

A think aloud study to explore the feasibility and acceptability of a digital intervention for the prevention of alcohol related harm in adolescents

October 2015

Key findings

- The Alcohol Smart Quiz, a digital intervention based on the Prototype Willingness Model of health behaviour, had many features that enhanced its acceptability to adolescents and teachers.
- Participants thought that some experimentation with alcohol was inevitable during adolescence and so schools based prevention programmes should focus on harm reduction.
- Drinking in moderation was viewed as an acceptable message for young adolescents, although 'moderation' could be challenging to define.
- Adolescents reported feeling pressure to drink to fit in but were also curious about how alcohol would affect them.
- This meant that, despite positive reactions to the idea of making plans in advance to avoid drunkenness and harms, some participants were sceptical about how this would work in real life social situations
- Teachers were receptive of the content and format of the intervention, suggesting it would be feasible to deliver within a school setting

Researcher

Dr Emma Louise Davies, Lecturer in Psychology

Oxford Brookes University, Headington Campus, Gypsy Lane, Oxford OX3 0BP

Background

This small grant was awarded to build and test the acceptability of a digital intervention to reduce alcohol misuse in adolescents aged 11-14. Adolescent drinking rates are higher in the UK than many other European countries, and consuming alcohol at a young age is associated with a number of risks and harms (Newbury-Birch et al, 2009). There is currently a lack of evidence for school based prevention programmes aimed at reducing alcohol consumption in adolescents (Jones, et al., 2007; Velleman, 2009; Cairns et al., 2011; Martin et al., 2013).

The Alcohol Smart Quiz (ASQ) is a digital intervention that is theoretically based on The Prototype Willingness Model (PWM) (Gerrard et al., 2008). This theory acknowledges the social, and often unplanned, nature of adolescent drinking and the importance of social comparison with peers at this age. The ASQ was

co-produced in conjunction with adolescents, parents and teachers, with input from intervention development experts (Davies et al., 2013; Davies et al., 2015a; Davies et al., 2015b). The first part of the current project involved building a web version of the ASQ that took into account the views of these stakeholders. This was completed using LifeGuide, open source software for the development of digital interventions (Yang, et al, 2009). The second stage of the project was to explore the acceptability of this novel intervention with adolescents and teachers, and to determine factors that might influence the feasibility of delivering this intervention in a school setting.

The ASQ applied behaviour change techniques (BCTs) that were identified in previous studies as relevant to the PWM (Davies, et al., in press). The intervention comprised ten quiz style questions and answers, as well as information and activities. The ASQ aimed to target the perception of 'non-drinker' and 'drunk' prototype images, and presented normative information about drinking. It also included discussions about the social influences on drinking and provided examples of how social pressure can be resisted using 'if-then' plans made in advance. Worksheets and activities were included to encourage adolescents to come up with their own 'if-then' plans to resist social pressure, and to deal with situations where they, or their friends, might be at risk of harm. The source of all the information in the quiz was included on the web pages in order to enhance credibility.

Method

Semi-structured and 'think aloud' interviews were conducted with 17 adolescents aged 11-14 (9 female) and nine teachers (all female). In a think aloud interview, participants are asked to verbalise their thoughts while completing a task, in this case working through the intervention materials and answering the quiz questions. Interview transcripts were analysed using thematic analysis (Braun and Clarke, 2006).

Findings

There were four main themes identified within the analysis of interview transcripts. These were named 'moderation', 'alcohol perceptions', 'making decisions' and 'facilitators and barriers to implementation'. There were important similarities in aspects of the interviews with adolescents and teachers that related to acceptability. Firstly, both groups reported an acceptance of moderate drinking, in some cases, given the inevitability of adolescent consumption.

'It's alright to drink a little, as long as you don't drink too much, you can meet people and have fun, that kind of thing' (Aaron, 11).

Adolescents appeared to hold ambivalent views about alcohol prototypes, which might influence the credibility of the 'drunk' and 'non-drinker' prototype presented within the intervention. However, both the physical effects of drinking alcohol and the potentially embarrassing consequences of drinking too much were often perceived in a negative way. This meant that the some participants might be welcoming of harm reduction messages, with the caveat that drinking too much could still be seen as 'cool'.

Some would be absolutely disgusted because they knew their friend was in that state and the others would think 'oh that was cool, I wish I had the nerve to do it (Mrs Jones).

Secondly, the prevailing culture of drinking in the UK was recognised by adolescents and teachers as an important driver in initiation and maintenance of drinking in the teenage years.

There's a reputation about being a certain age and going out and getting drunk, isn't there (Ms Fox).

Both groups of participants appeared to accept that drinking was inevitable, and this appeared to be amplified through social media for the adolescents.

There's a status, like 'yeah, I'm 13 now, perhaps I should try it' they want to feel grown up (Will, 12).

Thirdly, both groups recognised the challenge that faced adolescents when making decisions within social situations and that there remained a powerful need to belong.

If there are loads of people there, then you might feel you have to do it, otherwise, they'd all make fun of you (Eliza, 12).

Alcohol was also seen as interesting, with curiosity an important reason for initiation. The pressure felt in social situations meant that many participants felt that making 'if-then' plans in advance to avoid drunkenness or harms would be ineffective.

I think the trouble with planning when you are talking about alcohol is that your friends are drunk too. You may well plan that no one is leaving on their own, but plans can become shattered by the reality of young people's misuse of alcohol (Ms Smith).

Fourthly, acceptability was enhanced by the quiz format, source of information presented in the ASQ, and focus on short term harms. In particular because it presented facts from credible sources and used the words of adolescents from previous studies in the development of the ASQ.

I liked the information because you know a real person said it (Becca, 12).

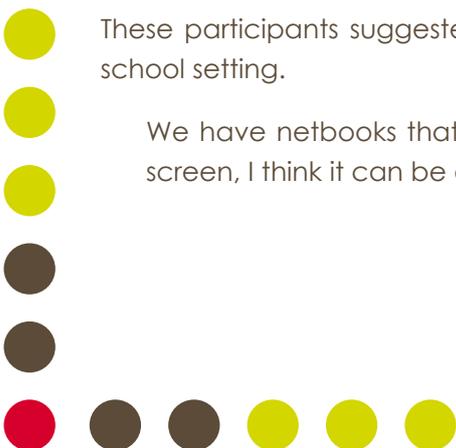
I liked it because instead of just telling you something it asks you questions about it, it makes you feel more in control (Anna, 14).

The findings suggested that the ASQ could be improved by clarification of the wording of some questions and focussing on moderate drinking. Teachers suggested it should give information about units and about the amount of alcohol that it would be harmful to consume in one setting.

How much is too much? What would be ok to drink at a party? What degrees of drunkenness are acceptable? (Ms Day).

These participants suggested that this type of digital intervention would be feasible to deliver within a school setting.

We have netbooks that we can hire from the library, or in a classroom we could have it on the screen, I think it can be quite adaptable (Ms Fox).



Implications

The Alcohol Smart Quiz had a good level of acceptability to the adolescents and teachers in this study. Furthermore, it appeared to be a tool that could feasibly be delivered in a school setting, although because the teachers viewed it as a flexible tool, further work is needed to explore how this might work in practice. An acceptance of moderate drinking among young adolescents was reflected in the findings of this study and should be taken into account when designing interventions for this population. A 'moderate' drinker prototype might be an effective inclusion in the ASQ. The interview findings also suggest that it is important to acknowledge the positive reasons that people drink alcohol, as well as the negative, and that often drinking is volitional as well as the result of pressure (face to face and online). The harm reduction approach espoused by the ASQ was an important factor in its acceptability to both participant groups, although teachers appeared keen to include longer as well as short term effects despite acknowledging that they might not be effective. Some changes will be made to the ASQ as a result of this study. The key changes are to incorporate a 'moderate' drinking prototype; to discuss a wider range of reasons for drinking alcohol; to include information about the positive and negative short term effects of drinking, and to provide further information about how to avoid short term harms, such as embarrassment, within the 'if-then' plan component.

Conclusion

Future work will be undertaken to incorporate the findings of this study into an enhanced version of the ASQ, in preparation for a process evaluation and pilot trial to explore its potential effectiveness. This study underlines the importance of undertaking qualitative work during intervention development.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Cairns, G., Purves, R., Bryce, S., McKell, J., Gordon, R. and Angus, K. (2011). *Investigating the Effectiveness of Education in Relation to Alcohol*. London: Alcohol Research UK
- Davies, E. L., Martin, J. & Foxcroft, D. R. 2013. Young people talking about alcohol: Focus groups exploring constructs in the Prototype Willingness Model. *Drugs: education, prevention and policy*, 20, 269-277.
- Davies, E. L., Martin, J. & Foxcroft, D. R. 2015a. Age differences in alcohol prototype perceptions and willingness to drink in UK adolescents. *Psychology, Health & Medicine*, 1-13. doi: 10.1080/13548506.2015.1051556
- Davies, E. L., Martin, J. & Foxcroft, D. R. 2015b. Development and acceptability of a co-produced online intervention to prevent alcohol misuse in adolescents: A think aloud study. *JMIR Human Factors*, 2, e13.
- Davies, E. L., Martin, J., & Foxcroft, D. R. (in press). Development of an adolescent alcohol misuse intervention based on the Prototype Willingness Model: A Delphi study *Health Education*
- Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review*, 28(1), 29-61. doi: 10.1016/j.dr.2007.10.001
- Jones, L., Bates, G., Downing, J., Sumnall, H., & Bellis, M. (2009). A review of the effectiveness and cost-effectiveness of personal, social and health education in secondary schools focusing on sex and relationships and alcohol education for young people aged 11 to 19 years. Liverpool: Centre for Public Health, Liverpool John Moores University.

Martin, K., Nelson, J. and Lynch, S. (2013). *Effectiveness of Schools-based Life-skills and Alcohol Education Programmes: A Review of the Literature*. Slough: National Foundation for Educational Research.

Newbury-Birch, D., Walker, J., Avery, L., Beyer, F., Brown, N., Jackson, K., . . . Stewart, S. (2009). *Impact of Alcohol Consumption on Young People: A Systematic Review of Published Reviews*. Newcastle: Newcastle University.

Yang, T., Osmond, A., Chen, X., Weal, M., Wills, G., De Roure, D., . . . Yardley, L. (2009). Supporting the running and analysis of trials of web-based behavioural interventions: The LifeGuide. *Proceedings of the Fifth IEEE International Conference on e-Science 2009*, 50-57. doi: 10.1109/e-Science.2009.16

Velleman, R. (2009). *Alcohol prevention programmes. A review of the literature for the Joseph Rowntree Foundation (part two)*. York: Joseph Rowntree Foundation

[Download the Final Report](#)

 **Alcohol Research UK** works to reduce levels of alcohol-related harm by ensuring that policy and practice can always be developed on the basis of research-based evidence.

 We are a lead funder of high quality research into the causes, impact and prevention of alcohol-related harm and are the only organisation exclusively dedicated to building an evidence base in this area.

 Read more reports at www.alcoholresearchuk.org

 Alcohol Research UK, 83 Victoria Street, London SW1H 0HW Tel: 020 3585 4155 Registered charity 1140287

