COMPARISON OF SELECTED PARAMETERS OF PHYSICAL ACTIVITY AT SCHOOL AND AT HOME IN CHILDREN AGED 12 IN RURAL AREAS IN POLAND

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Abstract
Introduction. In recent years, research studies have demonstrated a significant decrease in physical activity (PA) amongst young people. Most of the young generation participate in sport and recreation too rarely, and they devote too much time to passive leisure. Diagnoses of physical activity at different stages of our lives, with particular emphasis on children and adolescents, are increasingly indicating that along with age, the level of physical activity, especially during leisure time, is decreasing. Material and methods. The aim of the study is to compare selected parameters of physical activity on a single day among students aged 12 and to determine how these parameters differ at school and at home. The study was conducted using an ActiGraph WGT3X accelerometer on a group of 100 students (50 girls and 50 boys) in a rural area of southern Poland. Results. The analysis showed that for parameters such as vigorous activity, total moderate-to-vigorous physical activity (MVPA), and step count, the observed difference between the time spent at school and outside of school was statistically significant (p < 0.05). All of these parameters were characterised by a higher level during school time. On the basis of the analyses performed, it was concluded that the school environment contributes to increasing youth's physical activity. Effective educational programmes promoting physical activity in different forms should be addressed to youth as well as to parents (custodians), who are responsible for the physical development of their children.

Key words: accelerometer, school youth, rural area

Introduction

Research studies have shown a significant decrease in physical activity among adolescents [1]; physical activity has a tendency to decrease with age both during childhood and adolescence [1, 2]. Furthermore, inactive children can become inactive adults and thus have higher risk of complications in future life. Physical activity, health, and quality of life are closely correlated. The increasing amount of evidence confirming the health benefits of physical activity has led to a growing need to understand the health behaviour of children and adolescents and its patterns [3, 4].

Some authors have conducted cross-sectional studies among youth related to physical activity at and out of school [5, 6]. In many countries, physical activity at different stages of life has been investigated, with particular emphasis on children and adolescents. Such research has shown that with age, the level of physical activity, especially during leisure time, has a tendency to decrease [7].

The habit of engaging in physical activity should already be fostered at kindergartens and primary schools, and physical education should, among others, be focused on supporting physical development. Physical education not only plays an important role in meeting pupils’ physical needs starting from their early childhood, but also prepares them for life in society [8].

In physical education, an important role is fulfilled by physical activity habits which have a long-term impact on health and should be shaped during the early development of children [8]. That is why it is crucial to educate children with respect to the importance of health and leisure activities from their early childhood. If children are exposed to adverse health risks at an early age, they have a tendency to maintain this type of behaviour during puberty and adulthood, and this eventually leads to an increased risk of many chronic diseases [9].

The aim of the study is to compare selected parameters of physical activity during a single day in pupils aged 12 using a WGT3X accelerometer [10]. The day was divided into two segments: the time spent at school (from 8:00 to 14:00) and the time spent at home (from 14:00 to 20:00). Based on the review of literature, the study sought to answer the question whether there was a difference in physical activity between the time spent at school and at home.