LA MAGNITUD DE LA OBESIDAD SE RELACIONA NEGATIVAMENTE CON EL RENDIMIENTO ACADÉMICO EN LA SECUNDARIA EN PACIENTES DE UNA CLÍNICA DE OBESIDAD EN CHILE

THE MAGNITUDE OF OBESITY IS NEGATIVELY RELATED TO ACADEMIC ACHIEVEMENT IN HIGH SCHOOL STUDENTS ATTENDING AN OBESITY CLINIC IN CHILE

Rodríguez Y, Correa P, Burrows R

Instituto de Nutrición y Tecnología de los Alimentos, Universidad de Chile. Santiago (Chile)

Introduction: The impact of undernutrition on cognitive and brain health has been well studied. Less is known about the consequences of overnutrition on cognitive function and academic performance. Evidence shows that obese children and adolescents have lower hippocampal volume and prefrontal cortex, which are brain structures related to learning and memory.

Objective: To determine the relationship between the magnitude of obesity and academic performance in obese children and adolescents attending an obesity clinic in Santiago (Chile).

Methods: In a sample of 474 schoolchildren (11.4; 61% females), we evaluated weight (Kg) and height (cm). BMI and BMI-Z for sex and age were estimated; BMI-Z values >4 DE were considered severe obesity. Academic achievement was measured through the high school grades high school (grade-point average or GPA, language and math), converted into standardized score (scale 210-825) according to the Ministry of Education (Chile). This information was obtained from public records. To examine the association between the magnitude of obesity and academic performance we used analysis of covariance. The models were adjusted for sociodemographic, lifestyle and early development variables.

Results: Mean BMI-Z in the sample was 4.25 DE. Forty-nine percent had severe obesity. In assessing the association of severe obesity and high school grades it was observed that severe obese participants obtained significantly lower scores than their peers without severe obesity (GPA: 590 vs 610; P<0.05), (Language: 528 vs 561; P<0.05) and (Mathematics: 454 vs 508; P<0.05). Differences remained after considering the effect of other influences.

Conclusion: In obese schoolchildren from Chile, there was a significant negative association between the magnitude of obesity and academic performance as measured by high school grades. The relationship remained significant after accounting for other influences.