

SOCIOECONOMIC STATUS AS A DETERMINANT OF ADIPOSIITY IN CHILDREN IN THE MORAVIAN-SILESIAN REGION: FINDINGS FROM A PRELIMINARY STUDY WITHIN THE REFRESH PROJECT

Petr Kutac

University of Ostrava, Faculty of Education, Ostrava, Department of Human Movement Studies,
Czech Republic

Background: Adequate body weight is considered one of the indicators of an individual's health. Body fat ratio must be monitored to assess body weight adequacy, particularly for the prediction and diagnosis of overweight and obesity. As the literature documents, the amount of body fat among children of early school age is influenced by sex and their families' economic status, suggesting an association between increased childhood obesity and economic disadvantage.

Objective: The aim of this study was to examine whether children from households experiencing persistent financial hardship exhibit higher adiposity levels than their peers from economically stable families.

Methods: This prospective study included 532 children aged 10–11 years (girls: $n=250$, age 10.6 ± 0.7 years; boys: $n=282$, age 10.7 ± 0.8 years). Children were divided into three socio-economic groups and by sex: G1M boys ($n=166$) and G1F girls ($n=145$) from economically stable families; G2M boys ($n=67$) and G2F girls ($n=56$) for whom socio-economic status (SES) could not be identified; and G3M boys ($n=49$) and G3F girls ($n=49$) from financially disadvantaged families. Body composition (BC) parameters – body mass (BM), body fat (BF), and visceral fat (VF) – were measured using BIA. Family SES was assessed through a questionnaire for parents.

Results: Significant differences in BMI, BF, and VF were found only between the groups G1M and G3M, boys in G1M showing lower values than those in G3M (BMI: $G1M=17.8\pm3.1$, $G3M=19.3\pm4.4$; BF kg: $G1M=8.0\pm5.2$, $G3M=10.7\pm8.2$; BF%: $G1M=19.6\pm8.2$, $G3M=23.5\pm11.0$; VF cm^2 : $G1M=34.0\pm28.9$, $G3M=49.3\pm44.7$).

Conclusion: A potential association between increased adiposity and family financial difficulties was observed only in boys.

Keywords: Body mass index; Body fat; visceral fat; Family financial distress; Preadolescent children.

Acknowledgement / Funding Source: REFRESH Research Excellence for Region Sustainability and High-tech Industries, reg. č. CZ.10.03.01/00/22_003/0000048.