

Effect of School-based Nutrition programs and Iranian traditional games on Health-related Physical Fitness, Nutritional Behaviour, Fundamental Movement Skills and Physical Activity Of Primary School Children

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Abstract Background and aim: Despite the known importance of physical activity and nutrition in promoting children growth, evidence suggests that habitual physical activity and nutrition status among young people is inappropriate. Therefore, the purpose of this study was to evaluate the impact of a school-based nutrition programs and Iranian traditional games on health-related physical fitness, nutrition behaviors, fundamental movement skills and physical activity level of primary school children. SPSS software version 22 was used for statistical analysis and P-value less than 0.05 was considered statistically significant. **Method:** in this semi-experimental study, 32 students with age ranges 9-10 years 4th grade were ed an elementary school and randomly divided into two experimental (weight: 40.75 ± 9.27 kg; body mass index: 20.75 ± 3.57 kg/m²) and control (weight: 45.20 ± 10.05 kg; body mass index: $22/37 \pm 4/20$ kg/m²) group. Traditional games conducted for 8-weeks, three times per week and each session was 70 min. In addition, the nutrition behavior intervention consisted of thirty-two teaching session for students (four 15-min sessions per week). Body composition, health-related physical fitness, fundamental movement skills and physical activity level were assessed before and after intervention period. **Result:** In the experimental group there was a significant improvement in body mass index ($p=0.01$), fat percent ($p=0.0001$), aerobic power ($p=0.002$), muscle endurance ($p=0.01$), object-control skills ($p=0.0001$), locomotor

skills (0.001), physical activity level (p=0.0001). In addition, there was significant improvement in nutrition behavior including usage of processed meat (p=0.02), red meat (p=0.02), chips and fried potatoes (p=0.01), salty snacks (p=0.0001), ice cream (p=0.004), fast foods (p=0.01), eating breakfast (p=0.001) and type of drink bought school (p=0.0001). However, There were no significant changes in waist to hip ratio, lean body mass and flexibility in experimental group (p>0.05). In addition, no significant changes were seen in control group (p>0.05). Conclusion: According to the study result, it seems that school-based nutrition programs and Iranian traditional games efficacious in improving elementary School children's health-related physical fitness, nutrition behaviors, fundamental movement skills and physical activity level.

Keywords : Key words: traditional games, nutrition behaviors, health-related physical fitness, fundamental movement skills, physical activity level

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