

This is the abstract of a study selected by Drug and Alcohol Findings as particularly relevant to improving outcomes from drug or alcohol interventions in the United Kingdom. It was not published by Drug and Alcohol Findings. Unless permission has been granted, we are unable to supply full text. Click on the [Title](#) to visit the publisher's or other document supplier's web site. Other links to source documents also in blue. Hover mouse over orange text for explanatory notes. Free reprints may be available from the authors - click [Request reprint](#) to send or adapt the pre-prepared e-mail message. The abstract is intended to summarise the findings and views expressed in the study. Below are some comments from Drug and Alcohol Findings.

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► **Substance use outcomes 5½ years past baseline for partnership-based, family-school preventive interventions.**

**Spoth R.L., Randall G.K., Trudeau L. et al.** [Request reprint](#)  
**Drug and Alcohol Dependence: 2008, 96(1-2), p, 57-68.**

Two of the most widely recommended US school and family prevention programmes retarded growth in some forms of substance use, especially among youngsters who had already used by their early teens, but there are some methodological concerns over the findings.

**Abstract** 36 secondary schools in the rural US mid-west were randomly allocated to either carry on as normal (the **control** schools) or to one of two prevention programmes. Both were delivered primarily in the seventh grade (ages 12-13), and both featured the [LifeSkills Training](#) (LST) drug education curriculum consisting of fifteen classroom lessons with later 'boosters'. In one set of schools, these lessons were supplemented by the [Strengthening Families Program: for Parents and Youth 10-14](#). This entails seven two-hour evening sessions plus four booster sessions in the following year, during which groups of about six or seven families focus in turn on particular parenting issues and skills. In the first hour of each session, parents and children learn in parallel; in the second, they come together to practice these skills with each other. Only a quarter of the families allocated to these (and **38%** of those actively recruited) attended any of the family sessions, but results are reported for all the families offered the intervention, regardless of attendance.

Questionnaire responses from 1677 pupils surveyed about six months before the grade seven lessons formed the baseline to assess changes in substance use among the same pupils over each of the five years following the lessons. Typically by then aged 17-18, about three quarters of the starting sample responded to the final assessments. For the featured report the sample was narrowed down slightly to pupils who had provided the relevant outcome measures at least three times: at baseline; about a month after the seventh grade interventions; and during at least one follow-up. For these pupils, the analysis tested whether over the five and a half years:

- trends in the growth of substance use differed between the three sets of schools; and

- whether by the end levels of substance use also differed.

First the study assessed how many pupils had started to use alcohol, cigarettes or cannabis. Most consistently positive results were found for cigarettes; growth in the proportion who had tried smoking, and the final proportion who had used by age 17–18, were significantly lower in intervention schools compared to control schools. For cannabis, only the final proportion was significantly lower, and for alcohol, only the growth trend, and then only when the family intervention had supplemented the lessons. When these measures were combined in an index representing experience of all three substances, both the growth trend and the final outcomes favoured the interventions. Experience of getting drunk was also measured and, like drinking itself, only the growth trend favoured the interventions.

Similar analyses for *current* use on at least a monthly basis and other more serious patterns of substance use found no results favouring the interventions. However, there were such results among the fifth of pupils considered at high risk of developing substance use problems. These were the pupils who at the first survey point at age 12–13 had already used two of the three substances. Compared to their lower risk peers, among these pupils both interventions had **consistently** greater effects on overall levels of use across the follow-up years. Further analysis showed that among lower risk pupils, the interventions made no significant difference. But among the higher risk fifth, growth in the average frequency of smoking cigarettes or using cannabis was less than in the control schools, and so too was final average frequency of use. This was not the case for the frequency of drinking or of getting drunk; for these measures only **two** of the eight outcomes significantly favoured the interventions. Among the same higher risk pupils, indices of serious use patterns combining measures of current or past use of **all three substances** consistently favoured the intervention schools.

Summarising their findings, the authors noted that for all substance initiation outcomes, one or both intervention groups showed significant, positive differences compared with the control group in the final follow-up year, and/or significant differences in growth trends over the five years since the interventions. In contrast, across all the pupils, more serious substance use outcomes reflecting mainly current and frequent use were not significantly affected. However, these forms of substance use *were* curbed when the analysis was restricted to higher risk pupils. Though the two interventions often bettered education-as-usual, in no case did one outperform the other. The authors speculated that less convincing initiation-prevention results than in earlier studies might have been due to the family intervention being delayed a year, when more pupils had already initiated substance use. In terms of affecting more serious forms of substance use, pupils already advanced in their substance use patterns responded relatively well, possibly because the messages were more 'real' for them and for their parents. Despite randomisation, there remained some significant baseline differences between control and intervention pupils which might also have obscured intervention impacts, though attempts were made to adjust for these in the analyses.

## FINDINGS

The two programmes tested in the study enjoy among the most widely respected research records in substance use prevention (**LST SFP**). The featured study's strengths include large samples, reasonable follow-up rates, randomisation by school and an analysis controlling for the influence of the school itself, and outcome measures

probing not just experience of the substances concerned, but how serious and lasting this was. Nevertheless the most which can be said is that the LifeSkills Training element probably retarded the initiation of smoking, possibly cannabis use, but not drinking, had no cross-sample benefits in respect of the forms of substance use of greatest concern, but may have had such benefits among the minority of pupils already relatively advanced in their substance use before the interventions started. [Other LifeSkills Training studies](#) have also most consistently found beneficial outcomes in respect of smoking, the programme's original target.

Focusing on the featured study's positive findings might give the impression of more all round success, but in respect of the full samples, these consisted of at most 13 out of 44 findings, and possibly (if arguably more appropriate methodological conventions had been followed) seven or fewer. Greater and more consistent success among the higher risk pupils is a tentative finding because of differences between intervention and control schools, because the study was not set up to test this subsample, and because of some methodological issues. Impacts on the forms of drug use of greatest concern emerged solely from this analysis, meaning that the interventions' ability to reduce these cannot be considered to have been demonstrated, though the possibility that this might prove to be the case is encouraging. Importantly, though many tests did not show the interventions were superior to education-as-usual, **none** indicated that they were *inferior*; the only significant findings favoured the interventions. For more on all these issues see [background notes](#).

Disappointingly, and despite [earlier findings](#) from the study, there was no real hint that adding the family programme improved on the school lessons in terms of the substance use measures reported in the study, though there may have been other benefits. Remaining support the family programme comes mainly from a study [whose findings](#) (impressive as they were) derived from **just over a third** of the mainly white and rural families asked to participate in the study. A [similar limitation](#) applies to a later study of a substantially revised version among poor black families. Because of the way they were designed, these trials could establish benefits only among the minority of families prepared or able to participate in the interventions and complete the studies; they cannot be considered a secure indication of how the interventions would perform if applied across the board. So far in the UK a [small pilot study](#) has established the programme's feasibility among a small set of families.

This leaves two of the most thoroughly researched universal prevention programmes for children of secondary school age with mixed findings of uncertain relevance to how they might perform if truly applied across the board. At least part of the problem lies in not in whether the benefits of these programmes *are* (or at least, can be) real, but in the difficulty of *showing* they are real. Verdicts in respect of [drinking](#) that public health strategies built on education and persuasion are relatively ineffective compared to measures such as restricting availability and raising price, would not be altered by the featured study. For smoking, the [case for education in schools](#) as a public health strategy is considerably stronger. Universal prevention programmes [in general](#), and [school-based programmes](#) in particular, have greater impacts on tobacco use than on use of the other two substances featured in the study.

Some [evidence](#) supports the modest effectiveness of school programmes in preventing cannabis use. But of the four studies on which this verdict was based, [one](#) was a primary school programme not focused on substance use at all but on classroom management, education and parenting, [another](#) was conducted only among pupils for some reason excluded from mainstream education, and the programme studied in a [third](#) has since failed in a [more real-world study](#) conducted by researchers not associated with its development. The remaining [study](#) was conducted in secondary schools and concerned LifeSkills Training, but the impact on cannabis use was not statistically significant. This line up does not offer much support to drug education in mainstream secondary schools as a means of preventing cannabis use.

Mixed findings of a prevention impact from school programmes targeting substance use do not negate the possibility that [general attempts](#) to create schools conducive to healthy development will affect substance use along with other behaviours, nor do they relieve schools of the obligation to educate their pupils on this important aspect of our society. As much as the limited research, such considerations led the UK's National Institute for Health and Clinical Excellence (NICE) to [recommend](#) that alcohol education should be an integral part of national science and health education curricula, in line with [government guidance](#).

*Thanks for their comments on this entry in draft to Richard Spoth of [Iowa State University](#), Andrew Brown of the [Drug Education Forum](#) and David Foxcroft of [Oxford Brookes University](#). Commentators bear no responsibility for the text including the interpretations and any remaining errors.*

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