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▶ Computer based alcohol interventions.

McAuley A.
NHS Health Scotland, 2012.

Worth trying but unproven for the UK and the general population and need evaluating, was the message of this review for the health service in Scotland of computer-based alcohol interventions as possible ways to extend the reach of treatment and of the national brief intervention programme.

Summary In 2012 NHS Health Scotland published the featured review of computer-based alcohol interventions as possible ways to extend the reach of treatment and of Scotland's national brief intervention programme to people drinking at hazardous or harmful levels, in particular those unlikely to attend traditional health care services but who might turn to the internet for advice and information, such as women and young adults. The review was a rapid assessment which limited its scope to English language reviews and meta-analyses published between 2001 and 2011.

Potential or actual advantages are that computer-based alcohol intervention content can be delivered consistently across users, and accessed in users' own time and at their own pace. Tailored personal feedback can also be provided, based on information generated by the user themselves. They can also be delivered consistently without a therapist, and so have the potential to be more cost-effective over time. Programmes can also be updated centrally and quickly, to reflect advances in technology or theory relevant to delivery. Other facilitators for web-based tools include the convenience of 24-hour availability (provided there is internet access), with no waiting times for an appointment and no geographical constraints. In addition, they can offer the user privacy, anonymity and flexibility, allowing individuals a greater sense of control and involvement in their treatment and protecting them from any fears of stigmatisation. The confidentiality afforded by such a delivery method is also potentially attractive to those deterred by face-to-face appointments which characterise most community-based alcohol support services.

Main findings

The report found evidence that computer-based alcohol interventions are more effective than no treatment or assessment only and just as effective as conventional approaches including brief interventions. But it also found this evidence insufficient to sustain a definite conclusion on the impact among non-student samples and in the British context, or whether such interventions truly are cost-effective.

The key points were that:
• Process research suggests that computer-based alcohol interventions have potential, and that sizable demand exists for them. They could be particularly useful for those less likely to access traditional community-based alcohol services, such as women and young people.
• Reviews suggest these interventions can be effective in reducing alcohol consumption and frequency of drinking.
• Reviews suggest these interventions are more effective than no treatment or assessment only, and equally as effective as other 'conventional' alcohol treatments (including brief interventions). This conclusion is highly debatable given the limited amount of evidence available to date.
• Web-based alcohol interventions would seem to be the most viable approach, given their breadth of reach.
• Single-session personalised feedback interventions have been identified as one of the methods that computer-based technologies may be most effective at utilising.
• Self-administered computer-based cognitive-behavioural interventions are effective, but are enhanced by some degree of therapist involvement.
• Most computer-based alcohol intervention studies have been conducted in student populations. It is difficult to apply their results to the general population.
• Most have also been conducted in the USA, with very little UK-based research.
• Most too have used inappropriate statistical measures of central tendency, thus weakening conclusions derived from the results.
• Also most studies have relied on self-report measures, which challenge the reliability and validity of some of the results.
• There is a lack of evidence on long-term impacts.
• There are clear differences across the computer-based alcohol intervention literature in relation to both outcome measures and intervention content.
• Most studies have been characterised by small sample sizes, high attrition rates, limited consideration of bias, participant self-selection and a lack of 'pure' control groups.
• It has been suggested that computer-based alcohol interventions are a cost-effective alternative to existing treatment options. However, these claims remain unproven as there have been no rigorous cost-effectiveness studies.

The author's conclusions

Computer-based alcohol interventions (either stand-alone or web-based) have potential, but further research is required to fully establish whether they offer a viable and cost-effective alternative to conventional treatment and support options. In particular, evidence indicates that they could be effective in certain groups, notably women, students and young adults. However, students are unlikely to be representative of the wider community, especially in their motivation, alcohol consumption levels, internet access, and IT literacy. More research is needed to establish feasibility and efficacy in general populations.

In addition, cost-effectiveness of this type of approach in relation to alcohol needs to be incorporated into any future evaluation to validate as yet unproven claims. Recruitment strategies to web-based interventions also need to be researched, as these could involve costs that far outstrip the set-up costs of the intervention.

Single-session personalised feedback interventions have been identified as potentially one of the most effective approaches, but the elements of personalised feedback that are key to outcomes and those needed to engage low and high risk drinkers are still unknown. Interventions that include brief intervention principles have also been proposed, as have those incorporating cognitive-behavioural elements. Techniques for delivering face-to-face brief interventions can also be incorporated into computer-based tools, and efforts to produce such resources have been increased in recent years. However, their quality and credibility has yet to be fully established. Evidence of effectiveness for internet-based cognitive-behavioural programmes is also limited in the alcohol field, often characterised by small sample sizes, lack of control groups and other methodological limitations. Where they have succeeded is in attracting users to the intervention, and those who are attracted generally report satisfaction with this method of delivery.

In Scotland, internet access is least available to people who are older, poorer, less well educated, unemployed, long-term disabled or ill, or living in the most deprived areas. Among these are groups most affected by alcohol-related harm, meaning that establishing an intervention modality which they are least likely to access could increase rather than decrease health inequalities.

Any computer-based alcohol intervention should ensure it has measures in place to identify and signpost those requiring additional support into appropriate services as effortlessly as possible.

FINDINGS Worth trying but unproven for the UK and the general population and need evaluating was the core message of the featured review. While the UK deficit remains as it was when the review was done, the findings of another analysis focused on non-student general adult populations might in this respect at least have helped firm up the featured review's conclusions. But even that analysis was limited to comparisons with effectively doing nothing rather than computer-delivered therapy as an alternative to face-to face therapy for people attending alcohol treatment services. For this role they remain virtually untested.

See other Findings analyses for a review of computer-delivered self-help interventions for drinking and smoking and a review focused on drinking. Both analyses include further commentary on the role of computer delivery and on UK findings.

Last revised 03 May 2012

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