

# THE FACTORS ASSOCIATED WITH THE CHANGE IN SMOKING STATUS AMONG SLOVAK SCHOOLCHILDREN

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*Múdrost' minulosti - poznatky prítomnosti - vzdelanie budúcnosti.*

# Introduction

- Why is this research topic important in reference to Slovak schoolchildren
- The Unplugged (EU-DAP/*European Drug Addiction Prevention Project*) is a school-based social influence intervention program which has been widely implemented in Europe with positive evaluations of its effectiveness (Miovsky, Novak, Stastna et al., 2012)
- The Slovak adaptation of the Unplugged intervention program



# Introduction

**at the pre-test**  
smoking

- boys
- normative beliefs
- availability of cigarettes, and
- parental knowledge

**at the post-test**

(three months after the Unplugged  
had been implemented)

**an increase in the number of  
smokers**

- normative beliefs.

Orosova, Berinsterova, Bacikova et al., 2015



# Introduction

## at the post-test

(three months after the Unplugged had been implemented)

...were not found to be related to **an increase in the number of smokers**

- risk perception concerning smoking
- mother/father smoking
- perceived parental approval

Orosova, Berinsterova, Bacikova et al., 2015



# Objectives

- to explore the incidence of risk factors associated with **the rate of smoking take up** among Slovak schoolchildren
- to test the effect of the European school-based social influence based intervention program "Unplugged" on this rate among schoolchildren at the follow-up tests.



# Sample and study design

## A cluster randomized controlled trial

### Data collection:

- immediately before the program implementation (T1)
- immediately after the program implementation (T2)
- at three months (T3)
- at 12 months (T4)
- at 18 months after the program implementation (T5)

1295 participating schoolchildren (M=11.52; 46.8% boys)

- 30 schools = the experimental group (n=641)
- 30 served = the control group (n=654)



# Sample and study design

- The school-based drug use prevention program *Unplugged* targets students 12–14 years of age
- 12 lessons, which were carried out once per week during the school year 2013/2014 (September – December)
- *Unplugged* was delivered via lectures by teachers



# Method

## **Tobacco cigarettes smoking.**

The schoolchildren who reported smoking on at least one occasion during the past 30 days were identified as smokers at every follow-up.

## **Availability of cigarettes**

*“How difficult do you think it would be for you to get cigarettes if you wanted? “*

- 5-point scale: from 1 – Impossible to 5 Very easy

## **Descriptive normative beliefs**

*„According to your estimation, how many of your friends smoke tobacco cigarettes? “*

- 5 point scale from 1 – Nobody to 5 – Everybody





# Method

## Parental knowledge regarding children's behaviour

*“Do your parents know where you spend Saturday nights”.*

- 4-point scale from 1-Know always to 4 – Usually don't know

## Self-control

the short version of the original Self-control scale developed by Tangney et al. (2004) was employed (Finkenauer, Engels, Baumeister, 2005)

- 11 items (Cronbach alpha=0.73)
- *“I am lazy, I have a hard time breaking bad habits, I wish I had more self-discipline”* is an example of items in the Self-control scale.
- Response categories ranged from 1-Not at all to 5-Very much.



# Method and Statistical analyses

the **Novelty seeking** factor of The Adolescent Resilience Scale was employed (Oshio, Kaneko, Nagamine et al., 2003)

- 7 items (Cronbach alpha= 0.70)
- „*I seek new challenges*“ is one example of items
- a rating scale using anchors of 5-Definitely yes and 1-Definitely no

## Statistical analyses

Logistic regression models



# Results

At the baseline (T1) 2.4% of schoolchildren were reported to be smokers

When all waves were considered (T1-T5):

- 90.4% of respondents remained as non-smokers
- 7.8% became smokers
- 1.1% stopped smoking and
- 0.8% were smokers throughout



# Results

The predictors of change in smoking status  
(from being a non-smoker to becoming a smoker) among Slovak  
schoolchildren

*before the program implementation (T1),*

*at 3 months (T3), at 12 months (T4), at 18 months (T5) after the program implementation*

- Unplugged
- Gender
- Availability: **T3-T4 (OR=1.931<sup>\*\*\*</sup>), T3-T5 (OR= 2.279<sup>\*</sup>)**  
**T4-T5 (OR= 2.998<sup>\*</sup>), T1-T5 (OR= 2.866<sup>\*\*</sup>)**
- Normative beliefs: **T3-T4 (OR=2.197<sup>\*\*\*</sup>), T3-T5 (OR=2.871<sup>\*\*\*</sup>)**  
**T4-T5 (OR=2.417<sup>\*</sup>), T1-T5 (OR=2.739<sup>\*\*\*</sup>)**
- Parental knowledge **T1-T3 (OR=2.416<sup>\*\*\*</sup>), T4-T5 (OR=1.899<sup>\*</sup>)**
- Self-control **T3-T5 (OR= 0.902<sup>\*</sup>)**
- Novelty seeking

\* $p \leq 0.05$ , \*\* $p \leq 0.01$  \*\*\* $p \leq 0.001$



# Limitations and Conclusions

- Teachers' perception of the importance of the Unplugged intervention as well as the implementation **fidelity** (*Jurystova, Orosova, Gabrhelik, 2017, Wang, Deveaux, Knowles et al., 2015*) may constitute a limitation of this investigation which should be considered
- **appropriate fidelity measures** (*Jurystova, Orosova, Gabrhelik, 2017*) which may also improve the understanding of health related behaviour among schoolchildren (*Middlestadt, Macy, Geshnizjani, 2014*).



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