

Original Article

A Study of Correlation Between Hemoglobin Level and Cognitive Function in Children from Rural Area Staying in Residential School

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Abstract

Objectives: Poor performance in the academic activities is common in children of low socioeconomic background. The following study was conducted to see the effect of nutrition by measuring their hemoglobin on cognitive function.

Methods: 60 children between 9 to 12 years of age residing in the residential school were included in study. Their hemoglobin measured by Sahli's method. The cognitive functions were assessed by

A. Reaction time - Visual reaction time -simple and choice (choice-simple), Whole body reaction time - simple and choice (C1).

B. MMSE Score

Results: The study showed a highly significant negative correlation between hemoglobin and various reaction times (SWBRT $r = -0.617$, $p = 0.000^{**}$), (CWBRT $r = -0.530$, $p = 0.000^{**}$).

Conclusion: Our study showed positive correlation between hemoglobin % and cognitive function in children. This study confirms the hypothesis that nutrition has a positive effect on cognitive function.

Key words: Reaction time, MMSE Score, cognitive function, hemoglobin

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