

Department of Public Health Sciences

Outcome evaluation of school-based prevention. A European multi-centric trial (EU-Dap study).

ACADEMIC DISSERTATION

For the degree of PhD at Karolinska Institutet this thesis will be defended in public in English at Large conference room, 2nd floor, Norrbacka, Karolinska University Hospital, Solna, Stockholm

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ABSTRACT

Background: Curricula aiming at preventing substance use are widespread in European schools, without formal evaluation of their effectiveness. Promising programmes based on the Comprehensive Social Influence (CSI) model have never been evaluated in Europe.

Aim: The overall aim of this thesis was to advance knowledge on the effectiveness of school-based best practice programmes on adolescents' alcohol use, as well as to elucidate the possible pathways to behavioural changes.

Methods: A cluster randomized controlled trial was carried out in 143 schools from seven European countries, involving 7079 students 12-14 years of age. Schools were randomly assigned to either control or to a 12-session standardised curriculum based on the CSI model, taught by trained teachers. Randomisation was blocked within socioeconomic levels of the school neighbourhood. Students were surveyed through a self-completed anonymous questionnaire at baseline, 6 (short term) and 18 (medium term) months thereafter. The effect of the programme on alcohol-related cognitive factors (intention to drink and to get drunk, knowledge on alcohol-related effects, skills to resist pressure to drink alcohol, normative beliefs, expectations and risk perceptions concerning alcohol) was analysed at the short term follow-up, on alcohol consumption and problematic use at the medium term. Additionally, the effect of some class characteristics on programme implementation was studied using the intervention classes as units of analysis. Given the hierarchical structure of the data all data analyses were carried out using multilevel models.

Results: The programme was associated with decreased positive expectations towards alcohol (odds ratio (OR)=0.81) and perception of peer drinking (OR=0.79), as well as with increased resistance skills against pro-alcohol pressures (OR=1.21) and knowledge (OR=2.25) at the short term follow-up. One year later the programme was associated with a decreased odds of reporting episodes of drunkenness (OR=0.79) and alcohol-related problematic behaviours (OR=0.78). There was no reduction in the frequency of alcohol use but non-drinkers and occasional drinkers at baseline progressed towards frequent drinking less often in the intervention group than in the control group. Associations were stronger among students from schools located in area of low socio economic level. Some characteristics of the class predicted the level of programme implementation: prevalence of substance use was associated with a decreased odds of implementing the programme in its entirety (OR=0.81), while students' connectedness to class was associated with an increased odds of teachers using role-play (OR=1.52).

Conclusions: School curricula based on the CSI model can modify cognitive factors for alcohol use and reduce occurrence of drunkenness and alcohol-related behavioural problems among students from European Countries. These programmes are likely to be particularly useful in socially disadvantaged areas. There was support for the hypothesis that resistance skills, norm perception and positive expectations may mediate the effect of school prevention on behavioural outcomes. Specific organizational strategies such as teachers' training in class management techniques may be integral to the provision of this type of programmes, in order to improve their implementation.