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PRELIMINARY STUDY ON SELECTED BLOOD BIOCHEMICAL PARAMETERS IN ADOLESCENTS FROM THE KOPAY MEDICAL OFFICER OF HEALTH, JAFFNA, SRI LANKA

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Adolescence is the transitional stage of development between childhood and adulthood. It is a critical period for establishing healthy habits, including diet, exercise, and lifestyle choices. The study was aimed at determining the nutritional status of adolescents (from 17-19 years old) based on selected biochemical parameters from the Kopay Medical Officer of Health (MOH), Jaffna District. Data collection was made from 70 adolescents. Blood samples were collected for the analysis of haematological indices using the cyanmethemoglobin method and serum albumin concentration using the calorimetric bromocresol green method. Ethical clearance for the study was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. Out of the total 70 adolescents, 38 were females (54.3%). The mean age of the male and female adolescents was 17.73 ± 0.8 and 18.35 ± 0.7 years, respectively. Mean serum albumin concentrations of males and females were 4.048 ± 0.2 and 3.986 ± 0.2 g/dl, respectively. Protein deficiency of males and females was 3.13% (n = 1) and 15.79% (n = 6), respectively. The mean haemoglobin (HB) concentration of the male adolescents was 13.72 ± 2.4 g/dl with a range of 7.2 g/dl to 16.9 g/dl. The HB concentration of female adolescents was 12.23 ± 2.0 g/dl, with a range of 6.1 g to 16.1 g/dl. Among them, 37.14% (n = 26) were with anaemia, while 7.7% (n = 2) had severe anaemia. The mean of HCT, MCV, MCH and MCHC levels of the male and female adolescents were 40.24% ± 6.9, 85.95 ± 8.4 fl, 27.90 ±3.3 pg and 32.42 ±1.7 g/dl, respectively. Of the total adolescents 3.13% (n = 1) males and 10.5% (n = 4) females were affected with both iron deficiency anaemia and protein deficiency. The study revealed a prevalence of anaemia and protein deficiency among adolescents (aged 17-19) in the Kopay MOH area, with iron deficiency anaemia being more common than protein deficiency.

Keywords: Adolescents, Albumin, Anaemia, Haemoglobin, Nutritional status