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► [Thinking about drinking: need for cognition and readiness to change moderate the effects of brief alcohol interventions.](#)



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Psychology of Addictive Behaviors: 2009, 23(4), p. 684–688.

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This US study found that different types of heavy-drinking college students responded best to different types of brief intervention to promote moderation; a novel finding was that the thinkers among them were most affected by being led to reflect on how their drinking compared to that of the average student.

Summary The featured report derives from a study of brief interventions to reduce drinking and drink-related problems in heavy-drinking US college students. It is concerned less with whether the interventions were effective, than with whether they were more or less effective with different types of individuals or people at different stages in their readiness to change their drinking.

Via [flyers and advertisements](#), the [original study](#) recruited 335 20–24-year-old students whose screening responses indicated they were heavy drinkers. They were randomly assigned to:

- Only be assessed with no intervention – the [control](#) group against whom the interventions could be benchmarked;
- A brief (one session up to one hour) intervention based on motivational interviewing which featured feedback on how the student's drinking compared to the average, the risks it posed, and strategies to reduce these risks;
- A two-session 'alcohol expectancy' intervention which challenged beliefs about the effects of drinking. In a simulated bar students were offered alcoholic or mock alcoholic drinks and asked to identify who including themselves had drunk alcohol. Guided discussions highlighted mistaken beliefs about how alcohol affected the students and the positive and negative effects of alcohol in social (session 1) and sexual contexts (session 2);
- A combination of both the above interventions.

Follow-up assessments one, three and six months later re-assessed the drinking of from 82% to 72% of the students. Among those missing were 44 deliberately omitted because they could not attend one of the alcohol expectancy sessions. An [earlier report](#) established that (relative to assessment only) the interventions did reduce drinking and that the motivational session also reduced related problems. People who scored more ready to reduce their drinking at the start of the study made the greatest reductions.

Did certain types of students respond better to the interventions?

The featured report investigated whether three characteristics of the students affected how much they cut their drinking and related problems in response to the interventions.

The first was their *need for cognition*. Individuals highly endowed with this need tend to make sense of their world through reflection and inquiry and like tasks which require reasoning and problem solving. Brief interventions based on motivational interviewing which require reflection on individualised feedback on the participant's drinking seem particularly suited to this type of personality. In line with this expectation, it was thought that in response they would curb their drinking more than people less keen on thinking things through.

Another potential influence on intervention effectiveness is *readiness to change*, as measured along the continuum described by Prochaska and DiClemente from precontemplation (not considering change) through several stages to action (taking steps to implement a plan for change) and beyond. People who are more ready to contemplate change should be more responsive to interventions promoting change.

The opposite can be expected of people characterised by *impulsivity and sensation seeking*. Associated with greater alcohol use and problems, these traits can be expected to reduce responsive to interventions which try to promote control over drinking.

Main findings

As expected, compared to other students, six months later the motivational intervention was found to have had a greater impact on students characterised by a strong need for cognition. They had made greater reductions in their total consumption and in the number of times they drank heavily at a single sitting. Also as expected, the same drinking measures had been reduced more by the alcohol expectancy challenge when students had initially been more ready to change their drinking. However, readiness to change did not affect how well the motivational intervention worked, impulsivity and sensation seeking were not influential with respect to either intervention, and none of the three characteristics affected how well the interventions reduced drink-related problems.

The authors' conclusions

The findings of the featured and the earlier reports confirm and extend research demonstrating an association between readiness to change and reductions in drinking among college students, and also showed that high readiness made the alcohol expectancy challenge more effective in reducing drinking. The fact that students at whatever level of readiness to change responded equally well to the motivational intervention seems to confirm that such interventions can work, even with people who at first do not feel they need to cut down. But from this study it seems they may work less well with people who are not keen on thinking things through.

The findings have clear implications for prevention planners. In this study, individuals who tend to engage in hard thinking and reasoning benefitted more from an intervention which featured discussion of personalised feedback on their drinking and risks. On the other hand, compared to less ready students, those who endorsed a higher degree of readiness to control their drinking benefitted more from the expectancy challenge, perhaps because this approach is more attuned to the 'action' stage of motivational readiness. The particular version used in the study focused on debunking the notion that 'more is better' by showing that effects typically viewed as desirable (eg, sociability, relaxation) also occur at lower levels of drinking.

In aggregate, our results provide further support for brief motivational and expectancy challenge approaches with heavy drinking students, and identified two features of the participants (readiness and need for cognition) which should be considered in the design and implementation of future intervention efforts.

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