


# DRUG & ALCOHOL FINDINGS *Review analysis*

This entry is our analysis of a review or synthesis of research findings added to the Effectiveness Bank. The original review was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). [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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## ► [Single-session alcohol interventions for heavy drinking college students: A systematic review and meta-analysis.](#)

**Samson J.E., Tanner-Smith E.E.**

**Journal of Studies on Alcohol and Drugs: 2015, 76(4), p. 530–543.**

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*Personalised, interactive, and motivational approaches dominate in this study of the effectiveness of single-session brief interventions for heavy-drinking college students. But, overall the effects of brief interventions remain modest in clinical terms.*

**SUMMARY** Excessive drinking among college and university students is associated with a range of health and social problems, including injuries from car crashes, drink-driving arrests, assault, sexual abuse, and the development of alcohol use disorders (1 2 3), so understanding the most effective interventions specifically for heavy-drinking students is demonstrably important.

Single-session brief interventions present an attractive option to administrators working with limited resources (1). The featured [meta-analysis](#) synthesised available literature on the effectiveness of single-session brief interventions for heavy-drinking college students by combining outcomes from studies comparing their effects with a [control](#) or comparison group of no-intervention, a waiting list, or routine response.

Eligible studies tested the effects of a single-session (up to five hours of contact time) brief alcohol intervention for undergraduate students age 25 years or younger, designed to directly address participants' drinking without the use of pharmacotherapy. Participants exhibited [heavy or hazardous levels](#) of drinking. Studies could be conducted in any country and reported in any language, after 1979.

The outcome of interest was an amalgamation of all the measures in a study indicative of the amount of alcohol consumed – measured by calculating the average

difference in [effect size](#) (a standard way of expressing the magnitude of intervention impacts even when these are measured in different ways) between students allocated to brief interventions and alternative or no interventions, where positive effect sizes represented better outcomes in the intervention group.

A comprehensive search of the evidence base revealed 73 studies, calculating 662 effect sizes. The researchers estimated the overall effect of the interventions, and the variability in effects across a range of factors: pre-test effect size, study method and quality, publication characteristics, participant demographics, intervention details, and outcome measure characteristics.



### Key points From summary and commentary

The featured study investigated the effectiveness of single-session brief alcohol interventions among college students.

Brief interventions were found to be consistently more effective than alternative or no interventions; the largest effects were associated with personalised, interactive, and motivational approaches.

The statistically significant benefits were modest in clinical terms. However, the authors suggest this could nonetheless “interrupt the trajectory from heavy drinking to alcohol use disorder”.

## Main findings

The average duration of interventions was 41 minutes, and interventions ranged from 2 minutes (for example, when personalised feedback reports were provided to students) to 180 minutes. There was no evidence that duration influenced the effect of the brief intervention.

The average effect size of brief interventions was 0.18. The results indicated that single-session brief interventions significantly reduced drinking among heavy-drinking college students compared with alternative or no interventions, and this remained the case across different study contexts. There were, for example, minimal difference in effects by study method, quality, publication details, participant demographics, and type of outcome measure.

Studies using motivational approaches (**motivational interviewing** or motivational enhancement therapy) reported larger effects than those using psychoeducational approaches. Studies using motivational interventions and personalised feedback reported average effect sizes that differed significantly from zero, but those based on cognitive-behavioural or psychoeducational approaches did not. Analyses examining whether the presence of a feedback component within **motivational interviewing** or motivational enhancement therapy interventions or the presence of specific intervention components (feedback, norm referencing, goal setting, and decisional balance) within any intervention moderated effect size produced no significant results.

The authors found no evidence of beneficial or harmful effects for interventions that relied primarily on psychoeducational techniques, while findings for cognitive-behavioural interventions were inconclusive because of a "large standard error", meaning that the results varied substantially across different studies and may not be representative of the average impact across all such interventions.

There was evidence that long-term effects were weaker than short-term effects, with effects decreasing to non-significance by 12-month follow-ups. However, as this finding was based on only 10 studies (124 effect sizes), it "must be interpreted cautiously".

## The authors' conclusions

The positive, statistically significant average effect size was similar across the range of studies, providing some confidence in the robustness of observed effects across different settings and student populations.

The results were largely consistent with prior research, suggesting that substance use interventions for young people yield more favourable outcomes when they use personalised and interactive rather than solely educational or informational approaches (1 2 3 4). Also consistent with previous literature reviews, results indicated that long-term intervention effects were weaker than short-term effects (1 2 3).

Inconclusive results from cognitive-behavioural approaches may reflect the wide variations in how cognitive skills training was implemented. It is also possible that the interventions weren't representative of most cognitive-behavioural therapy programmes as cognitive-behavioural therapy interventions typically include multiple sessions (rather than a single session).

Finally, though the average effect size of single-session brief alcohol interventions reported in this study would be considered modest in clinical terms, even relatively small clinical effects have the "potential to interrupt the trajectory from heavy drinking to alcohol use disorder". The average effect size of 0.18 would translate into a seven percent gain for the intervention group participants relative to alternative or no interventions, or into participants consuming an average of 0.37 fewer drinks per week one month after the intervention.

**FINDINGS COMMENTARY** Combined findings from 73 studies showed that single-session brief interventions were more effective at reducing drinking among heavy-drinking college students than comparison approaches.

In clinical terms, the average effect size of brief interventions was "modest". While the authors didn't discount the cumulative benefits of even modest interventions, they did argue that researchers should continue developing more potent interventions by refining elements that appear most effective.

Of the brief interventions identified, motivational therapies and personalised feedback were the most consistently effective, raising the possibility that feedback alone might be *good enough*, and presumably easier to implement widely, with little training.

Like every [meta-analysis](#) or literature review, the featured review was limited by and limited to the research already in the field. In this particular case, there were notable gaps in studies that directly compared different single-session interventions for heavy-drinking college students, constraining the researchers' ability to untangle the effects of feedback and motivational modalities, and studies that measured longer-term impact.

Looking at 'what works' in motivational approaches, another study added to the Effectiveness Bank [reported that](#) bolstering students' confidence that they could curb their drinking and resist risky drinking was key to their success. US students who broke college drinking rules and were required to undertake an alcohol programme responded better to three hours of group motivational interviewing than six of alcohol education. The authors attributed these findings, in part, to the positive, mutually reinforcing interactions in the motivational groups. Unlike students in the other groups, motivational participants were asked to generate creative ideas about how they would avoid excessive drinking in typical college situations. They brainstormed ways to do so which to them were realistic and practical, created by themselves and their peers, and which they could own. They also helped each other find solutions they may not on their own have come up with or felt confident enough to mention. Armed with this real-life expertise and after seeing that fellow students in their position felt the strategies would work, they felt more confident that they could avoid 'doing too many shots', 'chugging' (consuming a whole drink in one go), or 'getting hammered'.

The Effectiveness Bank has examined the "fast and flexible counselling style" of motivational interviewing in a [hot topic](#), pointing out its wide applicability, from risky but as yet non-problematic drinkers or drugtakers identified by screening programmes, to established addicts who recognise they need help, but welcome being afforded the dignity of self-definition and self-control. Click [here](#) to read more about motivational approaches, and click [here](#) for a thorough look at alcohol screening and brief interventions.

Interventions lasting up to five hours were permitted in the featured study – stretching the definition of a *brief* intervention. The report did not specify how many interventions were, for example, over an hour long, but it did identify that the longest intervention was 3 hours long, the average length of an intervention was 41 minutes, and duration made no discernible difference to effectiveness.

Lastly, despite the positive findings for brief interventions overall, *Figure 3* of the paper indicated that many studies found no effects or negative effects from brief interventions. This echoes a broader point from research in this field – that the effects of brief interventions are far from guaranteed, especially when studies examine the effects of brief interventions in 'unreal circumstances', for example among psychology students volunteering to participate because they get grade credits. Findings from a [multi-university study in New Zealand](#) seem an example of trials of brief alcohol interventions as they would be implemented in routine practice failing to match more promising findings from trials conducted in less 'real world' circumstances. Seven of New Zealand's eight universities used screening and intervention procedures feasible in normal practice. Despite incentives and reminder emails, just a third of students participated in the trial and were randomly allocated to screening only or this plus the brief intervention. The 'intervention' in this case was largely feedback of assessment results with little advice on what to do about this and no interactive elements to bolster motivation or commitment to change. A more extensive intervention might have been more effective, but might also have been skipped by more students. As the authors argued, reducing the affordability and availability of alcohol for students seems a more promising strategy than seeking to persuade them that their drinking is harmful or atypically heavy.

To search for studies on college brief alcohol interventions, [click here](#).

Last revised 06 December 2017. First uploaded 08 November 2017

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