Study on the effect of nutritional supplementation on growth of children under age of 6 with protein-energy malnutrition under support of healthcare centers of city of Namin from March 2002 to March 2005

Abstract:

Introduction and Objectives: Malnutrition is a major health and nutritional problem. Nutritional support and supplementation are effective on the individual's life's quality and quantity. Our objective was to determine study on the effect of nutritional supplementation on growth of children under age of 6 with protein-energy malnutrition under support of healthcare centers of city of Namin from March 2002 to March 2005.

Methods & Materials: This study was conducted as a retrospective cohort on 61 children under age of 6 who according to Gomez criteria had a weight lower than 90% of a normal child's weight and were also under supportive care of city of Namin's healthcare system. From this group, 38 of children's families received food aid for 6 months. Our data covered 3 areas: 1. socio-economic status 2. quality of the received care 3. children's anthropometric measurements which were extracted from household's files available at healthcare units and interviews with children's caregivers at healthcare units. Weight and height and weight- centile and height- centile before and after nutritional supplementation were compared in 2 groups. The yielded data were then analyzed by SPSS and chi-square and t- tests and multivariate regression.

Results: Children's mean age was 26/1 ± 16/1 months. 20 of children were male (32/8%). Weight – centile increased by 3.6% on average in children who received nutritional supplementation while children who did not receive supplementation showed 1.5% weight- centile increase. This difference was statistically significant (P=0.04). However difference in height changes of the 2 groups was not significant (P>0.05).

Discussion & conclusion: Our Study Showed that Weight-centile of the children who receid nutritional supplementation increases significantly as compared to the group that did not receive the supplementation, however height-centile did not show a significant difference between the 2 group since correction of height growth in chidren requires long-term intervention. Futhermorenutritional interventions along with other interventions such as education and promotion of public and environmental health, targeting families needing care, can decrease malnutrition.