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# Prevalence of Moderate Malnutrition in Children of Jaffna District, Sri Lanka

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Objective of the study was to determine the moderate malnutrition and associated risk factors among children aged 1-5 years in Jaffna District. In a multi-stage cluster sampling, 846 children were selected from March, 2010 to May, 2012. Anthropometric measurements and biochemical parameters were obtained. Questionnaires were used to obtain associated risk factors. Of the total of 846 children, 414 were males (48.9%). Prevalence of wasting, underweight and stunting were 21.6, 33.1 and 26.4% respectively. Prevalence of moderate forms of wasting, underweight and stunting were 17.7, 27.2 and 22.1% respectively. Prevalence of wasting and underweight of children were under 'very high public health significance' in Jaffna District. Prevalence of severe forms of wasting, underweight and stunting were 3.7, 5.9 and 4.3% respectively while low prevalence of overweight (3.4%) was observed among children. Mean calorie consumption by the children aged 12-23, 24-35, 36-47 and 48-59 months was 782.6 ( $\pm 150.3$ ), 918.6 ( $\pm 142.5$ ), 998.5 ( $\pm 139.2$ ) and 1055 ( $\pm 173.5$ ) kcal/day respectively and were lower than RDA ( $p < 0.05$ ). In this study, 85.5 and 30.4% of children consumed low levels of calorie and protein. Risk of wasting (OR: 8.2, 95%CI; 3.1-21.9), underweight (OR: 19.8, 95%CI; 6.4-61.8) and stunting (OR: 3.3, 95%CI; 1.8-5.8) was high in children with calorie deficiency when compared with normal children. The breast and complimentary feeding practices were not satisfactory [Exclusive Breastfeeding: 63.9%]. In addition, 23.4% of the mothers were unaware of the breastfeeding practices. Among the children, 11.1, 29.2, and 30.3% were affected with frequent gastroenteritis, respiratory tract infection and fever respectively. Prevalence of anaemia was 36.4% and it was under 'moderate public health significance'. Prevalence of Iron Deficiency (ID) was 33.4% and among, 31.7% was affected with Iron Deficiency Anaemia (IDA). Among the anaemic children (n308), mean ( $\pm$ SD) dietary iron intake [10.0 ( $\pm 5.2$ ) mg/day] was significantly lower than that of non-anaemic children [17.2 ( $\pm 8.3$ ) mg/day] ( $p < 0.05$ ). Mean urinary iodine excretion was 149.8 ( $\pm 53.3$ ) microgram/dL and 17.8% was affected with urinary iodine deficiency ( $< 100$  microgram/dL). In logistic model, children from poor wealth class (Adj.OR 14.36, 95%CI; 1.6-123.2), rural sector (Adj.OR 7.47, 95%CI; 1.59-35.04), low birth weight (Adj.OR 6.7, 95%CI; 2.94-15.34), non-exclusively breast fed (Adj.OR 3.25, 95%CI; 1.82-5.78) and frequent infection (Adj.OR 2.87 95%CI; 1.4-5.73) were at risk of being undernutrition. This study revealed that, high prevalence of undernutrition is identified with calorie deficiency. Identified causative factors can be minimized in Jaffna District by proper remedy measures. High prevalence of anaemia could be controlled with iron supplementation.