



Parental adherence to the Food Safety Authority of Ireland's dietary guidelines for vitamin D and iron in young children

O. Eslami¹, G.J. Cuskelly¹ and A. O'Connor¹

¹*SHE Research Group, Department of Sport & Health Sciences, Faculty of Science and Health, Technological University of the Shannon, Republic of Ireland*

Vitamin D and iron are two major micronutrients contributing to optimal growth and development during early childhood. Evidence from the National Preschool Nutrition Survey indicates that amongst 1–4-year-old Irish children, around 93% and 10% have suboptimal intakes of vitamin D and iron, respectively^(1,2). Furthermore, the 2020 Food Safety Authority of Ireland's (FSAI) dietary guidelines report that the usual eating patterns of young children do not provide them with adequate amounts of vitamin D and iron. To address these nutrient insufficiencies, these guidelines recommend parents of 1–5 year-olds to offer their child⁽¹⁾ a low-dose (5 µg/day) vitamin D-only supplement during the extended winter months (i.e., from late October to mid-March), and⁽²⁾ 30 g red meat three days a week and 30 g ready-to-eat cereals (RTECs) with added iron (≥ 12 mg iron per 100 g) five days a week⁽³⁾. This cross-sectional study aimed to investigate the degree of, and determinants of, compliance with the recommendations in a convenience sample of parents/caregivers of 1-to-5 year-olds living in the Republic of Ireland.

After approval by TUS Research Ethics Committee, an online questionnaire was used to obtain information on parents' and children's demographic status, as well as parents' general knowledge of micronutrients, and their awareness of, and adherence to, the guidelines (N = 185). Data were analysed using SPSS software version 22. The associations between demographic variables and adherence to the guidelines were assessed using the Chi-square test (a P-value < 0.05 was statistically significant).

The majority of study participants were mothers (91.9%), college-educated (84.3%), and parents of a toddler (71.4%). Adherence rates to the recommendations for vitamin D supplementation, red meat, and iron-fortified RTECs were at 20.5%, 21.6%, and 31.9%, respectively. In comparison to parents of toddlers (1–3 years), those with a pre-school-aged child (4–5 years) had lower compliance with the recommendations for vitamin D supplementation (24.2% vs. 11.3%; P = 0.049) and red meat intake (26.5% vs. 9.4%; P = 0.011). In addition, compliance with the supplementation recommendation was higher among parents with a high knowledge of vitamin D than those with a lower knowledge (29.3% vs. 11.8%; P = 0.003). Moreover, parents with a third-level qualification had higher adherence to the red meat recommendation compared to those with non-academic degrees (24.4% vs. 6.9%; P = 0.036).

In conclusion, there was poor adherence to FSAI supplementation and dietary recommendations for vitamin D and iron among parents of young children. As expected, higher level of parental education attainment and parental knowledge led to better adherence to recommendations. This study highlights the need to design targeted public health communication campaigns to raise awareness of the guidelines, particularly among parents with lower education levels and those with preschool-aged children.

References

1. Hennessy Á, Browne F, Kiely M, *et al.* (2017) *Eur J Nutr* **56**, 1219–1231.
2. Kehoe L, Walton J, McNulty BA *et al.* (2017) *J Hum Nutr Diet* **30**, 405–416.
3. Food Safety Authority of Ireland (2020) *Scientific recommendations for food-based dietary guidelines for 1 to 5 year olds in Ireland* [Available at: https://www.fsai.ie/Dietary_Recommendations_1-5_Year_Olds/].