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## Hematological parameters and anemia prevalence among school children in Morocco

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### Abstract

Hemoglobin, hematocrit, mean cell volume (MCV), and red blood cell distribution width are hematologic tests that are commonly used to assess iron status.

**Aims:** The objective of the present study is to evaluate the hematological profile among school children healthy in Morocco.

**Methods:** 295 pupils aged from 6 to 16 years old composed the study group. Blood samples were collected for measuring hemoglobin (Hb), serum ferritin (SF), serum iron and other hematological indices (MCV, TCMH, Ht, GB, GR), and subjects were screened for anaemia and iron deficiency

**Results:** The mean ferritin level was  $27.26 \mu\text{g/l} \pm 16.88$  whereas the mean serum iron  $2.4 \text{ mg/l} \pm 1.0$  and the mean haemoglobin concentration was  $12.45 \text{ g/dl} \pm 1.02$ . A significant difference by sex is observed for the number of red blood cells, values of hemoglobin and hematocrit ( $p < 0.005$ ). However, no significant difference by sex is noted for MCV, MCHC and MCH. There were significant correlations between the levels of Hb and SF, mean corpuscular volume (MCV) and SF were found to be significantly related to Hb.

**Conclusion:** Our study showed a positive correlation between hemoglobin and ferritin and a strong positive correlation between hemoglobin and MCV suggesting that anemia in children surveyed is dominated by microcytic anemia by iron deficiency.

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