

Research Article

How can meditation be salutary in dealing with alcohol use disorder?

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Abstract

Alcohol use disorder not only endangers individual physical and mental health, but also threatens social costs. Among multifarious treatments, meditation has become a growing option, with encouraging signs. This literature review provides an overview of the effectiveness of this approach, including mindfulness-based, vipassana, and transcendental meditation, with 6,837 participants from the USA, the Netherlands, Italy, and Australia, in 27 research projects. Strengthening awareness and self-control, meditation practitioners were able to lessen drinking motives and disengage alcohol cues, resulting in alcohol-related self-efficacy, stress reduction, and finally dissipation of excessive alcohol consumption. These support the extension of using meditation in drinking interventions. In addition, recommendations are given for developing this method to tackle problematic alcohol use with more reliable data.

Introduction

Alcohol abuse remains a serious detriment to all age groups, from adolescents [1-3] to the elderly [4], engendering physical, mental, behavioural, financial, family, and social problems within individuals and their communities. More than three million deaths each year worldwide [5] are attributed to effects of a high risk factor associated with over 200 physical and mental illnesses and disabilities, including cancerous organ diseases, diabetes, cardiovascular failure, strokes, dementia, and psychotic disorders [6]. Thus, it incurs quantifiable and intangible social financial burdens [7]. The former covers health care expenditures, lower productivity, law enforcement costs, preventive and education expenses, and welfare budgets [8]; the latter encompasses poor quality of life, and inimical family relationships, causing family violence [9]. Worse, foetal alcohol syndrome induced by maternal alcohol consumption [10, 11] potentially produces genetic alcoholism [12] that harms newborns for their entire lifetime.

In order to tackle alcoholism, manifold treatments are utilised, mainly with medications, behavioural modification or combined approaches, achieving positive consequences; for example, using disulfiram, naltrexone, or acamprosate, along with cognitive behavioural therapy [13]. Meditation, a non-intrusive practice that cultivates neuro-behavioural energy [14], has also been applied to substance abuse and relapse [15, 16] since the 1970s, for instance, transcendental meditation [17-20]; among which Buddhist forms are increasingly adopted, including vipassanā and mindfulness meditation [21-25]. For example, a recent study has reported the effectiveness of a mindfulness-based relapse prevention programme among 168 participants affected by alcohol or drug dependence [26], which was supported by other research projects [27-29].

This literature review offers an overview of the effects of applying meditation to alcohol abuse, by sourcing 27 major electronic databases, such as the British Nursing Index, ProQuest Medical Library, MEDLINE, PsycARTICLES, PsycINFO, and PsycTESTS. The inclusion criteria are four-fold: (1) using only meditation, (2) merely examining problematic alcohol consumption, (3) adopting empirical methods,

and (4) publishing in peer-reviewed journals. The exclusion criteria include: (1) duplications, and (2) theoretical exploration, literature reviews, book reviews, and dissertations.

Findings and discussion

The 27 reviewed projects involved 6,837 participants from the USA, Italy, the Netherlands, and Australia, including 3,816 (55.8%) adolescents or college students: nine of which (33.3%) were experimental studies. Only three randomised controlled trials (11.1%) were carried out, with 484 (7.1%) participants; and 18 (0.3%) participants took part in another single qualitative inquiry.

Although the literature search was open to all forms of meditation, the output listed Buddhist-oriented meditative modes, mainly concerning mindfulness (n=24, 88.9%), together with vipassanā (n=1, 3.7%) and transcendental (n=2, 7.4%) meditation.

Mindfulness-based meditation

Originating from the noble eightfold path, a key Buddhist tenet, the two basic elements of mindfulness are memory [30] and awareness [31]. *Memory* focuses on remembering virtues to accomplish inner purification through deep observation related to body, feelings, mind, and phenomena, from which *awareness* arises of one's own dirty corporeality, suffering, impermanence, and ever-changing self. These can be attained through mindfulness training, particularly meditation, resulting in knowing intrinsic characteristics such as emotional responses and personal weaknesses (including greed, hatred, and

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ignorance). Therefore, mindfulness has been extensively adopted for physical [32] and mental health treatments in individual [33] and organisational settings [34], covering a wide age spectrum from children [35] to seniors [36]. Its effectiveness on substance abuse [37, 38] and substance-induced mental illnesses [39] attracts attention to itself in the health care field.

As attributes in research associated with addiction, the five dimensions of mindfulness interpreted by Western scholars [40-42] comprise *observing* (attention to internal and external environments), *describing* (word expression of inner experiences), *acting with awareness* (present moment activities), *non-judging* (non-evaluation to thoughts and feelings), and *non-reactivity to inner experiences* (free flow of thoughts and feelings).

Mindfulness meditation contributes to enhancements in these dimensions which, for example, link a negative correlation with drinking motives [43] and alcohol-related stress [44]. Thirteen participants took part in 2-hour daily sessions from Monday to Friday for eight weeks, and practised 30 minutes of mindfulness-oriented meditation everyday at home [45], showing not only improvements in temperament and character maturity but also risk reductions in developing personality disorders and relapsing alcoholism.

Also, mindfulness training, guided by a 10-minute tape recording, was provided to 207 college students with problematic drinking to investigate the relationship between drinking motives, drinking behaviour, and mindfulness [46]. The outcomes presented an adverse correlation between *acting with awareness* and likelihood of harmful alcohol consumption, due to a lower level of drinking as a coping motive to reduce negative emotions. This association also applied to the factor *non-judging*. Moreover, greater *acting with awareness* is connected with weaker likelihood of alcohol overuse as a conformity motive to alleviate pressure from others. These were approved by Reynolds, Keough and O'Connor [47] from their survey among 76 informants. Another survey conducted with 316 participants added an inverse relationship between *describing* and alcohol consumption [48].

Despite the effects of mindfulness on overcoming alcohol misuse as presented earlier, Murphy and MacKillop [49] argued that these mindfulness traits were unable to predict impulsive alcohol consumption. An observation from another research indicated an insignificant relationship between *observing* and *non-reactivity to inner experiences* and alcoholism [48].

Mindfulness noticeably yields stronger positive implicit expectancy and weaker negative implicit expectancy [50] because it increases awareness and openness [51], and lessens attached thought [52]. Such strengths are conducive to better executive control [53] (higher-order regulation of thought and behaviour) and a decrease in thought suppression [54], thus regulating cue-reactivity and disengaging alcohol cues [55].

In addition to enhancements in self-control [56] and alleviation of stress reactivity and automatic compulsion as narrated by 18 young heavy alcohol users in a qualitative study after joining a 10-week mindfulness-oriented recovery enhancement intervention [57], mindfulness weakens automatic alcohol motivation [58] but strengthens alcohol-related self-efficacy [59]. Consequently, it assists in less alcohol consumption and better mental health benefiting from a 8-week meditation course coupled with 30-minute daily home practice periods [60], including stress reduction [61], depression, anxiety, and alcohol-generated health problems due to gains in purpose in life [62].

Although a few projects were opposed to the effects of mindfulness on quantity, frequency, and duration of alcohol consumption [63], on reducing alcohol craving [64], on the mediating role between stressful life events and alcoholism [65], and on overall effects [66], these studies suffered from either small sample sizes or bare reliance on self-administered survey questionnaires. However, these contrary outcomes may abate over-optimism towards the usefulness of meditation in alcoholism, and remind scholars of careful research design.

Vipassanā meditation

Vipassanā meditation emphasises insight into phenomenal reality, that is, the nature of the secular world, regarding transience, afflictions, and inconstant self, eventually aiming for emancipation. As reported by 173 participants who practised 8 to 10 hours of daily vipassanā meditation over a 10-day course, a non-randomised study indicated a significant decrease in unwanted thoughts about alcohol use [67]. This research presented favourable indicators; nevertheless, further confident data will be important for looking into the effects of this Buddhist meditative method on alcohol dependence.

Transcendental meditation

Popularised in the 1950s and developed from Buddhist ideas, transcendental meditation is a systematic, mantra-oriented deep breathing technique to cultivate inner happiness related to peace and balance [68]. A primary survey conducted with 1,862 instructors who practised transcendental meditation expressed that this practice could reduce hard liquor intake [69]. Additionally, Shaffii and the team [70] detailed the results of their project in that 40% of 216 participants who practised this meditation for two years discontinued alcohol use, and 60% did so within 25-39 months. In spite of these acceptable outcomes, recent academic research on this method has seemingly become inactive related to alcohol overuse.

Limitations and future research directions

Research methods and meditation modes can be discussed further to investigate their usefulness against alcohol use disorder. First, only one-third of the reviewed projects studied intervention programmes, while the remainder were based on telephone or Internet surveys. A rise in experimental research is desirable to enrich promising data on how meditation can deal with heavy alcohol consumption. Second, three randomised controlled trials did not yield sufficient scientific results. A randomised controlled research design is required to gather reliable data sets in an evidence-based manner, which minimises research biases. Third, the reviewed works used cross-sectional design without follow-up, which makes it difficult to determine their effectiveness in the long-term. Longitudinal studies are thus recommended to expand applications to alcohol-related problems. Fourth, in-depth interviews, either in individual or group context, can explore deeper understandings and thick descriptions of the lived experiences of people with alcohol use disorder. Hence, qualitative research is an advised method. Lastly, the diversification of meditative forms, for example Taoist meditation, is expected to extend choices for both health care professionals and people affected by alcoholism.

Recommendations

Common characteristics of addictive behaviour include emotional instability, stimulation, and loss of control [71], which can be improved by meditation, for instance, a reduction in craving alcohol [72]. The findings of this review support augmented applications of meditation

to addiction therapies such as gambling [73], excessive social media use [74], and sexual addiction [75]. However, a qualified meditation instructor is essential to prevent illusion, delusion or hallucination when practising.

A general principle comes into play here: more frequent practice, more skilled techniques, and prolonged effectiveness. Therefore, meditation, as a coping strategy, is proposed to be practised regularly [76] and be integrated into daily life activities; for example, walking, eating, and cooking [77]. This feasibly exhibits favourable results for remedial and preventive purposes over the long-run.

Conclusion

Meditation is comparatively safe, economic, non-medicinal, and non-invasive. The positive signs from the 27 reviewed studies reveal the effects of meditation on alcohol use disorder pertaining to an extensive range of consequences from remedial and preventive perspectives, including lower drinking motivation, better alcohol disengagement, and greater alcohol-associated self-efficacy, resulting in a significant reduction in alcohol consumption. This practice also benefits alcohol-incurred mental problems such as depression and anxiety. Although it is a potential measure for pathological alcohol dependence and relapse, further well-designed empirical research is necessary in order to collect substantial, reliable evidence.

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There is no conflict of interest to declare with respect to the present manuscript submitted for publication.

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