

Abstract

Evidence of Limited Iron Education Provided to 11–14-Year-Old Females in New Zealand Schools [†]

Jerushah Keightley, Claire Badenhorst , Renee Jansen, Hajar Mazahery  and Pamela von Hurst * 

School of Sport, Exercise and Nutrition, College of Health, Massey University, Auckland 0632, New Zealand

* Correspondence: p.r.vonhurst@massey.ac.nz; Tel.: +64-9-2136657

† Presented at the Annual Scientific Meeting of the Nutrition Society of New Zealand 2022, Wellington, New Zealand, 1–2 December 2022.

Abstract: Iron deficiency is one of the most common nutritional deficiencies worldwide and is the leading cause of anaemia. Iron deficiency is disproportionately represented in the female population, partially due to the significant blood loss experienced during menstruation. Awareness of a female's increased risk and symptoms associated with iron deficiency may aid early diagnosis, and treatment. Additionally, increases in iron education may serve as a preventative method for reducing iron deficiency incidence in females in the general population. The objective of this study was to investigate the level of dietary iron education currently provided to 11–14-year-old females in intermediate and secondary schools in New Zealand. An anonymous online questionnaire was distributed to nutrition, physical education, and health teachers nationwide to gain their perspective of what iron (dietary and menstruation) education is provided within their schools. A total of 182 teachers were recruited via work email addresses and of these, 50 completed the questionnaire (response rate = 27%). The results reflect a low level of iron education currently being provided, with 52% (26/50) of participants reporting that iron education was not part of their current curricula. The delivery of iron education did appear to be affected by the subject the participant primarily taught ($\chi^2 = 12.641$, $p = 0.002$). Health and physical education teachers were 5.07 times more likely to report that they did not teach any iron-specific education compared to nutrition teachers. The primary reasons for not including iron education were a lack of time (36%, 9/26) followed by iron education being too specific (28%, 7/26). Our findings indicate that there is limited iron education provided to 11–14-year-old female students in intermediate and secondary schools in New Zealand. This low amount of iron education appears to be due to a lack of time available for teachers to cover the specific topic in the health and nutrition curricula.

Keywords: iron; iron deficiency; dietary iron; education; anaemia



Citation: Keightley, J.; Badenhorst, C.; Jansen, R.; Mazahery, H.; von Hurst, P. Evidence of Limited Iron Education Provided to 11–14-Year-Old Females in New Zealand Schools. *Med. Sci. Forum* **2023**, *18*, 19. <https://doi.org/10.3390/msf2023018019>

Academic Editors: Claire Smith, Sally Mackay, Shabnam Jalili-Moghaddan and Michelle Gibbs

Published: 16 March 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Author Contributions: Conceptualization, J.K., P.v.H., C.B. and R.J.; Methodology: J.K., P.v.H., C.B. and R.J.; Investigation, J.K.; Data curation, J.K. and H.M.; Writing—original draft preparation, J.K.; Writing—review and editing, J.K., P.v.H., H.M. and C.B.; Supervision, P.v.H. and C.B.; Project administration, J.K.; Funding acquisition, P.v.H. and C.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Beef and Lamb New Zealand.

Institutional Review Board Statement: This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the Massey University Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study, prior to their completion of the survey.

Data Availability Statement: Data available on request due to ethical restrictions.

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

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.