


DRUG & ALCOHOL FINDINGS *Review*

analysis

This entry is our analysis of a review or synthesis of research findings considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original review was not published by Findings; click [Title](#) to order a copy. [Links](#) to other documents. [Hover over](#) for notes. [Click to highlight](#) passage referred to. [Unfold extra text](#)  The Summary conveys the findings and views expressed in the review. Below is a commentary from Drug and Alcohol Findings.

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► [Family-based prevention programmes for alcohol use in young people.](#)

Gilligan C., Wolfenden L., Foxcroft D.R. et al.

Cochrane Database of Systematic Reviews: 2019, Issue 3. Art. No.: CD012287.

[Consultation draft subject to amendment and correction.] Findings of this comprehensive review seem to almost entirely deflate what in the mid-2000s was a bubble of enthusiasm for parental programmes as a way to prevent or reduce drinking among teenagers, yet some such interventions have had remarkable results.

SUMMARY This review updates one published in 2011 [analysed](#) for the Effectiveness Bank, and extends its analyses of family-based interventions to prevent or reduce drinking among young people aged up to 18 beyond 'universal' interventions to those classed as 'selective' or 'indicated'.

In the context of the sector being investigated, 'universal' interventions are those which target parents of all children regardless of the risk they might become drinkers, usually aiming to delay the start of drinking among the children or to reduce how often or how much they drink. With similar aims, 'selective' interventions target parents whose children have an elevated risk of substance use due to social or family factors. 'Indicated' interventions target parents whose children are already known to drink, generally with a view to reducing consumption, the frequency of heavy drinking, or reducing alcohol-related harms.

Approaching prevention via the parents is thought to work by promoting appropriate parenting strategies likely to develop positive social norms in the children and to help them resist negative influences among their peers and the broader society. Positive parenting strategies include rule-setting, appropriate communication, monitoring of the children, and conveying positive values and attitudes.

Such programmes are often appended to school-based prevention curricula for the children, but may also be standalone interventions.

Commonly they focus on parent-child communication and relationship building, developing the child's social competence and self-regulation skills, and intensifying the parents' involvement with their children.

To assess whether overall these types of programmes have been found to reduce drinking the



Key points

From summary and commentary

Comprehensive review amalgamated findings from studies of family-based interventions which assessed whether they prevented or reduced drinking among school-age young people aged up to 18.

Overall the review found little evidence that interventions with parents or families applied universally to all children, to high-risk groups, or to children already drinking, reduced adolescent drinking compared to no intervention, standard care, or a child-focused intervention alone.

There were some more promising findings, but these derived from few studies conducted by even fewer lead researchers and their results cannot be relied on as an indication of what might be achieved if the 'best' interventions were selected to be widely implemented, or drinking was assessed over a longer period than the up to four years analysed for the review.



reviewers searched for studies which had randomly allocated school-age children (aged up to 18) and their parents to a parent-based **alcohol** prevention intervention versus either an alternative programme or no special programme at all. Preference was given to outcomes reported or estimated across the entire sample rather than just children followed up or whose families completed the interventions, and to drinking **as assessed** at the latest follow-up within four years of the intervention. When studies adjusted their results for other influences on drinking, these adjusted figures were used. Rather than individual children, many studies allocated groups such as classes or schools to the intervention and the comparator. If the study did not adjust for the bias this can generate, the reviewers did, and used the adjusted figures in their analyses.

In total 46 trials (29 from the USA) were found involving 39,822 participants or families. In 35 trials the comparison was with usual care or no intervention. A further 12 compared the effects of an intervention aimed at the children with the same intervention coupled with family/parent components. Universally applied interventions were trialled in 27 studies, selective approaches in 12, and indicated in seven. Children were on average older in trials of selective (about 13 years) and indicated (about 15.5 years) than in trials of universal interventions (about 12 years).

Universal and selective interventions were delivered to parents in a variety of ways, including print materials, CDs or videos, via internet/computers, presentations or workshops at the child's school, face-to-face group, individual or family sessions at the school or a community venue, or parent/family sessions in the home or at a healthcare setting. All indicated interventions were delivered through face-to-face sessions with parents and children separately or together, or a combination of both. In half the trials the children too were involved in the intervention through classroom curriculum or other adolescent-focused resources, or face-to-face sessions in individual, group or family formats.

To analyse the outcomes of these trials the reviewers amalgamated data from studies where interventions and outcome measures were considered similar using **meta-analytic** techniques. The outcomes pooled were:

- *prevalence* of alcohol use, ie the proportion of children who had used alcohol either ever, in the last six months, or in the past week;
- *frequency* of drinking, including the number of occasions of use in the last 30 or 90 days; and
- *volume* or amount of alcohol consumed, including the number of drinks in the previous 30 days, or a score generated from the quantity typically drank on each occasion and frequency measures.

Main findings

Findings are presented first for studies which compared the evaluated intervention with no special intervention at all, then which compared the effects of adding family/parent components to an intervention aimed at the children. In each case, amalgamated findings are presented for all studies, and in so far as this is appropriate and feasible, separately for those testing universal, selective or indicated interventions.

Parental interventions versus no intervention or usual care

Generally these analyses found no statistically significant differences indicating that parental interventions had reduced drinking.

Across all the studies the only statistically significant finding on the prevalence, frequency or volume of drinking, was a very small difference indicating a reduction in volume after parental interventions compared to no intervention or usual care. This became marginally insignificant when studies at a greater risk of producing biased results were excluded from the analysis. A non-significant, but relatively large, reduction in frequency of drinking after parental interventions compared to no intervention or usual care became marginally reversed when studies at a higher risk of bias were excluded.

Findings were similar when the analysis narrowed in on studies of interventions applied universally to all children regardless of their risk of drinking or drink-related problems. There were no statistically significant results for prevalence or frequency of drinking, and again the only statistically significant finding was a small difference indicating a reduction in volume after a parental intervention compared to no intervention or usual care. This was found across three studies whose results could be amalgamated. Another three whose



results could not be included in the analysis also reported statistically significant reductions in the volume of drinking after a parental intervention compared to no intervention or usual care.

Since there were so few of these studies, results from those trialling selective or indicated interventions were pooled. There were no statistically significant differences in respect of any of the drinking outcomes either across all studies or those involving different types of children/families, after different follow-up periods, or more or less intense interventions. The picture was similar across studies whose results could not be included in the amalgamated findings. The most promising finding was a non-significant and therefore possibly chance finding of a reduction in the frequency of drinking across five studies. Within these studies, findings from the three targeting ethnic minority children registered a large reduction in frequency which came close to being statistically significant, though findings substantially differed between the studies.

Impacts of adding parental components to a child-focused intervention

These studies tested whether 'added value' was generated by supplementing a child-focused intervention with family/parent components. No such findings emerged which might not have been due to chance fluctuations.


No studies reported on volume of alcohol. Both prevalence and frequency of drinking were lower when family/parent components had been added and remained lower when studies at a greater risk of producing biased results were excluded from the analysis. Though the size of these differences were appreciable, with variable findings and so few studies (at most four) included in the analyses, the differences were not statistically significant, meaning that the possibility that these were chance results could not be excluded. The most promising findings were a relatively substantial but still non-significant reduction in prevalence across two studies judged at low risk of bias, and a near-significant reduction in frequency of drinking across three studies at low risk of bias.

Findings were similar when the analysis narrowed in on studies of interventions applied universally to all children regardless of their risk of drinking or drink-related problems. Frequency and prevalence measures favoured adding parental components, but not consistently enough to result in a significant finding across so few studies. Only frequency of use could be analysed for selective and indicated studies, and then in only two studies of indicated interventions whose results amalgamated to virtually no difference from adding parental components. Studies whose results could not be amalgamated gave a similar picture.

The authors' conclusions

Overall this comprehensive systematic review with meta-analyses found little evidence that universal, selective, or indicated interventions with parents or families are effective in reducing adolescent drinking compared to no intervention or standard care or a child-focused intervention alone. Some evidence suggests that under certain circumstances such interventions may be effective. However, in light of the number of analyses conducted, variation in effects, and the high risk of bias across the studies, the overall interpretation of outcomes indicates no effect. There seemed no clear differences between the interventions which did and did not work.

Findings on frequency of use suggested that interventions aimed at low-risk children can be counterproductive, while more targeted selective and indicated interventions aimed at higher risk children are more likely to reduce frequency. Among these higher risk children there is both more scope to reduce frequency and arguably it is a more relevant measure than prevalence, since preventing use altogether may be less achievable than reducing drinking. However, this speculation is not supported by findings on volume of drinking.

 **FINDINGS COMMENTARY** These findings seem to almost entirely deflate what in the mid-2000s was a [bubble of enthusiasm](#) for parental programmes in the form of the Strengthening Families Program, leading to its being adapted for the UK. However, the type of analyses undertaken by the reviewers pooled results from

different programmes as if these were the same intervention implemented in different circumstances in order to reach a verdict on parental programmes in general. In fact of course, they differ, and some may actually be effective, at least in certain circumstances. Arguably this is the more practically relevant issue, since commissioners and services do not mount a 'parental programme in general', but a particular one, and would want to choose one which has a good record, even if this is not enough to outweigh less effective programmes when their results are pooled.

To address this issue we can look at the studies which generated the review's most promising findings. This closer look at the original studies shows that even the more promising results found by the review cannot be relied on as an indication of what might be achieved if the 'best' interventions were selected to be widely implemented, or drinking was assessed over a longer period.


Where did the promising findings come from?

The only statistically significant results were for volume of drinking across all trials and across trials of universal interventions. Possibly this was due to the narrower range of studies which could be included in these analyses – just five across all trials compared to 12 for prevalence and eight for frequency of drinking. It seems possible that had all the studies which reported prevalence or frequency also reported volume, there would have been no significant effects, since volume is a composite of frequency and amount drunk on each occasion. There was also a near-significant finding in the review indicating that frequency of drinking might be reduced by universal interventions.

Just three studies were responsible for these more encouraging findings – all from the same lead researcher, likely to have come from a highly self-selected set of children and parents, in two studies limited to mother-daughter pairs. In [one case](#) the reviewers seem to have mistaken a frequency measure for volume, in [another](#) the volume measure covered the last 30 days of the intervention, with no indication whether the effect lasted, and in [another](#) the finding on frequency was dependent on the follow-up period chosen for the review; in the context of negative findings across the whole follow-up period, the positive findings at this point can be seen as anomalous.

There was also a non-significant reduction in prevalence arising from a [single study](#) of a universal intervention, but again this was an artefact of the review's choice of which follow-ups to focus on. Across the entire follow-up period there was no reduction in drinking attributable to the family/parenting intervention.

Among studies of selective or indicated interventions, the most promising finding was a non-significant reduction in the frequency of drinking, which came close to being statistically significant across the three trials targeting ethnic minority children. In both cases a [single study](#) was responsible, conducted among a very distinct group – drug and/or alcohol using gang-affiliated Mexican-American adolescents – and the findings were possibly biased due to loss of participants to follow-up.

To unpack this summary of the key studies [unfold](#)  [the supplementary text](#). It includes consideration of whether the Swedish Örebro intervention is an exception to the general ineffectiveness of parental interventions.

 [Close supplementary text](#)

Universal interventions

Two studies with statistically significant reductions associated with a universal parental intervention were responsible for the positive results on volume; results from none of the other three approached significance, and two were in the 'wrong' direction. Both the positive studies were from the same lead researcher and tested an intervention for mothers and daughters. In [one of the studies](#) the measure (detailed in [this study](#)) **does**



not seem to have been of volume at all, but of frequency. Compared to no special intervention, one year after baseline it documented significantly fewer occasions of drinking over the past 30 days among girls (11–13-years-old at the start of the trial) after they had been assigned to what was intended to be nine weekly sessions during which mother and daughter worked through a computerised programme. It aimed to help mothers learn to better communicate with their daughters, monitor their behaviour and activities, build their daughters' self-image and self-esteem, establish rules about and consequences for substance use, create family rituals, and refrain from communicating unrealistic expectations. The girls were intended to develop skills for managing stress, conflict, mood, refusing peer pressure, bolstering confidence in what they can achieve, and satisfaction with how they look. An extraordinarily high 97% of the pairs completed all nine sessions, indicative of a highly committed and highly self-selected sample.

The second study was very similar in methodology and in the intervention it trialled, but specifically recruited black and Hispanic girls aged 10–13, who joined the study with their mothers. The pairs were randomly allocated to a control group or to work together through a computerised programme. As assessed at the end of what was intended to be 10 weekly sessions, girls allocated to the programme had drunk on average fewer drinks over the past 30 days, a period when they would still have been working through the programme. There is no information on whether this result outlasted their and their mothers' engagement with the programme. In this study it seems that only mother-daughter pairs who completed the intervention programme were directed to the online follow-up measures. Reassuringly, the study records few drop-outs between baseline and these measures being taken. Nevertheless the possibility remains that the requirement to complete – one which could not be replicated among the controls – biased outcomes by excluding non-completers among the intervention pairs. Alternatively, the low rate of drop-out suggests another extraordinarily high completion rate.

The same lead researcher was responsible for the study which led the featured analysis to record a near-significant reduction in frequency of drinking associated with universal parental interventions. In turn this was due to the review's choice of up to four years for its follow-up periods, meaning that the three-year results from the study – the ones closest to but not above four years – were the ones included in the review's amalgamations of findings. Looking at the study more broadly reveals that the featured review's modestly promising findings on frequency were an artefact of its choice of which follow-ups to focus on. Had earlier or later results been used instead, its findings on frequency would have been even less encouraging. Described in the Effectiveness Bank, the study recruited youngsters (boys as well as girls) aged 10–12. The 514 who participated were primarily black or Hispanic. Children at different sites were randomly assigned to a control group which received no special intervention, to a 10-session CD-ROM alcohol prevention programme, or to this plus parental components. The CD-ROM depicted characters from the same backgrounds as the young people in an "edgy urban landscape". Players decided how to react to different scenarios and then witnessed the consequences of their decisions. They could choose again if these were negative until the 'right' course was taken. Parental components consisted of a video and newsletters explaining the project and attempting to engage parents in strengthening the family structure and helping their children assimilate the CD-ROM. Children and parents were offered two annual booster sessions. For the parents the first took the form of a group workshop and the second a new CD-ROM to



work through with their sons or daughters. Over 90% of the children completed the initial and booster sessions and from 67% to 83% of parents completed the parental components – again, extraordinarily high figures.

Of greatest interest in the current context is whether adding the parental components to the child's CR-ROM-based intervention further reduced the frequency of drinking. This was not the case when measures were taken after the initial programme had ended nor one and two years later, but at three years there was a small, statistically significant difference favouring the parental supplements. That was, however, not to last. There were no differences on drink-related measures when most of the same sample were [followed up](#) when aged 17–18, nor when the children were a year older when [another analysis](#) from the same study focused on their drinking.

In all these studies it seems likely that the children and parents who volunteered for and completed the trials were particularly keen on developing the skills on offer and on controlling the substance use of the children. It could be that the lead researcher and his teams hit upon home-based, engaging interventions which required relatively little effort from the parents and children, but it could be too that high completion rates were indicative of highly committed and highly self-selected samples. If, like school-based drug education, the programmes were implemented routinely across the adolescent population, completion rates might be lower and results might differ. Offered on a voluntary basis, take-up of [online health promotion](#) is low especially among high-risk groups, and concentrated among the highly educated population. Typically in Britain (see for example [1 2 3](#)) and [elsewhere in Europe](#), attendance for parent or family interventions is very low, especially among parents most in need of parenting support and with lenient attitudes to substance use.

Another promising finding was a relatively substantial but still non-significant reduction in prevalence across two studies judged at low risk of bias, due to the findings of a [single study](#) from the USA [included](#) in the Effectiveness Bank. It evaluated the Strengthening Families Program for 10–14-year-old children, which consists of seven two-hour evening sessions plus four booster sessions in the following year where groups of about ten families focus in turn on particular parenting issues and skills. In the first hour of each session parents and children learn in parallel, then in the second come together to practice these skills with each other.

The key study tested whether adding the Strengthening Families Program to a drug education curriculum improved outcomes among children aged 12–13 at the start of the trial. Only 38% of families allocated to these attended any of the parenting sessions, but results are reported for all the families regardless of attendance. A year after the intervention was completed about 26% of their children went on to start drinking compared to 35% allocated only to drug education. However, this reduction was not to last. [By the time](#) the children were aged 17–18, on no substance use measure did adding the family components improve on drug education alone, including measures of current drinking and rates of growth in drinking over the entire follow-up period. It seems the earlier finding used by the featured was not representative of how things panned out over the longer



term; again the review's findings of a reduction in prevalence were an artefact of its choice of which follow-ups to focus on.

Is the Örebro intervention an exception?

Though not outstanding in the review due to the measures used not being those favoured by the review, and one study being excluded because not a randomised trial, a more encouraging picture of universal parental interventions emerges from trials of the Swedish Örebro intervention. It aims to bolster parental rule-setting in relation to the drinking of their adolescent children, and has in trials sometimes been allied with classroom alcohol education. The parenting intervention entails a brief presentation from an alcohol expert at the first parents' meeting at the start of each school year on the adverse effects of youth drinking and the negative effects of permissive parental attitudes towards under-age drinking. After this, parents of children from the same class are meant to meet to agree a shared set of rules about alcohol use, and a summary of the presentation and the result of the classroom discussion is mailed to all parents.

In the [original trial](#) conducted in Sweden by the programme's developers, the parental intervention its own was found to halve the increase in the frequency of drunkenness between ages 13 and 16 both among pupils in general and among high-risk pupils who had already been drunk at age 13. However, a [later Swedish trial](#) conducted by independent researchers failed to replicate these findings. [Another trial](#) was conducted in the Netherlands, which randomly allocated 19 schools to the parenting intervention alone, to classroom alcohol education alone, to the combination of both, or to act as [control](#) schools which carried on with [alcohol education as usual](#). The trial tested whether effects 34 months after the start of the study and when the pupils averaged just over 15 years of age. As a year before, the parenting elements alone or alcohol education alone had made no statistically significant differences to drinking, but the impacts of both together in retarding uptake of weekly and heavy weekly drinking were even greater than a year before. Compared to 59% and 27% in education-as-usual control schools, after the combined intervention 49% and 15% of pupils were drinking weekly or drinking heavily each week. However, though it could have done, this study did not directly test whether adding the parental intervention to alcohol education significantly improved outcomes compared to alcohol education alone, and other studies were not set up to make this comparison. From figures in the [earlier report](#) it seems likely that had this comparison been made there would have been no significant differences, leaving it unclear whether it is worth adding the Örebro intervention to a well-structured classroom alcohol education/prevention programme.

Selective or indicated interventions

Among studies of selective or indicated interventions, the most promising finding was a non-significant reduction in the frequency of drinking across five



studies, which came close to being statistically significant across the three targeting ethnic minority children. In both cases a [single study](#) was responsible, conducted among a very distinct group – drug and/or alcohol using gang-affiliated Mexican-American adolescents aged 12–17.

The intervention being tested was a 16-session family therapy programme adapted to the target group in ways intended to strengthen adolescent and parental engagement. Its effects were compared to those found for a control group merely offered referral to services if they asked for it. The featured review said the findings were possibly biased due to loss of participants to follow-up and the fact that this was not balanced across the intervention and control groups. Just 58% of the youngsters recruited to the study completed the follow-up six months after the intervention ended – creditable among this sample, but still leaving doubt over whether the findings would have been different had more completed the measures. Compared to a no-intervention control group, at six months youngsters allocated to the intervention has been drinking on significantly fewer days over the past 30 days. It was one of only two statistically significant findings among the 15 measures used to evaluate the intervention, and was marginally significant; had the significance bar been raised to account for the number of variables tested, almost certainly it would not have remained significant. Effects were seen on drinking but not on other forms of substance use possibly, thought the researchers, because parental drinking was lowered by the intervention and alcohol became less available at home, while illicit drugs were obtained through other channels.

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