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Abstract:

In the present study levels of physical activity was evaluated via daily energy expenditure in 8-16 years old boys of the North West schools of Iran. 2787 students (8-16 years) of the North West schools of Iran participated in this study. Subjects' age (year), weight (kg), height (cm), fat percent, BMI ($\text{kg}\cdot\text{m}^{-2}$) and daily energy expenditure (DEE, $\text{kJ}\cdot\text{kg body weight}^{-1}\cdot\text{day}^{-1}$) were measured. The test-retest method was used to evaluate the QAPACE questionnaire reliability. Paired t-test, intra-class correlation (ICC) and Pearson correlations coefficient were used to evaluate and assess of the test retest reliability of the QAPACE questionnaire. Values of ICC for fat% were 0.99, 0/99 and, 0.99, for DEE were 0.98, 0.98 and 0.99 and for BMI were 1.00, 1.00 and 1.00 for three age categories of 8-10, 11-13, and 14-16; respectively. In addition, our results indicated that subjects in age category of 8-10 had higher DEE and subsequently higher physical activity levels than age categories of 11-13 and 13-16. Moreover, 13-16 years old boys had higher DEE and subsequently higher physical activity levels than age categories of 11-13. In the age categories of 8-10, 11-13 and 14-16 years, daily energy expenditure were 131, 120.4 and 121.85 ($\text{kJ}\cdot\text{kg body weight}^{-1}\cdot\text{day}^{-1}$); respectively, which were lower than average levels of international norm (At the level of 50%, they were 138, 124, and 136 $\text{kJ}\cdot\text{kg body weight}^{-1}\cdot\text{day}^{-1}$ respectively). The results of present study showed that the students at three age categories have lower daily energy expenditure compared to the international standard norm for daily energy expenditure, and that the QAPACE questionnaire is reliable for evaluating physical activity levels by using DEE at 8-16 years old boys of the north west schools of Iran.

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