ABSTRACT

THE CORRELATION OF ADEQUATE INTAKE Fe, VITAMIN B_9, AND VITAMIN B_{12} WITH HEMOGLOBIN CONTENT OF AGE 11 YEARS OF ELEMENTARY SCHOOL 02 PEDURUNGAN KIDUL SEMARANG

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School children with low hemoglobin levels may interfere with cognitive development that may lead to poor school performance. In Indonesia low hemoglobin is still found in elementary school children and most of the cause is due to lack of nutrient intake, especially the source of iron, folic acid and vitamin B_{12} as the forming of red blood cells. The purpose of this study was to determine the relationship of the level of sufficiency of Fe, vitamin B_9 and vitamin B_{12} with hemoglobin level of children aged 11 years State Elementary School 02 Pedurungan Kidul Semarang.

This research is an analytic observatioanal research with cross sectional approach. The research population of all students of SDN 02 Pedurungan Kidul Semarang was 11 years old. The sample number of 46 students was selected by simple random sampling. Data of intake of Fe, vitamin B_9 and vitamin B_{12} with food recall method 3x24 hours. Data of hemoglobin level by cyanmethemoglobin method. Data analysis using Rank Spearman statistical test.

The results based on univariate analysis of hemoglobin levels below normal at 11 years child at Elementary School 02 Pedurungan Kidul Semarang 28.3%. Samples with sufficient Fe sufficient level of 76.1%. Samples with sufficient levels of Vitamin B_9 as much as 71.7%. Samples with sufficient levels of Vitamin B_{12} as much as 69.6%. There was a correlation of the level of sufficiency of Fe (iron) and hemoglobin levels ($p = 0.000$). There was a correlation between vitamin B_9 (folic acid) and hemoglobin levels ($p = 0{,}000$) levels. There was a correlation between vitamin B_{12} adequacy (cyanocobalamin) and hemoglobin levels ($p = 0{,}000$).

Keywords: elementary school children, hemoglobin level, vitamin B_9, vitamin $B_{12,}$ iron.