

Do effective drug prevention programmes also reduce social inequality in risks?

Learning from the EU-DAP trial

Federica Vigna-Taglianti ⁽¹⁾, Gregor Burkhart ⁽²⁾, Maria Rosaria Galanti ⁽³⁾, Fabrizio Faggiano ^(1,4) and the EU-DAP Study Group

⁽¹⁾ Piedmont Centre for Drug Addiction Epidemiology, Grugliasco – Italy

⁽²⁾ European Monitoring Centre for Drugs and Drug Addiction, Lisbon – Portugal

⁽³⁾ Stockholm Centre for Public Health/Tobacco Prevention and Karolinska Institute, Stockholm – Sweden

⁽⁴⁾ Department of Medical Sciences, Avogadro University, Novara – Italy

Background

In western countries, the prevalence of behavioural risk factors for poor health is known to vary across social groups, the most economically disadvantaged population groups showing also the most unfavourable profile of risk. Whether universal prevention is likely to reduce this inequality is not known.

Methods

The EU-DAP study is a randomised cluster trial evaluating a European school-based programme aiming to deter adolescents from using tobacco, alcohol and illicit drugs. The study was designed as a four-arm controlled randomised experiment, with schools stratified according to socio-economic status (SES) at the area level. The social strata were defined as high, intermediate and low, depending on a series of indicators developed at the level of the participating centre. Overall, 143 schools and about 7000 students 12–14 years old participated in the experiment in seven countries. Pupils in the intervention schools received a prevention programme based on a comprehensive social influence model. The control group followed the usual health curriculum taught in the school. The effect sizes were estimated through a multi-level regression model to take into account the cluster design, the differences among centres and among arms.

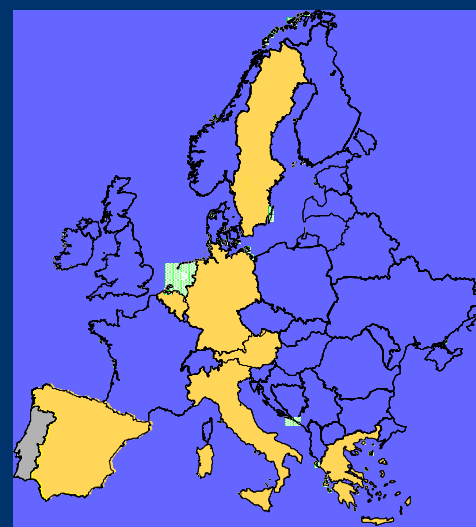
Results

Early results from the trial have been presented elsewhere. Overall, the data showed a 23–30% reduction in the prevalence of use of all substances among students receiving the programme compared to controls.

At the pre-test survey, the prevalence of use was higher in the 'Low' SES areas for all the substances (Table 1), above all for alcohol and cigarettes. An increasing trend was observed among the three SES groups, with the 'High' showing the lowest prevalence in almost all substances. The largest difference between 'Low' and 'High' SES concerned any cigarette smoking (ALO smoking) in the last 30 days.

At the post-test survey, three months after the end of the programme and eight months after the pre-test survey, the difference in prevalence of use between 'Low' and 'High' SES was still high among controls for almost all substances (Table 2). Among interventions, compared to the pre-test, this difference was reduced in all cases except for daily smoking.

The efficacy (Prevalence Odds Ratios at post-test intervention vs. control) was found to vary between areas depending both on type of substance and on stage of the behaviour (Table 3). Concerning cigarette smoking the efficacy was higher in 'Medium' and 'Low' than in 'High' SES if any smoking was considered, while it was higher in the 'High' and 'Medium' SES for daily smoking. The advantage was again larger for the 'Low' SES both in any use of cannabis and any episode of drunkenness. Most estimates, however, did not attain formal statistical significance.



www.eudap.net

Table 1. Pre-test Prevalence of use (last 30 days) by area SES and difference Low to High SES

	High SES		Medium SES		Low SES		Difference Low-High SES
	n/N	%	n/N	%	n/N	%	
ALO smoking	240/2088	11.5	246/1926	12.8	348/1933	18.0	+6.5%
Daily smoking	74/2088	3.5	96/1926	5.0	149/1933	7.7	+4.2%
ALO drunkenness	99/2124	4.7	99/1991	5.0	162/2022	8.0	+3.3%
Regular drunkenness	20/2124	0.9	28/1991	1.5	56/2022	2.8	+1.9%
ALO cannabis	71/2160	3.3	56/2043	2.7	79/2077	3.8	+0.5%
Regular cannabis	41/2160	1.9	29/2043	1.4	48/2077	2.3	+0.4%
ALO drugs	87/2178	4.0	101/2063	4.9	122/2100	5.8	+1.8%

* ALO: At Least Once in the last 30 days

Table 2. Post-test Differences in Prevalence of use (last 30 days) Low to High area SES

	Controls	Interventions
ALO smoking	+6.3%	+5.0%
Daily smoking	+4.9%	+7.0%
ALO drunkenness	+5.1%	+2.7%
Regular drunkenness	+2.9%	+1.6%
ALO cannabis	+0.5%	-0.9%
Regular cannabis	+0.3%	+0.1%
ALO drugs	+0.2%	+0.1%

* ALO: At Least Once in the last 30 days

Table 3. Prevalence Odds Ratios of use (last 30 days) and change % pre-post test, stratified by area SES

	High SES		Medium SES		Low SES	
	Adjusted POR (95%CI)	change pre-post test	Adjusted POR (95%CI)	change pre-post test	Adjusted POR (95%CI)	change pre-post test
ALO smoking	1.19 (0.83-1.71)	+19%	0.79 (0.54-1.18)	-21%	0.80 (0.57-1.14)	-20%
Daily smoking	0.57 (0.30-1.07)	-43%	0.56 (0.34-0.93)	-44%	1.08 (0.70-1.68)	+8%
ALO drunkenness	0.94 (0.60-1.46)	-6%	0.72 (0.51-1.02)	-28%	0.74 (0.52-1.06)	-26%
Regular drunkenness	0.83 (0.44-1.56)	-17%	0.69 (0.41-1.16)	-31%	0.81 (0.43-1.50)	-19%
ALO cannabis	0.85 (0.53-1.35)	-15%	0.91 (0.59-1.40)	-9%	0.60 (0.38-0.94)	-40%
Regular cannabis	0.59 (0.33-1.08)	-41%	0.97 (0.52-1.83)	-3%	0.75 (0.41-1.37)	-25%
ALO drugs	0.81 (0.52-1.26)	-19%	1.05 (0.63-1.74)	+5%	0.78 (0.52-1.15)	-22%

* ALO: At Least Once in the last 30 days

Conclusions

Average social status and prevalence of use at the area level did not modify the efficacy of the programme in a foreseeable or straightforward way. However, the data suggest a possible reduction of the difference in prevalence of use between 'Low' and 'High' SES among pupils receiving the intervention. Factors mediating the programme efficacy across areas of different social status appear to be both substance-specific and dependent on the behavioural stage, and should be further investigated.