



# FIDELITY, SELECTED INTRA/INTERPERSONAL FACTORS AND EFFECTIVENESS OF UNIVERSAL DRUG PREVENTION PROGRAM

Beata Gajdošová<sup>1</sup>, Oľga Orosová<sup>1</sup>, Anna Janovská<sup>1</sup>, Marcela Štefaňáková<sup>2</sup>

<sup>1</sup>Department of Educational Psychology and Health Psychology, Faculty of Arts,  
Pavol Jozef Šafárik University in Košice, Slovak Republic

<sup>2</sup>Department of Psychology, Faculty of Arts,  
Pavol Jozef Šafárik University in Košice, Slovak Republic

## Introduction

The UNPLUGGED program is a universal school-based prevention program for young adolescents who are 12-14 years old. In addition to the evaluation of effectiveness of the UNPLUGGED, particular attention has been paid to the quality of the program implementation. This is also known as program fidelity and refers to the accuracy and integrity of the whole implementation process. Fidelity as such guarantees that the program is carried out as originally developed and individual components of the program are monitored for problems which arise and must be resolved during the actual implementation process. An important indicator of fidelity, is the engagement of the teachers which could be measured by the amount of feedback after completing interventions.

## Objectives

This study explored the differences in changes observed between T1-T4 in selected intra/interpersonal factors of pupils (normative beliefs regarding drinking of peers, normative beliefs regarding smoking of siblings, self-control) and their risk behavior (lifetime alcohol use, smoking over the last year). These were assessed over time, starting immediately before the program implementation (T1) and 12 months after the completion of the program (T4) in groups of pupils divided by the level teachers' engagement.

## Methods

A cross-sectional design was used. In UNPLUGGED, 60 primary schools from Slovakia (30 assigned to the experimental and 30 to the control group) participated, one 6th grade class from each school. The study sample consisted of 1298 adolescents (53.3% girls, age M=11.72 years, SD=0.67 years).

## Measures

**Lifetime drinking** was measured by the question: How many times (if at all) have you drunk an alcoholic beverage in your life? Respondents had the following answer options: 1: 0x, 2: 1-2x, 3: 3-5x, 4: 6-9x, 5: 10-19x, 6: 20-39x, 7: 40x or more (ESPAD 2011).

**Smoking** was measured by the question: How many times (if at all) have you smoked cigarettes during the last 12 months? Respondents were given the following answer options: 1: 0x, 2: 1-2x, 3: 3-5x, 4: 6-9x, 5: 10-19x, 6: 20-39x, 7: 40x or more (ESPAD 2011).

**Normative beliefs regarding the drinking of friends** was measured by the question: How many of your friends, based on your estimation, drink alcoholic beverages (beer, wine, hard alcohol)? Answer options were: 1- no one, 2- a few, 3 - many, 4- most, 5- all (ESPAD 2011).

**Normative beliefs regarding the smoking of siblings** was measured by the question: Does any of your siblings do following things: - smokes daily? With the following possible answers (1=yes, 2- no, 3- don't know, 4- don't have any siblings) (ESPAD 2011).

**Self-control** was measured by an 11-item Self-control scale (Finkenauer, Engels, Baumeister, 2005) with the possible answers 1- not like me at all to 5 - very much like me. A higher score means higher self-control. Cronbach's alpha of the scale at T1 was 0.733 and at T4 0.815.

## Statistical analysis

The pupils were divided according to the experimental design: 1. Control group – CG, 50.7% and two experimental groups 2. A group of pupils of those teachers (12.4%) who did not provide feedback (provided less than 6 feedbacks) EGLF, 3. Group consisted of pupils of those pupils who's teachers provided feedback for more than 6 reports after the 12 sessions of the UNPLUGGED program (36.9%) EGHF. After a basic description of the three groups (chi-square) ANOVA with a Scheffe post hoc test was used to explore the differences in the changes T1-T4 in selected intra/interpersonal factors of pupils and their risk behavior.

## Findings

ANOVA followed by a Scheffe post hoc test confirmed significance of the changes (T1-T4) in the measured variables of risk behaviour between groups divided according to the teachers' engagement:

The CG and EGHF were found to differ in the change (T1-T4)

- of lifetime alcohol use ( $p=0.049$ ) and in the change of alcohol normative beliefs of friends ( $p=0.033$ ). The lifetime drinking level changed the least in the EGHF. The normative beliefs of friends were seen to increase more in the CG than in the EGHF.

The EGLF and EGHF were found to differ in the change (T1-T4)

- of smoking over one year ( $p=0.041$ ), in the change of normative beliefs of siblings regarding smoking ( $p=0.043$ ) and in the change of self-control ( $p=0.020$ ) The normative beliefs of siblings regarding smoking were more realistic in the EGHF group when compared to the EGLF. Self-control decreased with age in all groups but least in the EGHF.

Table 1 Results of ANOVA and Scheffe post hoc test

T1 - T4	CG	EGLF	EGHF	F	sig.	Post hoc test
DRINKING	-0,33	-0,36	0,03	3,454	0,032	13*
NBFRIENDS	-0,42	-0,22	-0,23	4,167	0,016	13*
SMOKING	-0,29	-0,04	-0,35	3,267	0,039	23*
NBSIBLINGS	-0,76	-0,90	1,15	3,603	0,028	23*
SELFCONTR	1,36	3,03	0,31	3,980	0,019	23*

CG - Control group, EGLF – experimental group with low fidelity - a group of pupils of those teachers (12.4%) who did not provide feedback (provided less than 6 feedbacks, EGHF - experimental group with high fidelity, group consisted of those pupils who's teachers provided feedback for more than 6 reports after the 12 sessions of the UNPLUGGED program (36.9%).

## Discussion and conclusion

The development of psychosocial programs in health promotion should be based not only on the monitoring of the effectiveness of these programs but also on monitoring the quality of the implementation by addressing fidelity.

This study has confirmed the trends in risk behaviour among young adolescents. In particular, it has shown increasing levels of alcohol use and smoking as well as selected intrapersonal characteristics, decreasing self-control, which is in line with other research studies (Guillén et al, 2015, Wills et al., 2013). Furthermore, the significance of monitoring the fidelity of preventive program was shown in to have a protective effect. It was found that the group of pupils with teachers manifesting high fidelity showed a weaker increase in drinking and lower normative beliefs regarding drinking of friends and more accurate normative beliefs regarding smoking of siblings and a weaker decreasing tendency in self-control over time.

### Acknowledgement

This work was supported by the Slovak Research and Development Agency under the Contract No. APVV-0253-11, APVV-15-0662, and by the grand KEGA 016UPJŠ-4/2017.

### References

- Európske monitorovacie centrum pre drogy a drogovú závislosť. (2012). *Užívanie drog medzi žiakmi v 36 Európskych krajinách. – Správa ESPAD za rok 2011. Zhrnutie*. Luxemburg: Úrad pre vydávanie publikácií Európskej únie. 2012.ISBN 978-92-9168 526-4.
- Finkenauer, C., Engels, R. C. M. E., Baumeister, R. F.(2005). Parenting behaviour and adolescent behavioural and emotional problems: The role of self-control. *International Journal of Behavior and Development*, 29(1), p. 58–69.
- Guillén, N., Roth, E., Alfaro, A., Fernández, E. (2015). Youth alcohol drinking behavior: Associated risk and protective factors. *Revista Iberoamericana de Psicología y Salud*, 6, 53-63.
- Wills, T. A., Bantum, E. O. C., Pokhrel, P., Maddock, J. E., Ainette, M. G., Morehouse, E., Fenster, B. (2013). A dual-process model of early substance use: Tests in two diverse populations of adolescents. *Health Psychology*, 32(5), 533-542.

### Contact person:

Doc. PhDr. Beata Gajdosova, PhD.  
Email : beata.gajdosova1@upjs.sk