

Longitudinal Assessment of Iron Status in Moroccan Adolescent Girls Following National Wheat Flour Fortification

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ABSTRACT

Background: Adolescent girls in North Africa are at high risk of iron deficiency anaemia, a major public health concern. A national policy mandating the fortification of wheat flour with iron and folic acid was implemented to address this burden, but its longitudinal impact on the target population's biochemical iron status remains unquantified.

Purpose and objectives: This study aimed to longitudinally assess changes in haematological biomarkers of iron status in a cohort of adolescent girls following the implementation of mandatory wheat flour fortification in urban Morocco.

Keywords: *Iron deficiency anaemia, Adolescent health, Food fortification, Longitudinal study, North Africa*

Article Highlights

- Longitudinal cohort study tracks iron status biomarkers in adolescent girls.
- Significant positive trend in haemoglobin concentration observed over time.
- Findings support the effectiveness of national fortification policy in urban areas.
- Highlights need for sustained monitoring and rural efficacy research.

Methodological Note

Analysis employed a linear mixed-effects model with robust standard errors to assess longitudinal trends in haematological biomarkers.

This study provides longitudinal evidence for a national public health intervention.

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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