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► [Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents.](#)



Conrod P.J., Castellanos-Ryan N., Mackie C.J. [Request reprint](#)  
**Journal of Consulting and Clinical Psychology: 2011, 79(3), p. 296–306.**

*Addressing the substance use promoting tendencies of the personality traits of London secondary school pupils at particular risk of substance misuse led to less intensive drinking six months later, and there was some support for the psychological mechanisms thought to underpin the intervention.*

**Summary** An alternative to prevention approaches applied to all children whatever their risk levels, the [Preventure](#) programme is a short intervention which targets youngsters who score highly on four personality dimensions which make different kinds of early-onset substance use and other risky behaviours particularly rewarding or hard to resist. As assessed by the [Substance Use Risk Profile Scale](#) personality questionnaire, these traits are:

*Hopelessness* A tendency to unhappiness, depression and feeling a failure, feelings relieved by intoxication;

*Anxiety-sensitivity* Fear of anxiety-related bodily sensations due to beliefs that such sensations will lead to catastrophic outcomes, for which substance use can represent a form of self-medication;

*Impulsivity* An inability to restrain seeking gratification in the presence of immediate rewards (such as the feelings available through substance use) despite longer term negative consequences; and

*Sensation-seeking* Desire for intense and novel experiences, which can be expressed as a desire to 'get high' through drugtaking or heavy drinking.

### The Preventure intervention

The manualised Preventure intervention addresses these risk factors by drawing on psychoeducational approaches, motivational enhancement therapy, and cognitive-

behavioural therapy, applied to real-life scenarios shared by high-risk young people in Britain. As implemented in the featured study, it occupied two 90-minute focus groups led by the same qualified and supervised therapist plus a co-facilitator. Groups were formed of pupils who shared elevated scores on the same personality dimension, and the variant of the intervention applied to that group particularly targeted that dimension and the associated risks. In the first session participants were guided in a goal-setting exercise to enhance motivation to change behaviour, taught about the personality dimension and how it can predispose to problematic coping behaviours, and guided in breaking down personal experience according to the physical, cognitive, and behavioural components of an emotional response. All the exercises were specific to the personality risk factors identified in the children. The second session involved identifying and challenging personality-specific cognitive distortions which lead to problematic behaviours.

Prevention interventions have been found to prevent the onset and escalation of drinking and drug use. The featured study aimed to test whether drinking reductions are sustained over the following two years, and whether they may be due to the expected impacts on the particular motivations to drink generated by the targeted personality dimensions.

### The study

Of 2530 pupils in 13 London secondary schools, just under half those tested scored as high risk on the Substance Use Risk Profile Scale. Of these, 347 joined the study and provided apparently reliable responses at the follow-up surveys. Their responses were the basis for the featured report. They had been individually allocated at random to the Prevention intervention or to a **control** group who simply carried on (as all the schools had to) with the **drug education components** required by the national curriculum. Just over 8 in 10 pupils were followed up six months later. Follow-ups were also conducted at 12, 18 and at 24 months, by which time around 60% completed the survey. The probable responses of pupils not completing any particular follow-up were estimated on the basis of earlier assessments and other data.

### Main findings

Six months later and compared to control schools, among high risk pupils in schools allocated to Prevention, the increase in average alcohol consumption had been significantly less steep, rising to 0.49 as opposed to 0.56 drinks a day. The average frequency of 'binge' drinking (defined as five or more drinks at one sitting for boys and four for girls) in the past six months too had risen less steeply, but this finding narrowly missed the conventional criterion for statistical significance. Both these effects had faded in to insignificance at later follow-ups and by the end on both measures the two sets of pupils scored virtually the same. In contrast, the increase at six months in the number of drink-related problems seen in the control group did not materialise in the Prevention group, and this gap in favour of the intervention remained statistically significant at all the follow-ups.

Largely due to findings among pupils characterised by anxiety-sensitivity, Prevention pupils expressed a relatively lower need to drink in order to cope with difficult feelings, a disparity which achieved statistical significance at the 12- and 24-month follow-ups. In contrast, there was no consistent impact on motivation to drink to 'get high' or otherwise

experience pleasurable feelings.

### The authors' conclusions

As in the first wave of the Preventure trial in London, the intervention reduced adolescent alcohol consumption and probably binge drinking in particular, but only over the following six months. However, the lasting impact on problems related to drinking suggests that the intervention may have delayed the growth of drinking sufficiently for the youngster to better be able to cope without developing problems. There was evidence for the expected mechanism among anxiety-sensitive pupils, who after the intervention felt relatively less need to drink to cope with their feelings and fears, but the same could not be said of pupils characterised by feelings of hopelessness, nor was there consistent and clear evidence of the expected mechanism among personality types motivated to drink to feel good as opposed to avoiding feeling bad.

The possibility remains that it was simply a group intervention which was effective in curbing drinking and related problems rather than the particular content of that intervention. In particular, it has yet to be demonstrated that matching intervention to personality profile exerts a greater preventive impact on drinking than non-matched interventions.

**FINDINGS** Relative to basic education without much if any intended prevention content, this and other studies ([▶ below](#)) have demonstrated sometimes substantial effects in delaying the onset of and retarding the growth of substance use.

The featured study involved a highly **selected** set of pupils and a single therapist engaged by the study, limiting the degree to which the findings can be assumed to apply to pupils across the board and to interventions delivered by a school's usual staff. However, in [another UK trial](#) neither schools nor pupils were highly selected, all but a small proportion of sampled pupils were followed up, and the schools' own staff conducted the intervention. Still six months later, the intervention had retarded the growth in the proportion of high risk pupils who were drinkers and among drinkers, the proportion regularly drinking heavily. An impediment to widespread implementation may be the availability of expert trainers and supervisors. Another may be the willingness of schools to release staff for what in this more real-life study were three days of training each followed by hours of supervision, and to let them spend many more hours addressing non-academic issues with a subset of high risk pupils. What may help convince schools will be further results from the study if these demonstrate impacts not just on drinking but on mental health, other substance use, conduct, and academic achievement.

Among the findings in both studies was however the disappointing failure to find a statistically significant impact on regular heavy or 'binge' drinking across all high risk pupils rather than just among those already drinking at the start of the study, though both found a non-significant trend in this direction. This probably also means no significant impact on regular heavy drinking across all pupils in the school. Drinking as such at these ages is a concern, but in the British context, even more so is teenage binge drinking. That the intervention could not register even a short-term significant impact on this priority concern will lessen its appeal.

Its matching strategy above all distinguishes the featured intervention from other approaches. Plausibly, the developers argue that addressing each individual's particular

personality vulnerability to substance use should more effectively reduce or prevent that use than a more scatter-gun or generic approach. However, this remains to be convincingly demonstrated (▶ [below](#)) in studies which have offered essentially the same intervention, but not matched to the individual's personality. It is possible that the advance made by the broad matching strategy embodied in the intervention's manuals is not sufficiently great to improve on the 'natural' and possibly more fine-tune matching which occurs as a sensitive therapist or counsellor adapts their interpersonal style and the content of the intervention to the individual. Also at issue is the persistence of the effects past the first six months.

### Other studies of the featured intervention

This study is one of the latest in a series investigating the same or similar interventions co-authored by the intervention's developers. Given that [allegiance](#) to an intervention is associated with finding that it works, a fully independent demonstration by researchers with no personal investment in the intervention is desirable. Despite this, the body of work to date is methodologically sound, often convincing in its results and based on a plausible theory of how the intervention should work.

Apart from the featured study and the more real-world study mentioned above, studies of schoolchildren in London include one which found that over the following six months the intervention [delayed the expected increase in drinking](#) among high risk pupils over the first six months of the follow-up, though again, by a year there was no significant difference in the drinking behaviour of pupils who had or had not been allocated to the intervention. The same trial found [reduced uptake](#) of cocaine and other drug use and a reduced frequency of drug use overall (but not cannabis in particular) over the two-year follow-up. In [Canada too](#), the intervention was found to result in at least short-term (four months) drinking reductions in secondary school pupils.

As well as these trials among schoolchildren, earlier versions of the intervention have been trialled with adults and young adults. One trial focused on [female undergraduates](#) in Canada characterised by one of the personality traits investigated in the featured study – anxiety-sensitivity. Over the next 10 weeks, drink-related problems were relatively lower (but not quite to a statistically significant degree) among women allocated to an intervention targeted to their personality profiles compared to those allocated to a 'placebo' group intervention, but drinking itself was unaffected. Another study involved largely [alcohol-dependent women](#) in Canada aged 30 to 50 recruited via ads asking them to get in contact if they were concerned about their drinking or prescription drug use. A variant of the featured intervention was compared to a control intervention involving a motivational film on substance use problems and a supportive discussion with a therapist, a combination which it fairly consistently outperformed in reducing substance use. However, there were no statistically significant findings (though there were [tendencies](#) in this direction) indicating that the intervention bettered another intervention similar in every other way except that the content was not matched to the individual's personality profile. These findings call in to question the matching strategy which above all distinguishes the featured intervention from other approaches.

*Thanks for their comments on this entry in draft to Patricia Conrod of the Institute of Psychiatry at King's College in London. Commentators bear no responsibility for the text including the interpretations and any remaining errors.*

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