

# **Socioeconomic status and obesity in Lebanese children and adolescents aged between 11 and 18 years**

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The global overweight and obesity prevalence has increased dramatically over the past decade. Childhood obesity, in particular, has become a global public health crisis. This global phenomenon is affecting all socio-economic groups, irrespective of age, sex or ethnicity but its prevalence varies across socioeconomic strata.

This cross-sectional pilot study describes the association between obesity and socio-economic status (SES) in Lebanese children and adolescents. The sample consisted of 359 Lebanese girls and boys, 11 to 18 years of age, randomly selected from public and private schools. The study was conducted in 2013 at elementary and secondary schools in Beirut, Tripoli, Zahle, Jbeil, Keserwan, Baskinta and Tyr.

The questionnaire included a series of questions aiming to assess the children's SES. The latter was estimated considering whether the child was registered in a public or a private school, parental work activities, household demographic factors, number of rooms per household, having help in the household, house ownership and number of cars owned by family members. The children's anthropometric measurements were obtained and the BMI was calculated.

One way ANOVA and Duncan Post hoc tests were carried out for statistical comparisons. The Statistical Package for the Social Sciences (SPSS) was used and a p-value <0.05 was considered significant.

In our study, the majority of adolescents were found to belong to a low socioeconomic background with a percentage of 55.4%, while 10.3% had a high SES and 34.3% had a middle SES.

The BMI differed significantly across the three groups with a p value of 0.006. In fact, the BMI of adolescents with high SES was significantly higher than the BMI of adolescents coming from both low and middle socioeconomic background. On the other hand, there was no significant difference between BMI of adolescents with a low and middle SES, at a p value <0.05, but the prevalence of undernourished students was found to be the highest in the low SES group.

We also found a statistically significant relationship between the BMI and the type of school attended. A high rate of obesity and overweight were observed in students attending private schools and a wider spread of under nutrition was observed in public schools.

This study supported the view that obesity in the developing world would be essentially a disease of the socioeconomic elite. It showed that there are multiple nutritional problems emerging in the Lebanese society ranging from under-nutrition to overweight and obesity all affected by the socioeconomic status. The major red flag is the increased percentage of poorly nourished adolescents in less fortunate families and the increased percentage of overweight and obese adolescents in the richer society.