DRUG & ALCOHOL FINDINGS *Review analysis*

This entry is our analysis of a review or synthesis of research findings considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original review was not published by Findings; click Title to order a copy. Free reprints may be available from the authors – click prepared e-mail. The summary conveys the findings and views expressed in the review. Below is a commentary from Drug and Alcohol Findings.

The efficacy of spiritual/religious interventions for substance use problems: a systematic review and meta-analysis of randomized controlled trials.

Hai A.H., Franklin C., Park S. et al.

Drug and Alcohol Dependence: 2019, 202, p. 134–148.

Around the world, programmes which take a spiritual or overtly religious route to overcoming substance use problems are extremely common and in some countries dominant – but do they work any better than the alternatives? This review systematically sifted the evidence from the past 30 years.

SUMMARY Spirituality and religiosity have been identified as protective factors against substance use problems, and feature as key components in several types of substance use interventions including spiritually-modified cognitive-behavioural therapy and 12-step mutual aid groups. In the featured review, spirituality and religiosity were defined as overlapping but distinguishable constructs, with **spirituality** representing the universal and fundamental human quality of searching for meaning, wellbeing, and wisdom through connections with oneself, others, and the universe, and **religion** as an institutionalised system of beliefs, values, and practices oriented towards spiritual concerns and transmitted over time by a community.

The aim of the review was to examine the effectiveness of spiritual/religious interventions in reducing substance use and enhancing participants' psycho-social-spiritual wellbeing. A total of 3,700 participants from 20 studies were included, with sample sizes ranging from 30 to 952. Half the studies were conducted between 1990 and 1999, six (30%) between 2000 and 2009, and four (20%) between 2010 and February 2018. Sixteen studies (80%) were set in the United States, one in Nigeria, two in Iran, and one in Canada.

Reviewers required that all studies employ a randomised controlled trial design, the gold standard for determining whether an intervention actually caused the desired changes (in this case, in substance use and wellbeing). Randomised controlled trials involve researchers randomly allocating participants to two or more groups – an intervention versus a control group – so that the only material difference between them is the intervention.

Key points
From summary and commentary

Spirituality and religiosity are key components in several types of substance use interventions, including 12-step mutual aid groups.

To determine causal evidence of their effectiveness, the featured review looked back over the previous three decades at studies using a randomised controlled trial design.

While the authors did find evidence that they were effective, the findings could not be interpreted as proof positive that spiritual/religious components were the only active ingredients operating, or indeed confirm that they were operating at all.

In order to understand the clinical implications of the research, the review separated out studies that compared spiritual/religious interventions with 'active' control groups (an alternative intervention) from studies that compared spiritual/religious interventions with 'inactive' control groups (no intervention at all, waiting list only, or standard care).

Most studies (14 out of 20) compared spiritual/religious interventions with other interventions: cognitive-behavioural therapy, integrated cognitive-behavioural therapy, acceptance and commitment therapy, methadone maintenance treatment, family-of-origin therapy, clinical management, group drug counselling, minimal treatment approach, guided imagery, motivational enhancement therapy, or the community reinforcement approach. Only four studies compared spiritual/religious interventions with an 'inactive' or 'no intervention' control group, and two studies used a combination of both an alternative intervention and no intervention.

Most of the spiritual/religious interventions (16 studies) were oriented around the 12 steps associated with Alcoholics Anonymous. The remaining interventions were based on the following:
• cognitive-behavioural therapy with undescribed religious components;
• spiritual therapy emphasising Islamic teachings including counselling and debate about spirituality and addiction, Komail prayer, worship, and religious practices, Qur'an verses and interpretation, forgiveness and repentance, divine grace and compassion;
• spiritual direction delivered by trained spiritual counsellors using a client-centred style and motivational interviewing techniques; this was not linked to any particular religion and was designed to help individuals explore their own spirituality; content included meditation, prayer, fasting, self-care, attentive awareness, solitude, acceptance, service, reconciliation, worship, gratitude, guidance, and celebration [note: the study reference was for a university thesis that was unavailable at the time of publication];
• intercessory prayer with patients entering treatment for alcohol problems or dependence.

Main findings

Compared with 'no intervention' control groups, spiritual/religious interventions did not have a statistically significant effect, whereas compared with alternative interventions, spiritual/religious interventions were found to have a statistically significant positive effect.

Compared with alternative interventions, spiritual/religious interventions had a significant positive effect on substance use outcomes. The average effect for psycho-social-spiritual outcomes, however, was not significant. These findings suggest that spiritual/religious interventions were more efficacious than alternative interventions for substance use outcomes and may have been equally efficacious for psycho-social-spiritual outcomes. More specifically, as only studies evaluating 12-step-oriented interventions allocated control groups to another active intervention, the review indicated that 12-step spiritual/religious interventions may be more efficacious than alternative interventions for substance use outcomes.

The authors' conclusions

To determine whether there was causal evidence of the effectiveness of spiritual/religious interventions, the featured review looked back at three decades of studies using a randomised controlled trial design. While the authors did find evidence to suggest that spiritual/religious interventions were effective, the findings could not be interpreted as implying that spiritual/religious components were the only active ingredients operating, or indeed confirm that they were operating at all.

The bulk of the research focused on interventions oriented around the 12 steps of Alcoholic Anonymous, and most often compared 12-step interventions with alternative interventions rather than a control group of no treatment, standard care, or waiting list only. This had implications for the interpretation of the results. Determining the *relative* effect of spiritual/religious interventions compared with alternative interventions could help to inform decisions about whether to choose spiritual/religious interventions over other interventions. In contrast, further research to understand the *absolute* effect of spiritual/religious interventions compared with no other intervention would inform decision-making about whether to employ spiritual/religious interventions when no other intervention is available or whether to add spiritual/religious interventions to standard care.

FINDINGS COMMENTARY The core component running through every primary intervention in the featured review was spirituality/religiosity. However, the reviewers urged a cautious interpretation of the results, pointing out that evidence supporting the effectiveness of spiritual/religious interventions did not equate to evidence of spiritual/religious components being the only active ingredients operating, or indeed confirm that they were operating at all. This type of caveat raises the possibility that observed effects may be explained by other factors – perhaps common features of substance use interventions rather than treatment techniques per se.

Implications of the findings

There was evidence that spiritual/religious interventions were effective for people with substance use issues. However, there appeared to be no effect on psycho-social-spiritual outcomes specifically – a surprising finding given that spiritual interventions would be expected to positively impact outcomes related to spirituality even if they did not affect substance use.

The findings were predominantly based on studies comparing the effectiveness of 12-step interventions with alternative interventions, though even the 12-step designation covered a broad range of interventions (and different intensities), ranging from individual counselling to group meetings, educational seminars, and 12-step facilitation (which introduces clients to the 12-step philosophy and support system) combined with medication.

One of the defining features of 12-step programmes is the mutual aid ethos – "the social, emotional and informational support provided by, and to, members of a group at every stage of their recovery from active alcohol and/or drug use and addiction". Although in one respect the review set a high standard for studies by requiring that all met the methodological bar of randomly allocating participants to a spiritual/religious intervention or a control group, the few studies of 12-step programmes that required group participation may not have been well served by the classic randomised controlled trial format. Participation in mutual aid is something someone *does*, not something *done to* them that can be expected to work regardless of whether they chose that route to recovery or embraced it once experienced. That being said, without randomisation results are vulnerable to the possibility that people who choose to participate in mutual aid interventions do better than those who choose not to just because they are keener to achieve abstinence, rather than due to any impact of the groups – so-called 'self-selection' bias.

Unlike the findings detailed in the featured paper, an earlier review (2006) conducted according to rigorous Cochrane Collaboration procedures did not demonstrate the effectiveness of Alcoholics Anonymous (AA) or other 12-step approaches in reducing drinking and achieving abstinence compared with other interventions.

Helping readers judge for themselves whether the original Cochrane review was correct on balance in concluding that there was no evidence of AA's effectiveness, another paper assessed the totality of the literature according to six key criteria for establishing cause and effect:

1. **Strength of association:** rates of abstinence were approximately twice as high among those who attended AA.
2. **'Dose–response' relationship:** higher levels of attendance were related to higher rates of abstinence.
3. **Consistency of association:** found across different samples and follow-up periods.
4. **Demonstrating the effect followed the influence:** prior AA attendance was predictive of subsequent abstinence.
5. **Specific effects:** evidence weakest when held to the standard of ruling out other explanations for abstinence.
6. **Plausibility:** the 'active ingredients' predicted by theories of behavioural change were evident at AA meetings and through the AA steps and fellowship.

Among the rigorous studies, there were mixed results: two positive findings for the effectiveness of AA, one negative finding, and one not showing an expected effect.

Studies published after 2006 which applied the 12-step principles have recorded mixed findings according to the featured review:
• In 2007, both 12-step facilitation and integrated dual disorder-specific cognitive-behavioural therapy

produced improvements in self-efficacy, and these changes were associated with substance use outcomes.
• In 2011, the differences between community reinforcement and 12-step facilitation were not significant for any of the outcome measures.
• In 2012, 12-step facilitation was associated with less cocaine use throughout treatment and a higher number of urine samples testing negative for cocaine use than those not assigned to 12-step facilitation.
• In 2016, compared to the methadone maintenance treatment control group, the Narcotics Anonymous group showed significant improvements in psychological well-being, self-acceptance, personal growth, but not in psychological flexibility, autonomy, or purpose in life.

An updated version of the Cochrane review (the protocol was released in 2017) is expected in 2019/2020.

The religious origins of the 12 steps

The 12 steps at the heart of Alcoholics Anonymous (▸ listed here) have an overtly religious tone, with seven of the steps "refer[ring] either to a deity – 'God,' 'Him' or 'a Power greater than ourselves' – or to religious practices such as prayer."

While the umbrella group for Alcoholics Anonymous in the UK acknowledges the programme has its origins in a Christian group, it says there is "only one requirement for membership and that is the desire to stop drinking. There is room in AA for people of all shades of belief and non-belief". Indeed, it does seem that there is some appetite for this application of the principles across the spectrum.

In the United States, where the programme is a more established feature of addiction treatment than the UK, the *New York Times* covered the growing phenomenon of "Alcoholics Anonymous, Without the Religion". At the time of publication, there were around 150 groups nationally which appealed to agnostics, atheists, and humanists alike. People were reportedly creating their own secular versions of the 12 steps, for example, instead of needing divine assistance for recovery, needing "strengths beyond our awareness and resources to restore us to sanity", as well as creating secular traditions within the groups themselves – for instance, instead of clasping hands and reciting the Lord's Prayer (or the Serenity Prayer) at the end of the session, reciting together, "Live and let live".

Religion is one of several "controversial" aspects of 12-step programmes which research has identified as a "point of resistance" among some people with drug and alcohol problems, while recognising that for others belief in an external higher power may be just what is needed to propel them towards change (for which see the story of Bill Wilson who went on to co-found Alcoholics Anonymous). However, religion being a potential point of resistance is not necessarily the same as it being a major obstacle to participation.

A US survey of outpatient treatment services between 2001 and 2002 found that barriers to 12-step participation were more often perceived to be motivation, readiness for change, and feeling the need for help, than religion or accepting powerlessness over addiction – though around half of both sets of services still agreed that "the religious aspect of 12-step groups is an obstacle for many" and that "the emphasis on powerlessness can be dangerous".

The 12 steps as described by Alcoholics Anonymous

1. We admitted we were powerless over alcohol – that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

Whether similar findings would emerge in the UK is unclear. Certainly in one study, references to a 'higher power' and God seemed the least appreciated and most off-putting of the 12 steps, and more so among drinkers in treatment than people who used drugs. In this study almost half the drinkers said the 12 steps would deter them from attending AA/NA meetings.

Comparing the importance of religion in the US and UK in 2003, a Gallup public opinion poll found that 60% in the US felt religion was very important (and 23% fairly important), but only 17% (and 30%) said the same in Great Britain. More recently the proportion of the UK population identified as having no religion in the British Social Attitudes survey reached 53% (up from 49% in 2014 and 46% in 2011), outnumbering the 43% who defined themselves as Christian.

An Effectiveness Bank hot topic delves more into what defines the 12-step experience. A pertinent point to consider, raised by Professor Keith Humphreys in response to the featured commentary, was that there may be a gap in the perceived importance of spiritual/religious issues between the population who researches and provides treatment and the population who receives treatment.

Thanks for their comments on this entry in draft to Professor Keith Humphreys of Stanford University in California, United States. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

Last revised 17 December 2019. First uploaded 10 November 2019

Top 10 most closely related documents on this site. For more try a subject or free text search

HOT TOPIC 2018 Can 12-step mutual aid bridge recovery resources deficit?

STUDY 2019 Efficacy and cost-effectiveness of an adjunctive personalised psychosocial intervention in treatment-resistant maintenance opioid agonist therapy: a pragmatic, open-label, randomised controlled trial

REVIEW 2011 Evidence-based therapy relationships: research conclusions and clinical practices

REVIEW 2018 Positive regard and psychotherapy outcome: a meta-analytic review

REVIEW 2018 Congruence/genuineness: a meta-analysis

REVIEW 2014 Estimating the efficacy of Alcoholics Anonymous without self-selection bias: an instrumental variables re-analysis of randomized clinical trials

REVIEW 2018 Cohesion in group therapy: a meta-analysis

STUDY 2012 Does active referral by a doctor or 12-step peer improve 12-step meeting attendance? Results from a pilot randomised control trial

STUDY 2012 Treatment seeking and subsequent 1-year drinking outcomes among treatment clients in Sweden and the U.S.A.: a cross-cultural comparison

REVIEW 2005 Self help: don't leave it to the patients