

THE RELATIONSHIP BETWEEN LIFESTYLE FACTORS AND DIETARY HABITS OF PRIMARY SCHOOL CHILDREN

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Abstract

Recently, studies show the impact of different individual lifestyle factors on children's dietary habits. The aim of this study was to determine the differences in the dietary habits of primary school children in relation to the combination of lifestyle factors.

Dietary records for three non-consecutive days were used to estimate the intake of energy, macronutrients, micronutrients and food groups of 106 children (55.7% boys) aged 8 - 9 years from schools in the city of Zagreb. Sleep and sedentary data were obtained from the general questionnaire and physical activity from the physical activity questionnaire for older children. Anthropometric measurements were performed according to standard protocols, while z-scores were obtained using AnthroPlus software. Children were divided into three clusters using K-Means cluster analysis toward sleep duration, sedentary behaviour, and physical activity.

Children in all three clusters have similar sleep duration (9 - 10 hours on average), but activity level decreases from the first to the third cluster (activity level 3.1, 2.9, and 2.6, respectively) and sedentary time increases (84.9 min, 193.1 min, and 372.0 min, respectively). There is no difference in children's anthropometric characteristics between clusters. Children in cluster 1 and 2 had significantly higher daily energy intake (1,802 kcal and 1,779 kcal, respectively) than children in cluster 3 (1,430 kcal). Children in cluster 1 had greater intake of total fat, monounsaturated fatty acids, and added sugars than children in cluster 3. According to Kendall's τ_b coefficient, cluster 3 is associated with higher energy intake from milk and dairy products ($r = 0.222$; $p = 0.02$) and lower from sweetened milk and dairy products ($r = -0.240$; $p = 0.01$).

The dietary habits of the children in this study are similar across clusters. The only differences are in the intake of energy, total fat, monounsaturated fatty acids, added sugar, and milk and dairy products.

Key words: Childhood, Dietary habits, Dietary intake, Physical activity, Sedentary behaviour, Sleep duration.