Systematic review of interventions to reduce problematic alcohol use in men who have sex with men.

Wray T.B., Grin B., Dorfman L. et al.


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With an ‘alarmingly scarce’ evidence base to go on, the researchers draw parallels with the broader alcohol treatment literature, finding some support for interventions with motivational components among cohorts of gay and bisexual men, for whom heavy drinking is associated with more severe and chronic consequences.

SUMMARY Despite the development of modestly effective treatments for alcohol use disorders (1 2), one persistent challenge involves transferring those interventions to specific populations who may be at high risk of alcohol-related harm. The featured study focused on one such population – men who have sex with men – among whom rates of heavy drinking, drinking problems, and alcohol-related disorders are high, and where associations between heavy drinking and contracting HIV suggest that drinking may have more severe and chronic consequences.

A systematic review was conducted to establish the evidence base for interventions to reduce heavy or problem drinking and/or alcohol-related problems among men who have sex with men. Five studies with a total of 1022 participants were identified, all of which had randomly allocated participants to the intervention(s) being tested versus a comparison intervention or no formal intervention at all.

Synthesising the findings was difficult due to the small set of studies. However, overall the review could find that there was preliminary support for interventions incorporating aspects of motivational interviewing.

Two studies focused on men who met criteria for alcohol use disorders, and one included homeless men with any substance use disorder. Others were based on drinking levels, with one targeting men who drank greater than or equal to 24 drinks per week over the past 90 days, and another including patrons standing in line for a gay bar who had plans to drink that night, but were currently sober.

There was considerable difference in the way interventions were delivered. While three studies used clinicians trained to a master’s or doctoral-level and provided in-depth descriptions of the intensive process of training/supervision, two made no mention of credentials or required training. The duration of interventions also varied considerably. Protocols ranged from a few minutes of interaction and treatment exposure to more than 12 hours, and length in treatment varied from a few minutes to six months.

Three of the interventions applied tenets of motivational interviewing or motivational enhancement therapy, cognitive-behavioural therapy, or a combination of motivational and cognitive-behavioural principles, albeit with substantial differences in application and delivery. For example, one study compared a combined individual and group counselling intervention based on both motivational interviewing and the transtheoretical model of change [see Effectiveness Bank hot topic for more on the transtheoretical model and the ubiquitous ‘five stages of change’]. Another study tested a hybrid motivational interviewing and cognitive-
behavioural therapy intervention, delivered alone or in combination with naltrexone, against a shorter intervention intended to enhance compliance with prescribed medication or placebo. The same research team also tested a similar hybrid motivational interviewing and cognitive-behavioural therapy intervention against a four-session motivational enhancement-only intervention. Of the remaining two studies, one tested a 24-week contingency management intervention, and another examined whether a brief, personalised feedback intervention delivered in a bar setting would reduce heavy drinking the same night.

Three studies focused on reducing self-reported drinking (eg, frequency of drinking, heavy drinking days), and two explored the effects of interventions on breath alcohol concentration.

**A quick reference guide to the five studies**

(This is based primarily on the information provided in the featured paper, with some additional details from the studies below.)

**Study one** involved 161 men who were standing in line for a gay bar and had plans to drink that night but were sober when recruited to the study. A single-session brief intervention was compared with a control group allocated to assessment and feedback about an unrelated issue (their ‘carbon footprint’). There was no difference in findings between the intervention and control group.

**Study two** recruited 198 men whose interviews suggested that had met diagnostic criteria for alcohol abuse or dependence during the past year. The 89 that accepted treatment were randomly assigned to either four weekly sessions of motivational interviewing or 12 weekly sessions of motivational interviewing plus cognitive-behavioural therapy. The participants who declined treatment were still followed up, representing a non-treatment control group. There was a significant decrease in drinks per day in the motivational interviewing group during treatment compared with the combined motivational and cognitive-behavioural treatment group.

**Study three** included 200 participants with an average weekly consumption of greater than or equal to 24 drinks per week over past the 90 days. Participants were randomly assigned to receive the medication naltrexone or a placebo, and within these groups also randomly assigned to a basic medical care intervention to enhance compliance with medication/placebo, or this plus 12 weekly sessions of a combination of motivational interviewing plus cognitive-behavioural therapy. The combined psychosocial therapy reduced drinking more than basic medical care and more than naltrexone, and adding naltrexone to basic medical care made no further difference.

In **study four** there were 210 homeless men identified as substance dependent. They were allocated to receive contingency management (two visits/week for 24 weeks) or no treatment. Contingency management involved increasing access to favoured goods by abstinence from substance use and/or engaging in health-promoting activities. At HIV-prevention appointments there were significantly greater reductions in the contingency management group in the number testing ‘positive’ for the presence of alcohol.

**Study five** involved 253 men who were HIV-positive and scored eight or more on the AUDIT questionnaire, indicative of an alcohol use disorder. A combined individual and group counselling intervention based on motivational interviewing and the transtheoretical model of change was compared with eight weekly sessions of resource referrals. There was a decrease in the intervention group in the number of drinks over a 30-day period and heavy drinking days compared with the control group.

**The authors’ conclusions**

This systematic review found that while there may be preliminary support for the use of motivational interventions and hybrid motivational and cognitive-behavioural interventions among men who have sex with men, overall, well-designed and theoretically-informed research focused on establishing the efficacy of alcohol interventions for this population is alarmingly scarce.

Associations between heavy drinking and contracting HIV support the need for interventions addressing both factors (3 4). However, the focus in the literature has predominantly been on HIV risk; only one study identified in the review addressed drinking as a focal outcome. Venue-based interventions (eg, at gay bars) represent a novel approach for reaching those at greater risk of alcohol-related harm, and for supporting harm reduction activities.

**FINDINGS COMMENTARY** This review found “preliminary support” for interventions incorporating aspects of motivational interviewing among cohorts of men who have sex with
men, which the authors described as "consistent with the broader alcohol treatment literature" (5 6).

Motivational interviewing is the "fast and flexible counselling style", explored in-depth in an Effectiveness Bank hot topic. Said to have "conquered the addiction treatment field", motivational interviewing was first formally documented in 1983 when William Miller noted that many drinkers resist treatment because they reject stigmatisation as an 'addict' or 'alcoholic' and the loss of control implied by being a patient. This represented a key shift from seeing motivation to change substance use as a fixed characteristic, to seeing it as an interpersonal process that could be affected through therapy. Anyone taking this reformulation seriously could no longer dismiss someone as unwilling to change; the onus shifted to the counsellor's ability to elicit motivation by highlighting discrepancies between the client's substance use and their valued goals and beliefs.

In the featured review, 'preliminary support' for motivational interviewing was not a conclusion that motivational interviewing was more effective than other intervention styles — only that it was a component in three out of five studies, and that it was generally associated with positive results. Where motivational interviewing was compared with a less extensive intervention, it could not be ruled out that more therapeutic contact was an effective element, as opposed to (or in addition to) a motivational intervention style.

Others have found it challenging to assess whether brief alcohol interventions based on motivational interviewing reduce drinking more than other approaches, in large part due to the relative paucity of studies in which motivational interviewing has not been a basis for interventions — a sign of how far the approach has pervaded research. In one review, a key finding was that whether motivational interviewing was the basis made no statistically significant difference to an intervention's impact on drinking; in fact, when it came to quantities consumed, non-motivational brief advice had a slight edge. For frequency of drinking, the position was reversed, motivational interventions having a slightly greater impact.

One of the take-home messages from the featured paper was the scarcity of research focused on developing and testing the effectiveness of interventions for men who have sex with men, in which context, the review was unable to come to any firm conclusions. The authors identified that while all five studies explicitly targeted this at-risk population, many of the interventions drew their theoretical foundations from the general alcohol treatment literature, and advised that existing interventions could be enriched if (also) informed by specific theories of problem drinking among men who have sex with men, for example:

1. The minority stress theory: Lesbian, bisexual, and gay people can experience additional stressors related to their 'sexual minority' status within society. Internalised homophobia, stigma, and experiences of discrimination and violence can result in chronic stress, associated with psychological distress and negative mental health outcomes including substance use problems (7 8). This can be compounded and qualitatively different among people with multiply socially-devalued characteristics.

2. The cognitive escape theory: The need to avoid sexual risk, and suppressing thoughts associated with this risk, can become a 'cognitive burden' and lead to people 'escaping' from the constraint of sexual safety norms and engaging in risky sexual behaviours. Alcohol and other drugs may lower inhibitions, and facilitate these and other risky practices (9 10).

3. The expectancy theory: Expectations that drinking or taking certain drugs will produce positive effects, for example lowering sexual inhibitions, enhancing sexual pleasure, and feeling closer or more open to other people (11).

Public Health England has identified three distinct but overlapping areas in which men who have sex with men bear a disproportionate burden of ill-health: sexual health and HIV status; mental health; and the use of alcohol, drugs, and tobacco.

In the UK, the charity Stonewall is working with the NHS to help services meet the needs of lesbian, gay, and bisexual patients and employees, who are "often overlooked in the provision of healthcare". Stonewall has produced a guide with practical advice and a spotlight on good practice, one example being The Health Shop in Nottinghamshire which offers advice and support on a range of problems related to substance use and sexual health, including a specialist needle and syringe exchange, blood-borne virus testing and vaccinations, harm reduction advice, and information and advice on steroids and image-enhancing drugs.
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