ANTHROPOMETRIC PROFILE OF PROTEIN-ENERGY MALNOURISHED AND WELL-FED UNDER-FIVE CHILDREN IN ZARIA, NORTHERN NIGERIA

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ABSTRACT

This study evaluated the pattern of anthropometric profile in protein-energy malnourished (PEM) and well-fed (WF) children in Zaria, northern Nigeria with a view to providing local data for these parameters. Anthropometric measurements (weight, height, mid-upper-arm circumference (MUAC) and body mass index (BMI)) were carried out in one hundred and fifty (150) each of PEM and age- and sex-matched WF children between the ages of 6 and 36 months. The PEM children were classified into 4 different classes according to Wellcome classification as well as according to gender as males and females. Weight, height and MUAC were measured using standard methods and BMI was determined using the weight in kilogram divided by the square of the height in metres (Weight (kg)/Height (m)²). The data obtained were analysed using SPSS 13.0 for Windows (SPSS Inc., Chicago, IL). Two-tailed student’s t-test for matched samples and one way analysis of variance (ANOVA) statistical methods were employed for the analyses. A p-value of equal to or less than 0.05 (p ≤ 0.05) was considered as statistically significant. The weight, height, MUAC and BMI values were significantly lower (p<0.001) in PEM than in WF children. The weight, height and BMI in males PEM children were not significantly different from those in females (p>0.05), while the difference in MUAC was significantly (p<0.05) higher in females than in males. The differences in weight, height, MUAC and BMI values between males and females WF children were not significantly different (p>0.05). The results of weight, height, MUAC and BMI show variable differences between the three age groups as well as between the four classes of PEM in both the PEM and WF children. The pattern of anthropometric values in PEM and WF children are similar to those reported in the literature, with PEM children having significantly lower values than the WF children.

Key words: Anthropometric measurement, protein-energy malnutrition, protein-energy malnourished, well-fed children.

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