

EVALUATION OF THE LEVEL OF NICOTINE DEPENDENCE AMONG ADOLESCENT SMOKERS

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SUMMARY

The questionnaire containing ten items evaluated the degree of dependence in students-volunteers from Brno secondary and vocational schools (ages ranging from 15 to 17 years) and the anamnestic data were compared with the specific (urinary cotinine) and non-specific (CO in the air exhaled) biological tests of exposure to smoking.

The sample of 147 students examined contained 42% non-smokers, 25% occasional smokers and almost 33% of those who smoked every day. Almost 10% children smoked more than 10 cigarettes a day, and more than 20% children stated that they smoked 60 and more cigarettes a week.

In accordance with the pre-developed degrees of dependence, compiled by the scores of the individual responses, 59% of the respondents (including the non-smokers) were ranked among the non-dependent. The second most frequent group contained the “strongly dependent” (almost 17% of all persons, e.g. 30% of smokers), 3.4% of examined persons (6% of smokers) were ranked in the sub-group of persons with a very high degree of dependence.

Highly positive correlations were found between the evaluation of the dependence degree according to the anamnestic data and the exposure bio-markers (urinary cotinine/creatinine and CO in the air exhaled): the values of correlation coefficients were 0.615 and 0.764, resp. Both bio-markers also correlated negatively with the time of the last exposure to both active and passive smoking.

The individual items in the dependence questionnaire had positive correlations with the objective exposure indicators which had statistical significance. The strongest relationship was observed in the question about the first morning cigarette - the highest correlation coefficients, being followed by signs evaluating the smoking frequency and the usual number of cigarettes smoked per day and in a week. The lowest relationships concerned the occasions for smoking and the unpleasant symptoms associated with the withdrawal.

The anamnestic questionnaire could explain 42.6% of urinary cotinine level variability (converted to the density measured by creatinine content) and 65.8% of variability of CO content in the air exhaled.

It was demonstrated that regular adolescent smokers at the ages between 15 to 17 years inhaled the cigarette smoke and the young smokers' inner exposure to nicotine had been proved as well. In this age group, there are many individuals who have a strong or a very strong dependence on nicotine. As a result, it is necessary to promote smoking cessation and nicotine dependence treatment by recommending pharmaceuticals of substantial nicotine therapy.

Key words: smoking, adolescents, biomarkers

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