

NUTRITION EDUCATION AND KNOWLEDGE, ATTITUDE AND HEMOGLOBIN STATUS OF MALAYSIAN ADOLESCENTS

Hafzan Yusoff¹, Wan Nudri Wan Daud¹ and Zulkifli Ahmad²

¹Department of Community Medicine, School of Medical Sciences; ²School of Dental Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Abstract. A higher occurrence of iron deficiency anemia is present in rural Malaysia than urban Malaysia due to a lower socio-economic status of rural residents. This study was conducted in Tanah Merah, a rural district of Kelantan, Malaysia. Our objective was to investigate the impact of nutrition education alone, daily iron, folate and vitamin C supplementation or both on knowledge, attitudes and hemoglobin status of adolescent students. Two hundred eighty fourth year secondary students were each assigned by school to 1 of 4 different treatment groups. Each intervention was carried out for 3 months followed by 3 months without treatment. A validated self-reported knowledge and attitude questionnaire was administered; hemoglobin levels were measured before and after intervention. At baseline, no significant difference in hemoglobin was noted among the 4 groups ($p=0.06$). The changes in hemoglobin levels at 3 months were 11, 4.6, 3.9 and -3.7% for the supplementation, nutrition education, combination and control groups, respectively. The changes at 6 months were 1.0, 6.8, 3.7 and -14.8%, respectively. Significant improvements in knowledge and attitude were evidenced in both the nutritional education and combination groups. The supplementation and control groups had no improvement in knowledge or attitudes. This study suggests nutritional education increases knowledge, attitudes and hemoglobin levels among Malaysian secondary school adolescents.

Keywords: hemoglobin status, knowledge, attitude, nutrition education, adolescents, Malaysia

Correspondence: Hafzan Yusoff, Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia.

Tel: +6017 9371499; Fax: +6097645952

E-mail: hafzan_yusoff.ud07@student.usm.my

Wan Nudri Wan Daud, Department of Community Medicine, School of Dental Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia.

Tel: +6097671067; Fax: +6097645952

E-mail: wnudri@kb.usm.my