The study on malnutrition and associated factors among children aged 1 to 5 years in Jaffna district

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Malnutrition remains most serious health problem in South-Asian countries and the single biggest contributor to child mortality. Thus, Nutrition intervention is important throughout life, the ante-natal and early childhood phases are the most critical in Sri Lanka. The purpose of this study is to determine the prevalence of malnutrition and to investigate the associated factors for malnutrition among children aged 1 to 5 years in Jaffna district. Multistage cluster sampling was used to identify a sample that represents the children aged 1 to 5 years. Children aged 1-5 years were recruited in this study between February to September 2010 and the sample number was 831. Among ninety children from one cluster of Point-Pedro was analysed. Information on the age of the child, sex, birth weight, congenital problem, birth problem and stage at Child Health Development Records (CHDR) were derived from the CHDR book. The type and frequency of food eaten over the last one week from visited date was used to get the food security and dietary pattern of children. History of illnesses such as diarrhea, respiratory tract infections, worm infestation, otitis media and skin infections which occurred were asked and recorded. Other information such as household information, socio-economical data, educational information, occupation and breast feeding were recorded by using self administrated pre and post corded questionnaires. General examination of the children was done by pre-intern doctors to detect anemia, pallor, Bitot's spot, Goiter and skin diseases. Weight, height, head circumference (HC) and mid-upper arm circumference (MUAC) were measured using a standard SECA weighing scale, Stadiometer and measuring tape. Blood sample was used to get haemoglobin concentration by using biochemical analyzer (TC: 3300). Weight, height, HC, MUAC and age were used to calculate weight-for age, height-for-age, weight-for-height, BMI for age, HC for age, MUAC for age by using WHO Anthro v.3.0.1 software. The SPSS 16 program was used to get the associated factors of malnutrition in children. There were 397 (47.8%) males and 434 (52.2%) females. Anthropometric measurements of children were compared with WHO standards Z scores. As a result, 23.33% were underweight 16.66% were wasted and 21.11% were stunted. 11.10% were less BMI for age, 8.88% were less HC for age and 3.33% less MUAC for age. 6.66% children were both stunted and underweight. 10% children were both wasted and underweight. 1.11% was affected by underweight, wasting and stunting. Mean Z-score value for underweight, stunting and wasting were -1.35 (±0.99), -1.11 (±1.03), -1.09 (±1.01) respectively. 21.11% of children were affected by anaemia. Fifty percentage of the children were fed on exclusive breast feeding up to six month period while 6.66% of mothers were failed to give breast milk regularly during the period. Although the data of biochemical, anthropometry and dietary pattern are not completely analysed, malnutrition among children at point-Pedro region was evident.

Key words: Malnutrition, Underweight, Wasting, Stunting, Haemoglobin, Anthropometry.