

Poster presentation

## Anxiety, depression and nicotine dependence: correlations to BMI

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### Background

The aim of this study was to investigate the relationship between Body Mass Index (BMI) and depression, anxiety and nicotine dependence in 18-year-old high school students.

### Material and Methods

Using the technique of stratified sampling, 112 high school students, aged 18 years old and residing the region of Pireus, were recruited. These subjects filled up the following scales: STAI questionnaire on anxiety, CES-D on depression and Fagestrom scale on nicotine dependence, as well as information concerning their height and body weight. From the afore-mentioned data, we calculated BMI for each subject and scored each of the above psychometric instruments. According to BMI, students were classified as underweight, normal weight, overweight and obese. Statistical analysis was done using SPSS 10.0 software.

### Results

Mean BMI was  $21.62 \pm 3.7$  (max 35.56, min 15.3). Of the 112 students (43.8% males, 56.3% females), 34.8% were underweight, (underweight girls mounted to 44.4%) 49.1% had BMI within normal range, 12.5% were overweight and 3.6% were obese.

Smokers' mean ( $21.25 \pm 3.29$ ) did not differ significantly ( $p = 0.216$ ) from that of non-smokers. Underweight students' mean score on trait subscale of the STAI ( $52.38 \pm 3.32$ ) was significantly higher ( $p = 0.016$ ) from that of normal weight students. In the same subgroup of patients, a similar trend was noticed also in state anxiety score, yet it did not reach statistical significance. The latter trend in

state anxiety score was also observed when comparing underweight with overweight students. ( $p = 0.131$  and  $0.149$ , respectively).

No differences were noted between any of the afore-mentioned subgroups of patients either concerning CES-D score, or Fargestrom score. ( $p > 0.05$  in all possible comparisons).

### Discussion

Trait anxiety seems to be significantly higher in underweight adolescents, compared to all other students' subgroups. This being the only exception, anxiety, depression and nicotine dependence does not correlate to 18-years old students' BMI.