

# Academic Achievement, School Absence and Self-Concept in Czech Prepubescent Children with Overweight and Obesity

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**Abstract Problem.** The paper offers findings about selected educational aspects of children's academic performance, examined here in terms of sociodemographic variables, BMI percentile values, cognitive test scores, weight bias internalization scale and self-concept scale with an aim to detect whether and to what extent these factors contribute to children's school results.

**Methods.** 557 fifth graders were administered *Vana's Intelligence Test*, the *Piers-Harris 2* self-concept questionnaire and other tools. Children's educational aspects were assessed in terms of school *Absence*, *Grade Point Average*, and *Czech* and *Mathematics* grades, with data obtained from their most recent report cards under the Informed consent of their legal representatives and in compliance with ethical standards.

**Results.** Prepubescent children from stronger socio-economic backgrounds suffer from overweight/obesity less often and perform slightly better at school. The present results suggest a link between weight bias internalization and overweight/obesity, and a somewhat weaker link between self-concept and overweight/obesity in the non-clinical population of prepubescent children. In these relationships of overweight/obese children, as in the cases of alarmingly high school absence, gender is an important variable. Multinomial logistic regression modelling the relationship between *Czech* and *Mathematics* grades and selected factors discovered that chances for a worse grade were significantly reduced by the results of *Vana's Intelligence Test* in both the subjects, while the *Self-concept* total score proved to be an insignificant factor. Conversely, pupils' *Czech* grades were negatively influenced by increased BMI (quartile), higher *Absence* rate, male *Gender*, *Presence*

of *only one parent* in the family and WBI, while in *Mathematics*, in addition to the above-discussed, significant regressors only included *Absence* and *Presence of only one parent*.

*Discussions.* The results of the *Self-concept total score*, the level of which is generally lower in girls than in boys in the population of Czech prepubescent children, agree with other authors' experience. The connection between the male sex and poorer performance in *Czech* can be partly explained by the fact that the development of speech, reading, writing and grammar is generally less complicated for school-age girls than boys. We can ask why a higher BMI quartile increases the chances of a worse grade only in the case of *Czech language*? So far, we can only speculate about the causes. In our opinion, it is possible that the impact of parents' education on the performance of children of this age is more pronounced in the *Czech language* (compared to *Mathematics*). The other possibility of the impact of the *BMI quartile* on the *Czech* grade is the significant predominance of boys in the o/o group. On the other hand, it should be noted that this argument would not explain the o/o children's poorer *Grade Point Average* score. However, we believe that the above reasons answer partially this question.

*Conclusion.* The vulnerability of o/o girls is pronounced in some domains of *Self-concept* and *Weight bias internalization*, while in boys it is reflected in the more frequent occurrence of high levels of *Absenteeism*, with the precise causes of this being still subject to speculation. In this regard, workers in the cooperating professions should pay continuous attention to strengthening the desirable aspects of education and healthy lifestyle among vulnerable groups of children. Educational aspects of overweight/obese children should therefore continue to receive increased attention.

**Key words** academic achievement, overweight/obesity, prepubescence, self-concept, weight bias internalization.