

# **RISK FACTORS AND PREVALENCE OF OVERWEIGHT AND OBESITY IN SCHOOL-AGE CHILDREN AND ADOLESCENTS WITH INTELLECTUAL DISABILITIES IN THE PODKARPACIE REGION**

## **Introduction**

Overweight and obesity have become one of increasing global threats. This problem affects both the developed and the developing countries. Growing concern is caused by the increasing prevalence of overweight and obesity in the population of children and adolescents. Excessive body weight not only reduces the quality of life, but it is an important factor generating the onset of many other diseases. It has been proved that excessive body weight in childhood translates to an increased risk of obesity, many non-communicable diseases, disability and premature death in the adulthood. It was also confirmed that the risk is partly dependent on the age of its occurrence and duration. Therefore, early diagnosis and proper treatment strategies are extremely important especially in people with intellectual disabilities, who have significantly higher health risk in relation to the general population. Scarcity of data on the prevalence and risk factors of overweight and obesity in children and adolescents with intellectual disabilities is noticeable both in Poland and worldwide. Therefore, it is important to identify the scale of the problem and its determinants, which can form the basis of preventive programs targeting modifiable factors. Consequently, it would result in a reduction in the prevalence and would help to avoid many of the adverse consequences of this health problem in the analyzed population.

## **Aim of the study**

The aim of this study was to answer the following research issues:

1. Does the prevalence of overweight and obesity in children and adolescents with intellectual disability show statistically significant differences in relation to the prevalence of overweight and obesity in children without the certificate of intellectual disability?

2. Which of selected biological, socio-economic and lifestyle-related factors increased the risk of overweight and / or obesity in the test group?

## **Material and methods**

The test group consisted of 588 students with intellectual disability between the age of 7 and 18 attending various levels of special education establishments located in Podkarpacie. The control group matched for age and sex accounted for 588 students from randomly selected primary and secondary schools in the Podkarpackie region without identified deficits in terms of intellect.

The basic anthropometric parameters: body weight, body height, and waist circumference were measured three times. In order to evaluate the physical activity of children *Physical Activity Questionnaire for Older Children (PAQ-C)* was used, while in the case of adolescents *Physical Activity Questionnaire for Adolescents (PAQ-A)* was applied. Evaluation of a typical diet was based on the method of 24-hour food log. The author's questionnaire constructed on the basis of the literature was also used.

Statistical analysis of the test results was performed by means of the statistical package Statistica PL 10.1, assuming the most commonly used rules for test probability values (p).

## **Results**

Excessive body weight characterized 31.6% of the test group and 20.7% of the control group. It was also found that the probability of overweight and obesity in children and adolescents with intellectual disability is almost twice as high (OR = 1.77) compared to their healthy peers.

The prevalence of overweight and obesity in the group with intellectual disabilities was significantly affected by the factors such as age, method of newborn/ infant feeding, length of breast-feeding, maternal age at birth, and abnormal body weight of the parents.

A significant relationship was also observed between the presence of excess body weight in patients from the test group and low economic status of the family, the number of family members and parents' education.

It was also found that the level of physical activity, the frequency of consumption of fruit and vegetables as well as salt intake in the diet influenced in a statistically significant way the BMI in children and adolescents with intellectual disability.

### **Conclusions:**

1. Overweight and obesity is significantly more common in the children and adolescents with intellectual disabilities than their healthy peers. The children with moderate and especially severe intellectual disabilities are burdened with a higher risk of excessive weight gain.
2. Older age, artificial newborn / infant formula, short period of breastfeeding, older maternal age at birth and excessive weight of the parents are the biological risk factors of overweight and obesity in the group with intellectual disabilities.
3. Low economic status of the family, its large size and a lower level of parents education (secondary education and vocational education) significantly increase the risk of overweight and obesity in school children with intellectual disability.
4. Factors associated with lifestyle, which in a significant way predispose to the prevalence of overweight and obesity in children and adolescents with intellectual disabilities are low physical activity, infrequent consumption of fruit and vegetables and an excessive intake of salt in the diet.