

HUBUNGAN ANTARA KADAR HEMOGLOBIN DAN STATUS IODIUM DENGAN PRESTASI BELAJAR SISWA SMA

Artikel Penelitian

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Correlation Between Haemoglobin Level and Iodine Status and Learning Achievement in Senior High School Students

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Abstracts

Introduction: Intelligence level and learning facilities are factors that affect learning achievement. Besides this factors, food intake is also very influential on the brain, such as food that contains iodine and iron. Iron status can be seen from haemoglobin (Hb) level whereas iodine status can be seen from urinary iodine axcretion (UEI) level. The purpose of this study is to find out the correlation between haemoglobin level and iodine status with learning achievement in senior high school students.

Methods: A cross-sectional survey study had been performed at state senior high school 14 in Semarang and the subjects were 27 adolescents of 15-17 years old. In the male adolescent the Hb category were deficit (<13,0 g/dl), normal (13,0 – 17,0 g/dl) and above-normal (> 17,0 g/dl) whereas for the female the category were deficit (< 12,0 g/dl), normal (12,0 – 15,0 g/dl) and above-normal (> 15,0 g/dl). The category of UEI were deficit (< 100 mg/g creatinine), normal (100-199 mg/g creatinine), above-normal (200-299 mg/g creatinine) and high (>= 300 mg/g creatinine). Learning achievement were given value based on the total amount of grades in rapport of even-semester of the year 2009-2010, the category of learning achievement is poor if the value ($x < \text{mean}$) and good if the value ($x > \text{mean}$).

Results: The results of *Pearson product moment* parametric test with confidence interval of 95% showed that there were no correlation between haemoglobin level and learning achievement ($p=0,056$), and there were no correlation between UEI level and learning achievement ($p = 0,124$).

Conclusion: Poor learning archievement that often found in boys has no significant correlation with Hb level, also no correlation between UEI level and learning achievement.

Keywords: Hb Level, UEI Level, Learning Achievement

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Hubungan antara Kadar Hemoglobin dan Status Iodium dengan Prestasi Belajar Siswa SMA

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Abstrak

Pendahuluan : Banyak faktor yang mempengaruhi prestasi belajar pada remaja diantaranya adalah tingkat intelegensi, fasilitas belajar, asupan makanan juga sangat mempengaruhi kecerdasan otak, diantaranya makanan yang mengandung iodium dan zat besi. Zat besi dapat dilihat dari kadar hemoglobin (Hb) sedangkan status iodium dapat dilihat dari kadar ekskresi iodium urin (EIU). Tujuan penelitian ini adalah untuk mengetahui hubungan antara kadar hemoglobin dan status iodium dengan prestasi belajar di kalangan siswa SMA.

Metode : Penelitian survei belah lintang diadakan di SMA negeri 14 Semarang dengan jumlah subjek 27 anak usia 15 – 17 tahun. Kategori Hb meliputi laki-laki yaitu kurang ($< 13,0$ g/dl), normal ($13,0 - 17,0$ g/dl) dan lebih ($> 17,0$ g/dl) sedangkan untuk wanita yaitu kurang ($< 12,0$ g/dl), normal ($12,0 - 15,0$ g/dl) dan lebih ($> 15,0$ g/dl). Kategori EIU meliputi kurang (< 100 mg/g kreatinin), normal ($100-199$ mg/g kreatinin), lebih ($200-299$ mg/g kreatinin) dan berlebih (≥ 300 mg/g kreatinin). Prestasi belajar dinilai berdasarkan jumlah nilai rapor semester genap tahun ajaran 2009-2010. kategori prestasi belajar meliputi kurang jika nilai ($x < \text{mean}$) dan baik jika nilai ($x > \text{mean}$)

Hasil : Hasil uji parametrik *pearson product moment* pada tingkat kepercayaan 95 % menunjukkan bahwa tidak ada hubungan antara kadar hemoglobin dengan prestasi belajar ($p = 0,056$), serta tidak ada hubungan antara EIU dengan prestasi belajar ($p = 0,124$).

Simpulan : Prestasi belajar yang rendah banyak ditemukan pada anak laki-laki. tidak ada hubungan yang bermakna antara kadar Hb dan kadar EIU dengan prestasi belajar.

Kata kunci : Kadar Hb, Kadar EIU, Prestasi Belajar

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