

ABSTRACT

Background: Despite a slight decline in the prevalence of substance use among adolescents in last years, there is a constant need for effective, available and well-targeted preventive interventions. Children of parents with substance use experiences are considered to be more endangered. Although the quality and availability of universal prevention programs has improved, their effectiveness is not usually systematically verified, moreover, the impact on children of parents with substance use experiences is unknown. The Unplugged preventive intervention was supplemented by nPrevention booster sessions in order to support its research-proven preventive impact.

Aims: The main objective was to evaluate the effect of Unplugged and nPrevention programs combination (Un+nP) after 24 months in comparison with Unplugged program (Un) alone and control in respect of the substance use experience in parents. The secondary objective was to test the reliability of anonymous self-generated identification code (SGIC) and the process of matching children's questionnaires between waves of data collection and with parents' questionnaires.

Methods: A cluster randomized, controlled, 3-arm, prospective, school-based prevention trial was conducted between years 2013 and 2017 to evaluate the Unplugged (implemented in the 6th grade) and the nPrevention (7th grade) interventions. A total of 2,810 students from 70 schools in four regions of the Czech Republic, and 1,931 parents participated. Data from students were collected by questionnaires in 7 waves with retention rate of 70 %. To match the data, SGIC from Galanti et al. (2007) and the deterministic matching system (Hamming, 1950) were used. The overall matching quality of linking and error rate of characters were evaluated. Prevalence of smoking, alcohol, drunkenness and cannabis use in the last 30 days in children as outcome variables, and binary logistic regression with generalized estimating equations (GEE) method to analyze effectiveness were used.

Results: We achieved high matching rate (95 % and 98 %) and proved that SGIC is a suitable tool for between-group and within-group linking procedures, to maintain anonymity and increase validity of data collection. Regarding effectiveness, both evaluated interventions (Un+nP and Un) seems to be successful for specific subpopulations and specific outcomes. The intervention Unplugged combined with nPrevention, in contrast with Unplugged alone, has significant effect for 1) a subpopulation of children whose parents consume alcohol twice a week and more often, and 2) targeting marijuana use in the last 30 days.

Conclusion: Although the results cannot be generalized and the effectiveness of the evaluated interventions cannot be considered as unequivocally proven, we can recommend the nPrevention booster sessions for further research and implementation into practice.

Keywords: primary prevention, risk behavior, effectiveness, Unplugged, nPrevention, anonymity