

**Knowledge and dietary practices related to iron and folic acid among GCE O/L (year 2023) female students in Jaffna divisional schools**

Venuuha S<sup>1</sup>, Suventhira A<sup>1</sup>, Danegka S<sup>1</sup>, Thilakarathna AMSD<sup>1</sup>, Aththanayaka AMRC<sup>1</sup>, Sithamparapillai K<sup>2</sup>, Parameswaran N<sup>3</sup>

<sup>1</sup>*Faculty of Medicine, University of Jaffna*

<sup>2</sup>*Department of Physiology, Faculty of Medicine, University of Jaffna*

<sup>3</sup>*Department of Community and Family Medicine, University of Jaffna*

**Introduction and objective:** Iron and folic acid are essential for women's health and foetal growth, especially during pregnancy. In Sri Lanka, 19.2% of school children and adolescents are found to have iron deficiency. In Jaffna, 56.74% of school students (14-18 years) have iron deficiency. The Jaffna Educational Zone has the second highest prevalence of iron deficiency. This study aimed to assess the knowledge and practices related to iron and folic acid among GCE O/L (year 2023) female students in schools of the Jaffna division.

**Methods:** A school-based cross-sectional analytical study was conducted among 427 female O/L students in schools of the Jaffna Educational Division from March 2022 to July 2023. Simple random sampling was used to select the sample. Data were collected by self-administered questionnaires and analyzed with SPSS and composite scores were used to assess knowledge and practices. Frequencies were used to describe knowledge and practices about iron and folic acid. Chi-square test was used to test for associations.

**Results:** Of the 427 students, 46.4% and 22% had adequate knowledge and good practice related to iron, respectively; 41.9% and 41.5% had adequate knowledge and good practice related to folic acid, respectively. Religion ( $p < 0.001$ ), parents' education level (father's  $p = 0.002$ , mother's  $p = 0.002$ ) and family income ( $p = 0.023$ ) had a significant association with the level of knowledge on iron. Religion ( $p = 0.026$ ) was significantly associated with practices related to iron. Residence ( $p = 0.022$ ), religion ( $p < 0.001$ ), parents' education level, (father's  $p = 0.002$ , mother's  $p = 0.003$ ), family income ( $p < 0.001$ ) and food pattern ( $p = 0.031$ ) had a significant association with the level of folic acid knowledge. Parents' education level (father's  $p = 0.047$ , mother's  $p = 0.001$ ) and family income ( $p = 0.035$ ) had a significant association with practices related to folic acid. Notably, there was a significant association between folic acid knowledge level and food practice ( $p < 0.001$ ).

**Conclusion and recommendations:** About half of the O/L students in this study had adequate knowledge but only around a quarter of students had adequate practice on iron. Less than half of the students had adequate knowledge and good practices on folic acid. Awareness programmes on nutritional supplementation, especially iron and folic acid, should be conducted among school students, while ensuring the intake of nutrition supplements given in schools to students.

**Keywords:** Female secondary school students, Iron, Folic acid, Knowledge, Dietary practices, Socioeconomic Factors