

Evaluation of the Nutritional Status of the Children Living in orphanages

**Nalayini Nallathamby, Niroja Canagaratnam, Sivaanuya Chandraraja,
Balasingam, V., Navaratnam, P., Balakumar, S., Senthuran, A.,
and Vasanthi Arasaratnam.**

Department of Biochemistry, Faculty of Medicine, University of Jaffna, Sri Lanka.

The civil war that lasted for more than two decades led to the destruction of family structure of people in the Northern Province and had led to an increase in number of orphanages and affected their nutritional status. This research was carried out to evaluate the nutritional status of children living in two orphanages closer to the Medical Faculty. For this project 28, 31 & 26 subjects were selected from two orphanages falling under 7-12, 13-16 & 17 and above 17 years of age groups respectively. The total serum protein level, bound iron and Total Iron Binding Capacity (TIBC) of the children were measured. The height, weight and blood pressure were measured and more information were collected from the children by perfecting questionnaires. Majority of the children in these two orphanages were under the desirable nutritional level based on their, height and weight measurements. The mean serum protein level of children in the age group between 7-12 years from Orphanage A and B was, 5.44 (1.21) and 7.69 (0.59) g/dl, while that of the children in the age group between 13-16 years from Orphanage A and B was, 5.25 (0.76) and 7.27 (0.7) g/dl respectively. The above said measurement of children in age group 17 years and above from orphanage A and B was 6.47 (0.76) and 7.08 (0.54) g/dl respectively, while that of the children in the age group between 7-12 years from Orphanage A and B was, 82.81 (34.32) and 96.21 (46.51) g/dl respectively. The mean serum bound iron level of children in the age group between 13-16 years from Orphanage A and B was, 77.04 (44.52) and 55.72 (30.28) g/dl respectively. The above said measurement of children in age group 17 years and above from orphanage A and B was 71.86 (38.51) and 128.62 (44.32) g/dl respectively. TIBC of children between 7-12 years from orphanage A and B were 415.91 (141.84) and 432.92 (89.89) g/dl respectively while that of children between 13-16 years from orphanage A and B was 365.44 (61.83) and 389.12 (52.78) g/dl respectively. The above said measurements of children in age group 17 years and above from orphanage A and B was 507.01 (10.92) and 450.39 (76.91) g/dl respectively. From the results it was found that under nourishment was found in all the following age groups such as between 7-12, 13-16 and above 17 years; 75.3 & 67 (from orphanages A & B), 35 & 18.18 (from orphanages A& B) and 15 & 12.5% (from orphanages A & B) respectively. This research indicated that 41.62 & 52.38 % of the children from orphanages A and B between the age group 7-12 years; 35 & 54.6% children from orphanages A and B in the age group between 13-16 years and 27.27 & 40% of the adolescence from orphanages A and B in the age group 17 years and over were affected with iron deficient anaemia. Similarly the children from both orphanages have shown reduced serum protein level. From the selected subjects malnourished, anaemic and lower protein level were 48.82, 45.15 and 28.55% respectively. The data collected and analysis of food composition indicated that the children have calorie deficiency and iron deficiency because of their food habit. As the children were given regular worm treatment the iron deficiency due to worm infestation can be ruled out. The results indicated that in average the nutritional status of children living in the orphanages are poor, i.e. below 50 % of the ideal situation.