



Non-pharmacological Interventions for Problematic Substance Use: a Rapid Overview of Cochrane Systematic Reviews

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Abstract

A Rapid review of Cochrane Systematic Reviews to identify the non-pharmacological interventions in substance use treatment services and their effectiveness levels where reported. Cochrane systematic reviews were matched to the inclusion criteria and data extracted. A total of 667 studies and 532041 participants are included. The non-pharmacological interventions found can be grouped into three categories: information dissemination, non-specialized face to face interactions, and qualified therapeutic interventions. The measured intervention effectiveness ranged from poor to moderate. The most often reported interventions were cognitive behavioural therapy, motivational interviewing, mindfulness, and contingency management. A wide range of non-pharmacological interventions are being used to treat problematic substance use despite the lack of supportive effectiveness evidence. Missing non-pharmacological interventions include creative arts interventions and lived experience recovery organisations, both of which are gaining momentum in the treatment of substance use.

Keywords Addiction · Substance use · Non-pharmacological interventions · Treatment · Systematic review · Overview

Introduction

The intent of this rapid overview is to identify and summarize the non-pharmacological interventions used in the prevention and treatment of problematic substance use as reported in the Cochrane Systematic Reviews (CSRs). Non-pharmacological interventions are those

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which do not involve a medication prescription and can be used in conjunction with other interventions, such as medication or alone.

Problematic substance use, often referred to under the broad term of addiction, is defined by the American Psychological Society as ‘a state of psychological or physical dependence (or both) on the use of alcohol or other drugs’. It can be further divided into mild, moderate, or severe dependence. Problematic substance use is a societal problem which affects all levels of communities and is a burden to health across the world (American Psychological Association, 2023).

CSRs are available through the Cochrane library (Cochrane Library, 2022). The origin of the Cochrane systematic review dates back to 1972 when the need for better health evidence was identified and the collation of randomized control trials results is meta-analysed to build quality evidence (Starr et al., 2009). The CSRs provide a methodical scrutiny of existing research and are helpful when searching for research gaps because they provide a thorough investigation (Clarke et al., 2007).

This rapid overview uses the methodology of a rapid review and applies it to provide an overview of the published Cochrane systematic reviews. Whilst according to Tricco et al. (2015) there are multiple approaches to conducting rapid reviews, they conclude that the results are congruent with the more thorough methodology of systematic reviews even though the rapid review is not as comprehensive in the reporting and assimilation of results. This simplified methodology is appropriate for gathering information when resources and time are limited and often useful to support the investigation into potential research gaps (Tricco et al., 2015).

Purpose of this Overview

The purpose of this rapid overview is to identify the type of initiatives and level of evidence to support the use of non-pharmacological interventions together with any research gaps, for this often-stigmatised treatment provision.

The study design is focussed on ascertaining the range of non-pharmacological interventions and prevention programmes reported in CSRs from the Cochrane drug and alcohol group. The results will be useful in the design of further studies into the provision and effectiveness of non-pharmacological interventions in problematic substance use treatment services.

Methods

In preparation for this overview, the first author designed the study using the PICO (Patient, Intervention, Comparison, Outcome) framework (Schardt et al., 2007) and prepared a protocol for guidance. The PICO protocol, although not independently published, highlighted the inclusion criteria for participants, interventions, controls and outcomes. The importance of a protocol for a systematic review is a fundamental component of Cochrane systematic reviews and is key to ensuring the quality of their publications (Schlosser, 2007).

Inclusion Criteria

The inclusion criteria matched the study design by keeping the benchmarks broad, whilst focusing specifically on substance use. This enabled as many reviews as possible to be included.

Reviews published in a 10-year period, from January 2012 to December 2021, by the Cochrane Library, and originated or assigned to the Cochrane Alcohol and Drug Group (CADG), were included. This 10-year period was considered sufficient to provide the data required.

Protocols, overviews and withdrawn reviews were not included. All CSRs found were initially screened on title and abstract according to the following inclusion criteria using the PICO framework.

Patient Participants

People described as susceptible to or with an existing history of substance use.

Interventions

All non-pharmacological interventions found were included.

Comparison Controls

All studies in Cochrane Systematic Reviews that matched the patient criteria were included.

Outcomes

Where reported, the primary and secondary outcomes of the non-pharmacological interventions found have been recorded.

Data Collection

Two of the overview authors independently identified those CSRs which met the inclusion criteria from the list of reviews published by the CADG. The data was recorded from the results section found in each CSR.

For each included review, the information was extracted from the CSR and tabled for ease of reference. Data included CSR identification number, review title, year of publication, review authors, number of included studies, countries of included studies, number of included participants, type of substance use, non-pharmacological interventions used and effectiveness where reported.

Table 1 Summary of data extraction results from 24 included Cochrane systematic reviews

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|-----------------------------------|---|---|
| A | 1 | Media campaigns for the prevention of illicit drug use in young people | CD009287 | 2013 | Ferri, M., Allara, E., Bo, A., Gasparini, A., & Fagianio, F | 23 | USA, Canada, Australia | 188,934 | Illicit drug use | Media campaigns | The effectiveness of media campaigns to prevent illicit drug use among young people is not clearly supported, with some evidence of iatrogenic effects |
| B | 2 | Maintenance treatments for opiate-dependent adolescents | CD007210 | 2014 | Mimozzi, S., Amato, L., Bellisario, C., & Davoli, M | 2 | USA | 187 | Opioids | Psychosocial interventions | It is difficult to draft conclusions on the basis of only two trials. In the first trial, methadone and LAAM led to similar improvements in social functioning. In the second trial, the maintenance treatment seemed to be more effective in retaining patients in treatment but not in reducing the use of drugs of abuse |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|-----------------------------------|---|---|
| A | 3 | Restricting or banning alcohol advertising to reduce alcohol consumption in adults and adolescents | CD010704 | 2014 | Siegfried, N., Pienaar, D.C., Ataguba, J.E., Volmink, J., Kredo, T., Jere, M., & Parry, C. D. H | 4 | Netherlands, Canada | 80 | Alcohol use | Alcohol advertising restrictions | There is a lack of robust evidence for or against recommending the implementation of alcohol advertising restrictions |
| A | 4 | Universal school-based prevention for illicit drug use | CD003020 | 2014 | Faggiano, F., Minozzi, S., Versino, E., & Buscemi, D | 51 | USA, Canada, Australia | 127,146 | Illicit drug use | School-based prevention interventions | School programmes based on a combination of social competence and social influence approaches showed, on average, small but consistent protective effects in preventing drug use, even if some outcomes did not show statistical significance |

Table 1 (continued)

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|----------------------------|--|---|----------|---------------------|--|----------------------------|---|------------------------|-----------------------------------|--|--|
| C | 5 | Psychosocial interventions for benzodiazepine harmful use, abuse, or dependence | CD009652 | 2015 | Darker, C. D., Sweeney, B. P., Barry, J. M., Farrell, M. F., & Donnelly-Swift, E | 25 | Canada, USA, Netherlands, Finland, Norway, Czech Republic, Germany, Australia | 1666 | Benzodiazepines | Cognitive behavioural therapy, motivational interviewing, letters to patients with advice, relaxation studies, counselling delivered electronically, advice provided by a general practitioner | CBT offers a short-term positive effect but is not sustained; insufficient evidence to support motivational interviewing to reduce BZD use. Some evidence to suggest that other interventions could be effective but insufficient evidence included in this review |
| C | 6 | Psychosocial interventions for pregnant women in outpatient illicit drug treatment programs compared to other interventions | CD006037 | 2015 | Terplan, M., Ramanathan, S., Locke, A., Longmaker, N., & Sui | 14 | USA, Australia | 1298 | Pregnant illicit drug users | Contingency management, motivational interviewing-based techniques | The present evidence suggests that there is no difference in treatment outcomes to address drug use in pregnant women with use of psychosocial interventions, when taken in the presence of other comprehensive care options |

Table 1 (continued)

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|----------------------------|--|--|----------|---------------------|--|----------------------------|---|------------------------|--|--|--|
| A | 7 | Social norms information for alcohol misuse in university and college students | CD006748 | 2015 | Foxcroft, D. R., Moreira, M. T., Almeida Santimano, N. M. L., & Smith, L. A | 70 | USA, Australia, Brazil, New Zealand, Sweden, UK | 44,958 | Alcohol misuse amongst university and college students | Social norms interventions | The results of this review indicate that no substantive meaningful benefits are associated with social norm interventions for prevention of alcohol misuse among college/university students |
| C | 8 | Pharmacological interventions for drug-using offenders | CD010862 | 2015 | Perry, A.E., Neilson, M., Martyn-St James, M., Glanville, J. M., Woodhouse, R., Godfrey, C., & Hewitt, C | 14 | USA, England, Iran, Australia, Norway, Germany | 2647 | Drug using offenders | Pharmacological treatments with (1) routine parole or social psychological treatment or both; (2) counselling options; and (3) a non-pharmacological alternative | Effectiveness of non-pharmacological interventions not reported. When compared to non-pharmacological treatment, agonist treatments did not seem effective in reducing drug use or criminal activity |

Table 1 (continued)

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|----------------------------|--|---|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|-----------------------------------|---|---|
| B | 9 | Brief school-based interventions and behavioural outcomes for substance-using adolescents | CD008969 | 2016 | Carney, T., Myers, B. J., Louw, J., & Okwundu, C. I | 6 | UK, USA | 1176 | Adolescent substance misuse | Brief interventions | We found low or very low quality evidence that brief school-based interventions may be more effective in reducing alcohol and cannabis use than the assessment-only condition and that these reductions were sustained at long-term follow-up. We found moderate-quality evidence that when compared to information provision, brief interventions probably did not have a significant effect on substance use outcomes |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|--|----------------------------|---|------------------------|-----------------------------------|---|---|
| C | 10 | Motivational interviewing for the prevention of alcohol misuse in young adults | CD007025 | 2016 | Foxcroft, D.R., Coombes, L., Wood, S., Allen, D., Almeida Santimano, N. M. L., & Moreira, M. T | 84 | USA, Canada, UK, Australia, Switzerland, Spain, France, Brazil, Thailand, Netherlands | 22,872 | Alcohol use | Motivational Interviewing | No effect for binge drinking, alcohol risky behaviour; small borderline effects for reduced alcohol consumed, frequency of alcohol consumed, alcohol problems and peak blood alcohol concentration. The results of this review indicate that there are no substantive, meaningful benefits of MI interventions for preventing alcohol use, misuse or alcohol-related problems |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|---|----------------------------|---|------------------------|---|--|---|
| C | 11 | Psychosocial interventions for cannabis use disorder | CD005336 | 2016 | Gates, P. J., Sabioni, P., Copeland, J., Le Foll, B., & Gowing, L | 23 | USA, Australia, Germany, many, Switzerland, Canada, Brazil, Ireland | 4045 | Cannabis disorder | Cognitive behavioural therapy, motivational enhancement therapy | Psychosocial intervention was shown, in comparison with minimal treatment controls, to reduce frequency of use and severity of dependence in a fairly durable manner, at least in the short term |
| B and C | 12 | Psychosocial interventions for psychostimulant misuse | CD011866 | 2016 | Minozzi, S., Saule, R., De Crescenzo, F., & Amato, L | 52 | USA, Spain, Australia, Switzerland, UK | 6923 | Psychostimulants — cocaine, amphetamines, and ecstasy | Cognitive behavioural therapy (19 studies), contingency management (25 studies), motivational interviewing (5 studies), interpersonal therapy (3 studies), psychodynamic therapy (1 study), 12-step facilitation (4 studies) | Uncertain results and no significant difference apart from favourable result for individual counselling. There were few studies comparing two or more psychosocial interventions, with small sample sizes and considerable heterogeneity in terms of the types of interventions assessed. None reported significant results |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|---|----------------------------|--|------------------------|-----------------------------------|---|--|
| B and C | 13 | Opioid agonist treatment for pharmaceutical opioid dependent people | CD011117 | 2016 | Nielsen, S., Laranca, B., Degenhardt, L., Gowing, L., Kehler, C., & Lintzertis, N | 6 | USA, Iran | 607 | Pharmaceutical opioids dependence | Counselling (2 studies), 15-to-20-min brief negotiation interview (1 study) | Effectiveness of non-pharmacological interventions not reported. In one study, the treatment dropout rate reduced for those receiving counselling |
| B | 14 | Personalised digital interventions for reducing hazardous and harmful alcohol consumption in community-dwelling populations | CD011479 | 2017 | Kaner, E. F. S., Beyer, F. R., Garnett, C., Crane, D., Brown, J., Muirhead, C., Redmore, J., O'Donnell, A., Newham, J. J., De Vocht, F., Hickman, M., Brown, H., Maniopoulos, G., & Michie, S | 57 | USA, Mainland Europe, UK, Japan, Australia | 34,390 | Alcohol use | Digital interventions | There is moderate-quality evidence that digital interventions may lower alcohol consumption, with an average reduction of up to three (UK) standard drinks per week compared to control participants |

Table 1 (continued)

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|----------------------------|--|---|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|-----------------------------------|---|--|
| C | 15 | Cognitive-behavioural treatment for amphetamine-type stimulants (ATS)-use disorders | CD011315 | 2018 | Harada, T., Tsutomi, H., Mori, R., & Wilson, D. B | 2 | Australia | 129 | Amphetamine-type stimulants (ATS) | Cognitive Behavioural Therapy | Study 1 showed a significant effect. Study 2, no significant difference. Overall quality of evidence was low, and there was insufficient evidence to conclude that CBT is effective, or ineffective, at treating ATS use |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|--|----------------------------|--|------------------------|-----------------------------------|---|---|
| B | 16 | Effectiveness of brief alcohol interventions in primary care populations | CD004148 | 2018 | Kaner, E. F. S., Beyer, F. R., Muirhead, C., Campbell, F., Pienaar, E. D., Bertholet, N., Daepelen, J. B., Saunders, J.B., & Burand, B | 69 | Finland, Spain, USA, Denmark, Germany, Poland, UK, Switzerland, Australia, Wales, England, Scotland, France, Canada, Kenya, South Africa, Thailand, Sweden, Brazil | 33,642 | Hazardous alcohol use | Brief interventions | Moderate-quality evidence that brief interventions can reduce alcohol consumption in hazardous and harmful drinkers compared to minimal or no intervention. Longer counselling duration probably has little additional effect. 5 studies reported adverse effects |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|---|---|--|
| B and C | 17 | Psychosocial interventions to reduce alcohol consumption in concurrent problem alcohol and illicit drug users | CD009269 | 2018 | Kilmas, J., Fairgrieve, C., Tobin, H., Field, C. A., O'Gorman, C. S. M., Glynn, L. G., Keenan, E., Saunders, J., Bury, G., Dunne, C., Cullen, W | 7 | USA, Ireland, Switzerland | 825 | Illicit drug users (aged at least 18 years) with concurrent problem alcohol use | Cognitive-behavioural coping skills training (one study), twelve-step programme (one study), brief intervention (three studies), motivational interviewing (two studies), and brief motivational interviewing (one study) | Low to very low-quality evidence to suggest that there is no difference in effectiveness between different types of psychosocial interventions to reduce alcohol consumption among people who use illicit drugs, and that brief interventions are not superior to assessment-only or to treatment as usual |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|---------------------------------------|--|---|
| C | 18 | Interventions for drug-using offenders with co-occurring mental health illness | CD010901 | 2019 | Perry, A.E., Neilson, M., Martyn-St James, M., Glanville, J., M., Woodhouse, R., Godfrey, C., & Hewitt, C | 13 | USA, Spain, UK, Sweden | 2606 | Drug misuse with mental health issues | A wide range of treatments, including mental health treatment courts with an assertive case management model, therapeutic communities, motivational interviewing (MI) with cognitive multi-systemic/multi-dimensional therapy involving families and mindfulness training, legal defence service with wrap-around social services, and interpersonal psychotherapy | Therapeutic community interventions and mental health treatment courts may help people to reduce subsequent drug use and/or criminal activity. For other interventions, such as interpersonal psychotherapy, multi-systemic therapy, legal defence wrap-around services, and motivational interviewing, the evidence is more uncertain. Studies showed a high degree of variation, warranting a degree of caution in interpreting the magnitude of effect and the direction of benefit for treatment outcomes |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|---|----------------------------|--|------------------------|---|---|---|
| B | 19 | Family-based prevention programmes for alcohol use in young people | CD012287 | 2019 | Gilligan, C., Wolfenden, L., Foxcroft, D. R., Williams, A. J., King-sland, M., Hodder, R. K., Stockings, E., McFadyen, T. R., Tindall, J., Sherker, S., Rae, J., & Wiggers, J | 46 | USA, Germany, Netherlands, Sweden, Poland, India | 39,882 | Alcohol | Family-based interventions versus no intervention or an adolescent component alone | Overall, we found no evidence and no clear benefits for the effectiveness of family-based interventions on the prevalence, frequency, or volume of alcohol use among young people. No adverse effects were reported |
| C | 20 | Psychological interventions for co-occurring depression and substance use disorders | CD009501 | 2019 | 21 + F25 | 7 | USA | 608 | Comorbid substance use disorders and depression | Psychological interventions versus no treatment, delayed treatment as usual and other psychological interventions | No conclusions about the effectiveness of psychological interventions delivered with or without pharmacotherapy could be made for the treatment of comorbid depression and substance use disorders |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|--|----------------------------|---------------------------------------|------------------------|-----------------------------------|--|---|
| C | 21 | Interventions for female drug-using offenders | CD010910 | 2019 | Perry A.E., Marty-St James M., Burns L., Hewitt C., Glanville J.M., Abojja A., Thakkar P., Santosh Kumar K., Pearson C., Wright K | 13 | USA, Spain | 2560 | Adult drug using women offenders | Case management; collaborative behavioural management; interpersonal psychotherapy; acceptance and commitment therapy and cognitive behavioural therapy; gender responsive treatment; therapeutic community; therapeutic community and cognitive skills training | On one outcome of arrest (no parole violations), we identified a significant reduction when cognitive behavioural therapy (CBT) was compared to a therapeutic community programme. But for all other outcomes, none of the interventions were effective |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|-----------------------------------|--|---|
| B and C | 22 | Alcoholics Anonymous (AA) and other 12-step programs for alcohol use disorder | CD012880 | 2020 | Kelly, J. F., Humphreys, K., & Ferri, M | 27 | USA, UK, Norway | 10,565 | Alcohol | Twelve step Interventions, motivational enhancement therapy, cognitive behavioural therapy | There is high quality evidence that manualized AA/TSF interventions are more effective than other established treatments, such as CBT, for increasing abstinence. Non-manualized AA/TSF may perform as well as these other established treatments. AA/TSF interventions, both manualized and non-manualized, may be at least as effective as other treatments for other alcohol-related outcomes. AA/TSF probably produces substantial healthcare cost savings among people with alcohol use disorder |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|---|----------|---------------------|--|----------------------------|---------------------------------------|------------------------|--|---|---|
| B | 23 | Mindfulness-based interventions for substance use disorders | CD011723 | 2021 | Goldberg, S.B., Pace, B., Griskaitis, M., Wil-lutzki, R., Skoetz, N., Thoenes, S., Zgierska, A.E., & Rösner, S | 35 | USA, Iran, Thailand, Brazil | 2825 | Various SUDs including alcohol and opioids | Mindfulness-based interventions (MBIs) | In comparison with no treatment, the evidence is uncertain regarding the impact of MBIs on SUD-related outcomes. MBIs result in little to no higher attrition than no treatment. In comparison with other treatments, MBIs may slightly reduce days with substance use at post-treatment and follow-up (4 to 10 months) |

Table 1 (continued)

| Type of intervention Group | Study Ref number in publication year order | Cochrane Systematic Review title | CSR ID | Year of publication | Review authors | Number of included studies | Countries in which studies took place | Number of participants | Type of problematic substance use | Non-pharmacological interventions studied | Overall narrative summary of effectiveness for non-pharmacological interventions |
|----------------------------|--|--|----------|---------------------|---|----------------------------|---------------------------------------|------------------------|--|---|---|
| B | 24 | Effectiveness of psychosocial interventions for reducing parental substance misuse | CD012823 | 2021 | McGovern, R., Newham, J., Addison, J., M. T., Hickman, M., & Kaner, E. F. S | 22 | USA, Australia, UK | 2274 | Drinking and drug use; heroin, cocaine, and alcohol were the most reported | Psychosocial interventions | Psychosocial interventions probably reduce the frequency at which parents use alcohol and drugs. Moderate-quality evidence was found that psychosocial interventions probably reduce the frequency at which parents use alcohol and drugs. Integrated psychosocial interventions which combine parenting skills interventions with a substance use component may show the most promise. The interventions were more beneficial for fathers than mothers at reducing alcohol use |

Type of intervention group A = information dissemination; B = non specialised face to face interventions; C = qualified therapeutic interventions

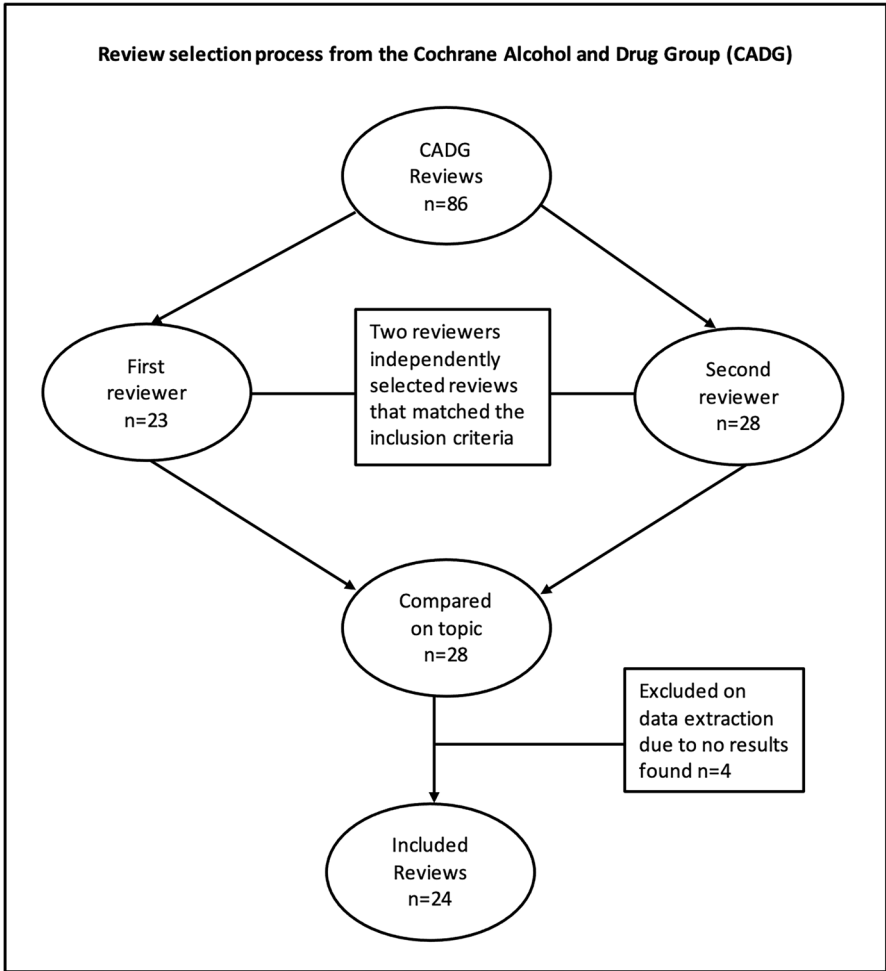


Fig. 1 Independent review selection by the authors

Analysis of the Data

The extracted data was analysed and categorized by intervention group. The results are reported in Table 1.

Results

The review of 86 Cochrane Systematic Reviews published by the CADG resulted in both reviewers agreeing 28 CSRs were identified on topic. During the data collection process, 4 reviews were excluded as they did not report any non-pharmacological interventions in their results sections. Consequently, there were 24 reviews that met the study inclusion criteria as shown in Fig. 1. A total of 672 studies and 532,845 participants are included and shown in Table 1, by review.

The data reported shows a wide range of substances was being used and a diverse range of intervention modalities was being implemented. The types of substance use, the interventions included and the effectiveness results are also presented in Table 1.

The variety of reported types of interventions and effectiveness included did not lend itself to a meta-analysis of the results. Nevertheless, the tabulated narrative of results shown in Table 1 indicates an overall low to moderate effectiveness pattern for these non-pharmacological interventions.

One review, CD004148, surprisingly found adverse effects relating to the brief intervention for hazardous alcohol use, with one study reporting an increase of binge drinking post this intervention for women.

The countries from which studies originate by each review are reported in Table 1, and 78% of these countries can be classified as high-income countries.

The 4 CSRs that were relevant to the topic but were subsequently excluded as reporting of non-pharmacological interventions were not included in the review results section, are listed in the reference's section.

Discussion

The results of this rapid overview highlight the types of reported non-pharmacological interventions used to treat people who seek recovery through substance use treatment services, as shown in Table 1. The interventions can be primarily categorized by type and can be grouped into three categories: (A) information provision and dissemination, (B) non-specialized face to face contact, and (C) therapeutic interventions provided by a qualified person as shown in Table 1. The list of interventions is so diverse in their descriptive design; a direct comparison of interventions is very difficult to scrutinize. A meta-analysis of the effectiveness results was not possible due to incomplete reporting and the heterogeneity of study focus and design.

What is most of interest here is the range of interventions and effectiveness outcomes shown in Table 1, which are collectively reported as poor to moderate, not indicating usefulness when paralleled to more widely supported harm reduction methods of treatment, such as prescribed medication for people who use substances. The imprecise reporting of amalgamated results for each included systematic review is of concern; however, Cochrane Systematic Reviews maintain a consistent methodology so giving some semblance of reliability throughout this overview of multiple systematic reviews (Cochrane Training, 2022). The authors acknowledge that using one database source of reviews could add a selection bias to the study; nevertheless, it is also recognized that Cochrane reviews search multiple databases for their inclusion criteria to be matched and would have already employed an extensive search strategy in their process. This study did not search other databases due to the rapid overview design.

The most widely reported interventions in the 672 studies are cognitive behavioural therapy, motivational interviewing, contingency management and mindfulness.

The analysis is limited in its nature due to the design and purpose of this rapid overview. It is recognized that a deeper and more extensive overview would be worthwhile in understanding these results more fully.

This rapid overview shows an absence of potential interventions that could have been expected to be included such as lived experience organisations, equine assisted therapy, sports, purposeful activities and creative arts interventions. A systematic review of creative arts interventions found evidence that music-based interventions are helpful in reducing craving and increasing motivation for recovery (Megranahan & Lynskey, 2018). This is poignant

given the growing interest in non-medicalized recovery options, such as creative arts (All-Party Parliamentary Group on Arts, Health, and Wellbeing, 2020) and lived experience recovery organisations. Whilst momentum is increasing in these alternative recovery initiatives, it is unlikely the rigidity of the Cochrane systematic review will be able to highlight the current research activities, mainly due to the stringent characteristics of study inclusion, until such time as there are more controlled trials exploring alternative non-pharmacological interventions in the sector of addiction treatment provision. As a start, a protocol was registered with Cochrane Library to conduct a Cochrane method systematic review investigating music therapy for people with problematic substance use (Ghetti et al., 2020). The completed Cochrane review on music therapy was published in 2022 which was outside the data collection period for this rapid overview (Ghetti et al., 2022). It found 21 studies which met their inclusion criteria with a total of 1984 participants. The results support those reported by Megranahan and Lynskey's 2018 systematic review results, which shows music is complimentary to reduce cravings for problematic substance use. However, the quality of the studies assessed remained moderate to low evidence which is substantiated in the results of this rapid overview. Michael Silverman's work into the use of music therapy has established a strong indication on the benefits it can bring to recovery for problematic substance use within substance treatment centres. The latest publication adopts a qualitative reporting design of the results for 12 participants and concludes from the thematic analysis five trends emerged: shared experiences, peer connections, a history of damaged relationships and isolation, the role of social support and an inclination not to seek new relationships whilst in treatment (Bourdagh & Silverman, 2023). Silverman emphasises the future need for more quantitative exploration for music therapy interventions to enhance the limited body of evidence.

Interestingly, there are 28 countries represented within this review, of which 22 are high-income countries, 3 are upper middle-income countries, 3 are lower-middle income countries, and there are no low-income countries included. Also noted is 50% of the CSRs include the four most represented countries being USA ($n=21$), Australia ($n=11$), UK ($n=8$), and Canada ($n=7$). These four countries all have English as their first language which may be a contributing factor to their prominence. According to the global burden of disease, problematic substance use is heavily weighted towards low and middle income countries, whilst the number of related research studies is predominately high income country based. This inequity can influence the collective results of research evidence (Frassetto et al., 2020).

Conclusion

This rapid overview has highlighted those non-pharmacological interventions which are currently offered by problematic substance use treatment services, even though there appears to be a lack of significant evidence of beneficial effects. This study accentuates the need for more investigation with robust study design of an in-depth nature to further understand the reasons these specific interventions continue to be provided by the treatment services for problematic substance use.

Compliance with Ethical Standards

Conflict of Interest The authors affirm that they have no conflicts of interest to declare, and no funding was received for conducting this study.

Ethics An ethics application and authorization were not required to conduct this study as it uses existing published data.

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