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## ▶ Universal alcohol misuse prevention programmes for children and adolescents: Cochrane systematic reviews.

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Perspectives in Public Health: 2012, 132(3), p. 128-134.

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The reviewers here helpfully amalgamate the findings of their three authoritative reviews of alcohol prevention programmes in the school, among families and parents, and combining these and/or other components. Some programmes they say work, but why and in what contexts remains unclear.

**SUMMARY** The featured review brought together the findings of three reviews conducted for the Cochrane collaboration, each concerned with the effectiveness of 'universal' programmes aiming to prevent the development of drinking or drink-related problems in young people aged 18 or younger. As opposed to programmes for high-risk groups, universal programmes target large groups such as an entire age range, whether or not they are known to be specially prone to substance use or problems. Each trial had to have randomly allocated participants to the evaluated programme or to a comparison group either offered no alcohol prevention intervention or an alternative approach, against which to benchmark the effects of the evaluated programme. Randomisation helps ensure that any differences in outcomes between intervention and comparison groups were not due to their being different to begin with, rather than the effects of the programme(s). All three reviews took in studies available up to the middle of 2010 in whatever language. Interventions included those targeted specifically at drinking and more generic programme intended to affect this among other outcomes, such as drug use and healthy and pro-social lifestyles.

The three component reviews have previously been analysed for the Effectiveness Bank. Readers are referred to these analyses for more detailed findings:

School-based programmes. Included trials which randomly assigned pupils (whether individually, as classes, schools or some other 'unit of analysis') to a curriculum or psychosocial intervention expected to affect drinking versus an alternative school and/or non-school-based programme, or just the standard curriculum.

Family-based programmes. In family settings, universal prevention typically entails developing parenting skills including providing support, nurturing, establishing clear boundaries or rules, and monitoring children's activities. In one important respect, family-based programmes differ from those based in schools: rather than directly intervening with the young people, they intervene via their parents and family.

Multi-component programmes. These operate simultaneously in several settings. The typical combination supplements school lessons with a family-based intervention; often also included are community involvement mechanisms and media promotions and campaigns.

Based on the available reports, the methodological quality of the trials was generally poor. In particular, it was often not clear that adequate precautions had been taken in the randomisation process and to 'blind' assessors to which intervention participants had been allocated, or whether appropriate measures had been taken to cater for the fact that data for some of the participants was missing.

## **Main findings**

School-based programmes Of the 53 trials, 41 were conducted in North America. Relative to a standard curriculum, six of the 11 trials of alcohol-specific interventions found some statistically significant reductions in drinking. Another 39 studies tested more generic programmes. Of these, 14 found some statistically significant reductions in drink-related outcomes relative to a standard curriculum. Some apparently positive results may have been due to inadequate adjustment for 'clustering' effects (eg, of children in a class and of classes in schools), and in some studies results were confined to certain subgroups and/or some measures of drinking but not others. Most commonly, significant effects related to drunkenness and binge drinking. Impacts tended to last longer after generic than after alcohol-specific or other programmes. Overall, the evidence is more convincing for certain generic rather than alcohol-specific programmes. Among generic programmes, those based on psychosocial or developmental approaches (life skills in Life Skills Training; social skills and norms in Unplugged; behaviour norms and peer affiliation in the Good Behaviour Game) were most likely to report statistically significant effects over several years when compared to standard school curricula or other types of interventions.

Family-based programmes All but one of the 12 trials were conducted in North America. Nine recorded statistically significant reductions in drinking, in some cases over longer as well as shorter term follow-ups. One study recorded apparently negative effects which may have arisen by chance or due to methodological issues. In another, though ineffective on its own, the family-based intervention was effective when combined with a school-based intervention. There is some evidence for the short to medium-term success of gender-specific interventions for daughters, typically involving their mothers. Some trials found impacts only among children already using substances at the start of the trial.

**Multi-component programmes** All but three of the 20 trials were conducted in the USA. Relative to comparison conditions, 12 trials reported statistically significant reductions in drinking lasting up to three years among children allocated to multi-component programmes. Six of the 20 trials found no statistically significant differences, and in another significant reductions were confined to children already drinking at the start of the trial. It was unclear whether in general adding further prevention components to an existing programme improved outcomes; reports on four trials indicated some possible benefits, but another three trials found no such indications.

## The authors' conclusions

The reviewed evidence supports the effectiveness of some but not all universal programmes for alcohol misuse prevention among young people. Given the variability in the results, particular attention should be paid to the content of programmes and the context in which they are delivered, including the setting, key personnel and target age. A programme may for example be effective where adolescent alcohol drinking is rare, but ineffective where it is the norm and reflects powerful social and cultural pressures to drink.

Specifically in the school setting, some studies found no effects of preventive programmes, others statistically significant effects. Most commonly observed positive effects were for drunkenness and binge drinking, and it seems that certain generic psychosocial and developmental prevention programmes can be effective and could be considered as policy and practice options. These include the Life Skills Training programme, the Unplugged programme, and the Good Behaviour Game.

Most of the studies in the family review reported positive effects. These were small but generally consistent and persisted in to the medium to longer term.

Overall there is some evidence that multi-component interventions can prevent alcohol misuse in young people, but insufficient evidence that interventions with multiple components are more effective than interventions with a single component. Most studies in the multi-component review found significant effects persisting in to the medium and longer term, but a notable proportion reported statistically non-significant results. Seven studies enabled an assessment of the impact of single versus multiple prevention components. Of these, only one showed a benefit from components delivered in more than one setting.

The psychosocial, developmental orientation of effective universal prevention programmes is typically designed to impact on a range of health and lifestyle behaviours (for example use of cannabis, tobacco, harder drugs, and antisocial behaviour) among young people, offering an advantage over alcohol-specific programmes.

The fact that some studies found positive effects and others none may mean that universal alcohol misuse prevention programmes are in fact ineffective, and that some studies find positive results purely by chance. Especially for family-based prevention programmes, this seems unlikely given the proportion of studies which found statistically significant effects and the sizes of their samples. It could however be that this proportion of positive results merely reflects a prevailing bias towards finding preventive effects. In all three Cochrane reviews, the nature of the evidence base makes this a plausible explanation for seemingly positive results.

Despite improvements in more recent studies, the studies remain weakened by important limitations in their methodologies and in how adequately they are reported. For example, the reviews found instances when clustering effects were not accounted for, and when it was not clear that randomisation had been adequate or that outcome assessors had been 'blinded' to the intervention participants had been allocated to. Several studies analysed their results for particular groups within the overall sample without making it clear whether these analyses had been planned in advance, or only after the results of the study were known. The latter possibility means the results can only be considered suggestive of hypotheses to be tested in studies designed in advance for that purpose. On the other hand, several studies may have failed to look for what would have proved to be significant effects in certain subsamples.

**FINDINGS COMMENTARY** See the Findings analyses of the three component reviews for comments on the review of school-based programmes, and for extended commentaries on the reviews of family-based and multi-component programmes. These point out that the studies generally pitted family or multi-component interventions against no programme or a minimal one. Arguably the more meaningful question is whether with a limited prevention budget it is cost-effective to reinforce core components (generally school-based drug education) with family, community and media elements, or whether the desired outcomes are achieved just as well by core elements alone. On this issue we judged the evidence thin and not on balance in favour of extra components including family and parenting programmes.

In relation to school programmes, in line with the featured review Findings has also highlighted the effectiveness of generic prevention programmes, some which do not mention substance use at all, but instead target parenting or school affiliation and classroom management techniques which affect vulnerability to developmental problems.

It remains the case however that in respect of preventing harmful drinking, no type of psychosocial intervention has attracted as much scientific support as population-wide changes like price rises and outlet restrictions, the effects of which inescapably influence decisions about drinking across the entire population, even if for some the resulting decision is to drink just as much but to spend more or travel further or change what you drink. Both types of approaches have a place in an overall strategy, and probably one can reinforce the other, but the driving force behind widespread drinking reductions is likely to lie with factors beyond the reach of education, information or family-based approaches. The relative strength of environmental preventive interventions compared with psychosocial and educational prevention programmes is also supported by the lead author of these Cochrane reviews in recent conceptual and theoretical work that considers different types of prevention interventions (1 2 3 4 5).

Thanks for their comments on this entry in draft to review author David Foxcroft of Oxford Brookes University in England. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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