Abstract

Objective: The objective of this study is to explore factors associated with iron depletion and parasites in preschool and school children attending the Instituto Alteño para el Desarrollo de Jalisco (INADEJ) and children who attend preschools and schools in Arandas, Jalisco. Methods: This cross sectional study assessed two groups of children. In the INADEJ group, 102 children aged 60 to 144 months old were included, and in the School group of Arandas, Jalisco, 206 children were randomly selected from schools and preschools in the same municipality. Variables: Ferritin concentration (g/ml), parasites, demographic, socioeconomic, educational and dietary data were collected. The Student’s t test, U Mann Whitney, chi square, odds ratio and logistic regressions were estimated. Results: Family income in the Schools group was $5,707 Mexican pesos (MP), which was higher than the family income in the INADEJ group ($4,311 MP), p = 0.031. The proportion of parents with incomplete primary education was higher in the INADEJ group (41.3%) than in the Schools group (35.4%) [OR = 1.88 (1.0-3.55)]. Unstable work was more frequent in the INADEJ group than in the Schools group [OR = 5.6 (3.26-9.62)]. The ferritin concentration was lower in the INADEJ group than in the Schools group (25 g/L vs. 60 g/mL, respectively), p <0.001. Having giardiasis and two or more parasites was more common in the INADEJ group compared with the Schools group [OR = 7.2 (2.25-23.0)] and [RM 3.86 (1.35- 10.98)]. Heme iron intake was lower in the INADEJ group. Conclusion: Low family income, father’s job instability, lower levels of education, overcrowding, living with animals and lower consumption of heme iron were associated with parasites and iron depletion.

Keywords
Parasites, Iron depletion, Preschool and school children.