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Alteration of Selected Biochemical Parameters in thin Adolescents in G.C.E (A/L) Students of National and Provincial Schools in Jaffna Educational Zone

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The objective of the study was to determine the prevalence of thinness in G.C.E (A/L) students and alteration of selected biochemical parameters in thin adolescents. The study area was Jaffna zonal division of Education. This was a cross sectional study and 410 students were selected from 20 schools. Of this total, 61 (14.9%) students were thin adolescents. Anthropometric measurements were obtained and recorded to derive the BMI, weight-for-age, height-for-age Z scores. Blood samples were collected for the estimation of haemoglobin, total protein and albumin concentrations. The prevalence of thinness was calculated from anthroplus version 3.2.2.0 software. Among the thin adolescents (n=61), males were 62.3% (n=38). Of these thin adolescents, 68.9% were from Provincial school whereas 31.1% were from National schools. Prevalence of anemia in thin adolescents and non-thinadolescents were 38.3% and 31.5% respectively. Anaemia in national school students were 6.6% and 31.7% in Provincial school students. The prevalence of protein deficiency was significantly high in thin adolescents (45.7%) than in non-thin adolescents (28.5%) ($P<0.05$). The mean value of albumin in the thin adolescents and non-thin adolescent were 3.44 (±0.31) and 4.68 (±0.42) g/dL and it was significant ($P<0.05$). This result revealed that, the prevalence of thinness was significantly high in males than in females ($P<0.05$). Anemia was low in thin adolescents than in non-thin adolescent. Students from provincial schools were highly affected by anaemia and protein deficiency than national schools. It was concluded that, thin adolescents are more susceptible to the alteration of biochemical parameters.

Keywords: Thinness, Anaemia, Haemoglobin, Adolescents, Anthropometry, Albumin