critical nutrient density, and it was compared to the observed nutrient densities of the adolescent girls. The data were analyzed using the SPSS software version 24. Independent t, Pearson's correlation, and chi-squared tests were used to assess the difference and association between micronutrient densities and different variables. Results: For most micronutrients (iron, calcium, zinc, vitamin A, vitamin D, thiamin, riboflavin, niacin, folic acid, vitamin B12, and vitamin C) the observed density was less than that recommended, meaning intake was inadequate. The mean densities of vitamin A, vitamin B12, iron, calcium, and potassium were significantly ($p < 0.05$) associated with age, BMI, dietary diversity scores, socioeconomic status, and body image concern. Conclusion: The findings of this study revealed that micronutrient intake inadequacy among adolescent girls is a public health problem in the study area. Therefore, interventions should be planned with a focus on nutrition-sensitive activities to increase diet diversification and nutrition security among adolescent girls.

Keywords: micronutrient adequacy; adolescents girls; nutrient density



Citation: Pareek, P.; Thorat, A.; Chandrasekar, C. A Cross-Sectional Study on Micronutrient Adequacy and Associated Factors among School-Going Adolescent Girls. *Proceedings* **2023**, *91*, 50.

<https://doi.org/10.3390/proceedings2023091050>

Academic Editors: Sladjana Sobajic and Philip Calder

Published: 17 November 2023



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Author Contributions: Conceptualization, P.P.; methodology, P.P.; validation, P.P.; formal analysis, P.P.; investigation, P.P., A.T. and C.C.; resources, P.P. and A.T.; data curation, P.P.; writing—original draft preparation, P.P., A.T. and C.C.; writing—review and editing, P.P.; visualization, P.P., A.T. and C.C.; supervision, P.P.; project administration, P.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Ethics Committee of MGM School of Biomedical Sciences (MGM/DCH/IEC/02/22 approved on 29/06/22).

Informed Consent Statement: Informed consent was obtained from all participants involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to utilization of data for further intervention study.

Conflicts of Interest: The authors declare no conflict of interest.

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