UNIVERSITI TEKNOLOGI MARA

ANTHROPOMETRIC, BODY COMPOSITION AND PHYSICAL FITNESS AMONG PRIMARY SCHOOL CHILDREN

NUR ASHIKIN BINTI AHMED ZAKI

Dissertation submitted in partial fulfillment of the requirement for

the degree of

Master of Sports Science

Faculty of Sports Science and Recreation

June 2013

AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

In the event that my dissertation be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

Name of Candidate   :   Nur AshikinBinti Ahmed Zaki

Candidate I.D. No.   :   2010910853

Programme   :   Master in Sports Science

Faculty   :   Sports Science and Recreation

Thesis Title :   Anthropometric, body composition and physical fitness among primary school children .

Signature of Candidate: ....,.....~..............................

Date   :   June 2013

Abstract

The aim of this study was to analyze the association between body composition and physical fitness among primary schoolchildren in Beruas, Perak. A total of 246 participants, aged from 10 to 12 years old were randomly selected from four primary schools. Anthropometric and body composition were assessed. The mean body mass index (BMI) of boys (n=113) and girls (n=133) were 19.09±5.03 and 18.49±4.69, respectively. The prevalence of underweight, normal weight, overweight and obese was at 24.8%, 48.8%, 13.4% and 13.0%, respectively. Physical fitness comparison by weight categories, noted that the normal weight category showed significantly better performance than the other weight categories ($p<0.05$). Comparison by age revealed that, the 12 years old group performed significantly better than the other age groups ($p<0.05$). The Partial Correlation analysis revealed a negative correlation with high significant correlation between (BMI, $r=0.58$), waist circumference (WC, $r=0.60$), and percentages body fat (BF, $r=0.59$) among overweight/obese female category for upper body strength (UBS). Result also showed high significance between (WC) and (UBS) for boy in the underweight category ($r=0.66$) and girl in the normal weight category ($r=0.53$). Only BF ($r=0.52$) were correlated with UBS in boy with normal weight category. Moreover, only UBS for girl in normal weight category was highly correlated with WC ($r=0.52$). In conclusion, malnutrition either for the underweight or for overweight among primary school children in Beruas, Perak were significantly associated with physical fitness level.

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