

## **OP 08 Nutritional status of adolescent students in Thenmarachi Zonal schools, Jaffna**

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**INTRODUCTION:** Adolescent students face series of serious nutritional challenges which not only affects their growth and development but also their life as adults.

**OBJECTIVES:** To determine the nutritional status and associated factors among Adolescent students in Thenmaradchey Zonal schools of Jaffna.

**METHODS:** A cross sectional stratified random sampling was carried out to identify 56 schools. The anthropometric (Weight and height) and biochemical [Blood haemoglobin, serum albumin, Total Iron binding capacity (TIBC), and Serum Iron (SI) and Vitamin C levels] measurements were made.

**RESULTS:** A total of 400 students aged 10-19 years were selected [192 (48%) males]. Mean age was 14.8 ( $\pm 2.3$ ) years. Prevalence of Thinness and stunting in adolescents was 20.9% (22.8% in boys and 18.1% in girls;  $p=0.042$ ) and 20.4% (23.8% in boys and 16.7% in girls;  $p=0.01$ ) respectively while prevalence of overweight was 1% (1% in boys and 1.1% in girls;  $p=0.12$ ). However, the prevalence of protein deficiency was low [5.7% ( $n=23$ )]. Mean TIBC and SI was 326.4 ( $\pm 38.2$ ) and 69.7 ( $\pm 18.4$ ) g/dL respectively. Prevalence of anemia and Iron deficiency anaemia (IDA) was 25.7% ( $n=100$ ) and 19.1% ( $n=76$ ) respectively. Prevalence of anaemia was significantly higher in girls (30.5%) than in boys (19.7%) ( $p<0.01$ ) (OR 3.21, 95% CI; 1.26-5.42,  $p=0.015$ ). Prevalence of Vitamin C deficiency was 8.8% (8.4% in boys, 9.2% in girls;  $p=0.086$ ). Students attending National schools [15.2% ( $n=61$ )] [Anaemia-42%; Protein deficiency-16%; IDA-20%] had poor nutritional status when compared with those who were attending the provincial schools [84.7% ( $n=339$ )] [anaemia-22.1%; protein deficiency-4%; IDA-18.9%] ( $p<0.05$ ).

**CONCLUSION:** Adolescents in Thenmaradchey Zonal schools are highly affected by under nutrition when compared to over nutrition. Girls are highly affected with micronutrient deficiencies while boys shared poor anthropometric indices. Prevalence of anemia in adolescent girls is of the public health significance. It is recommended that, high protein diets with variety of vegetables need to be consumed to reduce the under nutrition and micronutrient deficiencies.