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▶ Alcohol prevention and school students: findings from an Australian 2-year trial of integrated harm minimization school drug education.
Midford R., Ramsden R. Lester L. et al.
Journal of Drug Education: Substance Abuse Research and Prevention: 2015, pre-publication.



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Substance use education in schools targeting harm reduction rather than prevention of use gains ground with the alcohol-related results from this large-scale Australian trial; the researchers call for the approach to replace ineffective usual lessons.

SUMMARY The featured report documented alcohol-related outcomes from a development of a [previously piloted](#) harm reduction model of alcohol, drug and tobacco education for Australian secondary schools. Though as a result of the learning pupils [may not be any less likely](#) to start using these substances, the aim was that they would do so in a less risky manner and experience less related harm. As the most widely used and, it was thought, most damaging substance, [alcohol was](#) the main focus of the programme.

The tested curriculum [incorporated](#) learning strategies which aimed to: enhance knowledge and negotiation skills; involve pupils in rehearsing problem-solving and problem-prevention strategies; and engage them in deconstructing social pressures to use substances and beliefs about how common substance use is among their peers. Joint home activities were intended to engage parents in the learning process. The programme was also informed by research indicating that social competence, problem-solving, autonomy and a sense of purpose are key attributes of resilient young people, which in turn reinforced the importance of interactive and applied learning strategies. [Rather than](#) telling students what they should think or how they should behave in respect of substance use, the lessons provide a social learning process through which pupils reach their own conclusions by exploring the issues. The expectation was that an interactive discovery process that involves articulation of responsible substance use would reinforce ownership and adoption of that behaviour. Teachers responsible for implementing the programme (the schools' own teachers, not specially recruited) were trained over two days in each of the two years of the programme. Manuals and teaching resources [are freely available](#).

Key points

The featured report documented alcohol-related outcomes from a harm reduction model of alcohol, drug and tobacco education for Australian secondary schools.

In the Australian state of Victoria 14 schools were randomly allocated to the tested programme and another seven to act as control schools which carried on with normal lessons.

As with prior research, the general picture was that the programme retarded age-related increases in the amount pupils drank and the resultant harms they experienced.

The major limitation of the study is that by the final assessment, in control schools data was available from only 56% of pupils invited to join the study, and in intervention school, just 37%.

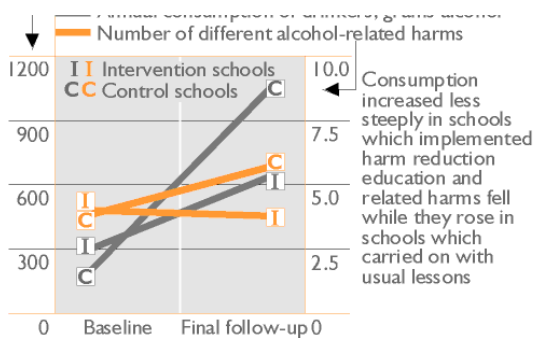
At the start of 2010, in the Australian state of Victoria 14 schools which volunteered for the study were randomly allocated to the tested programme and another seven to act as [control](#) schools which carried on with normal lessons. Of 2,700 year-eight pupils (average 13 years old) in the schools, 1,746 completed a baseline assessment after approval had been obtained from pupils and parents, representing 77% of control-school pupils but only 60% of intervention-school pupils. Later that year pupils received the first set of 10 lessons, two or three months after which they completed a follow-up assessment. Another eight lessons were delivered the following year, after which 1,133 pupils completed follow-up assessments, on average when they were 15 years old; these comprised 56% of the pupils invited to join the study in control schools but just 37% in intervention schools. One intervention school had withdrawn from the second year of the study so was excluded from the final results. At the start of the study just under a quarter of pupils had drank one full drink (about 10g alcohol) and over the past year the drinkers had averaged 21 drinks in control schools but 31 in intervention schools. Only pupils who completed baseline assessments were included in the outcome analyses, not other pupils who may later have joined the same classes.

Main findings

At issue was whether compared to control schools, pupils in schools which implemented the harm reduction lessons improved more (or deteriorated less) in respect of their alcohol-related behaviour, attitudes and knowledge between the baseline and the final assessments about a year and eight months later. The general picture was that the intervention retarded age-related increases in the amount pupils drank and the resultant harms they experienced; details below.

Proportions of pupils who had drank at least one full standard drink increased by slightly less in the programme schools (from 23% to 38% versus 43%), but once other factors had been taken in to account, this difference was not statistically significant. Similarly, though this was more steep in control schools (from 10% to 38% but to 26% — Annual consumption of drinkers, grams alcohol

control schools (from 19% to 36% but to 26% in intervention schools), the rise in the proportions who had drunk at least 50g or just over 6 UK units at one sitting just failed to meet conventional standards of statistical significance. Estimated total yearly consumption more than doubled in intervention schools from 305g per drinker to 632g, but this increase was significantly less steep than in control schools, where it increased nearly fivefold from 211g to 1034g. The average number of different kinds of alcohol-related harm drinkers had experienced in the past year fell slightly from about 4 out of 10 to just under 4 in intervention schools, but rose from about 4 to 6 in control schools, creating a significant difference in trends in the two sets of schools ▶ [chart](#).



Knowledge scores in relation to alcohol, tobacco, cannabis and other illicit drugs improved by about 6 out of 38 answers among intervention pupils but only by about 4 in the control schools, a statistically significant advantage for the intervention schools once other factors had been taken into account. Similarly there was a statistically significant advantage in respect of changes in the frequency of talking to parents about alcohol, which rose from 2.1 to 2.8 occasions in the past year among intervention pupils but from 2.1 to 2.3 occasions among control pupils. Nearly 83% of intervention pupils recalled receiving more than one lesson on alcohol, but only 54% of control pupils. However, the already highly responsible attitudes to drinking in both intervention and control schools at the start of the trial changed little, and no more in the intervention schools.

These analyses for all pupils or all drinkers were supplemented by analyses confined to the roughly a fifth of pupils who at the start of the trial usually drank in a risky manner, consuming five or more standard drinks (10g of alcohol) when they drank. Their average consumption over a year increased much more steeply in control than in intervention schools, ending at 2,563g in control schools versus 2,056g in intervention schools, even though at the start of the study consumption had been lower in control schools. Correspondingly, the average number of different kinds of alcohol-related harm these relatively heavy drinkers had experienced in the past year fell slightly in intervention schools but increased in control schools, creating a statistically significant difference in the trends.

The authors' conclusions

The curriculum achieved its aims: intervention pupils drank less and experienced less alcohol-related harm, both across the entire sample and among initially most risky drinkers. This indicates that pupils who drink can be influenced to do so in a more responsible and moderate manner by a school education programme focused on harm-minimisation, integrating work on legal and illegal substances, and delivered by specially trained teachers employing participatory, pupil-centred teaching methods.

Young people are particularly vulnerable to acute harm from alcohol and other drug use; effective school drug education offers immediate and mass benefit. In Australia there is likely to be incremental prevention benefit if demonstrably effective harm minimisation programmes replace programmes with no demonstrated effect. An approach that covers all drugs in the same curriculum can be more readily accommodated, as well as reinforcing harm minimisation skills relevant across a range of substance use scenarios.

The two-year programme maintained the success achieved in the first year in bringing about change in three factors likely to influence student drinking decisions. First, intervention pupils became more knowledgeable about substance use issues, underpinning more informed decision-making. Second, they talked more to their parents about drinking, likely to influence their behaviour because of the influence of parental values and opinions. Third, intervention pupils remembered receiving more alcohol education than the controls and also more than the norm in Australia. A further consideration is that having peers who received the same harm minimisation programme may have reduced social pressure to drink in a risky manner.

However, limitations include the fact that obtaining consent from parents and pupils meant that over a third of pupils were not included in the study, and that largely due to family mobility, over a third who did complete the initial assessment did not complete the final assessment.

FINDINGS COMMENTARY The curriculum tested in the featured study was based in part on the Australian alcohol harm reduction curriculum SHAHRP. Like the featured curriculum, in both [Australia](#) and [Northern Ireland](#) SHAHRP curbed growth in alcohol-related problems and also meant pupils drank less. These results further strengthen the promise of harm reduction education noted by a [research review](#) associated with [guidance](#) on alcohol education from the UK's National Institute for Health and Clinical Excellence (NICE) issued in 2007. For commonly used substances like (in Australia and in the UK) alcohol, harm reduction may offer education a more realistic and culturally appropriate target for its limited classroom time, one which now has some relatively solid research support. Such issues were addressed in the NICE guidance, which stressed that education should be adapted to its cultural context. For the UK the most salient point was that "alcohol use is considered normal for a large proportion of the population [and] a 'harm reduction' approach is favoured for young people".

One possibly significant finding in the featured study is the increase in the times intervention pupils spoke to their parents about alcohol. An abstinence-oriented approach would have posed these 14–15-year-olds the dilemma of whether to hide their drinking and even their interest in drinking. Harm reduction opens up opportunities for discussions during which youngsters can be open about drinking, making it possible to enrol parents in moderating and making safer such drinking as does occur.

The preceding pilot study not only produced similar alcohol-related results in a different set of Australian schools, but also similar results in respect of smoking. Compared to pupils in the single control school, pupils in the three schools which implemented the harm-reduction curriculum were no less likely to take up smoking, but those who did smoked fewer cigarettes and experienced fewer associated harms.

As in previous Australian and US trials (1 2), a harm reduction approach seemed most beneficial for children who started the trial most engaged with drinking, though in the earlier studies sometimes this took the form of drinking unsupervised by adults, and sometimes drinking supervised. However, in the pilot study of the predecessor curriculum, it exerted its greatest impact on pupils who usually drank in a low-risk manner at the start of the programme, but did not persuade pupils who had already drunk

low-risk manner at the start of the programme, but did not persuade pupils who had already drunk heavily on a single occasion to curb their consumption any more effectively than usual lessons. Importantly, in the featured study and in other studies of harm reduction education, there was no indication that this approach led more pupils to start drinking; usually the opposite trend was found.

The major limitation of the study is that by the final assessment, in control schools data was available from only 56% of pupils invited to join the study, and in intervention school, just 37%. This degree of attrition raises questions over the generalisability of the results to all the pupils who outside the context of a research study would have received all or some of the lessons, and over whether the 'level playing field' intended to be assured by randomisation was sustained. For example, if pupils who would have responded least well to harm-reduction education tended to be missing, the results would have been biased in favour of the curriculum. Even at the start of the study there were some substantial demographic differences between pupils in intervention and control schools, and on average intervention pupils were drinking more heavily. These differences were adjusted for in the analysis but such adjustments are not a substitute for achieving comparability between samples, and there may have been other ways the pupils differed which were not captured by the study. The multiple outcomes measured in respect of drinking might have been considered to have required a stiffer test of statistical significance, and the key measure of harm took no account of the number of times each of the ten types of harms were experienced nor the severity of the events. We don't know as yet what the impacts were on use of and harms from other substances, nor whether alcohol-related prevention effects will be sustained in the year after the programme ends, both of which will presumably be the subject of later reports from the study. Finally, several of the researchers were involved in developing the programme they evaluated, raising the possibility of their somehow favouring the programme, a **risk endemic** in substance use prevention research.

For more on harm reduction education and on the UK policy and practice context see the most recent [Findings analysis](#) of the SHAHRP curriculum.

Thanks for their comments on this entry in draft to research author Richard Midford of Charles Darwin University in Australia. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

Last revised 20 May 2015. First uploaded 12 May 2015

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