

Therapeutic Effectiveness of Mindfulness-Based Meditation in Addiction Rehabilitation: Evidence from a Systematic Literature Review

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Abstract

The association between substance use disorder (SUD) and persistent cravings, emotional distress, relapse risk, and disrupted sleep has a negative impact on rehabilitation outcomes. The aim of this systematic review was to investigate whether mindfulness-based meditation interventions produce beneficial effects in substance users with sleep disturbances and substance cravings. Using Scopus, Web of Science, PubMed, ScienceDirect, Google Scholar and Emerald Insight, the literature from these sources was retrieved in accordance with PRISMA 2020 guidelines. Forty of the eligible studies were included in the qualitative synthesis. The results showed that the mindfulness-based interventions (MBIs) – including Mindfulness Based Relapse Prevention (MBRP), Mindfulness Based Stress Reduction (MBSR), mindfulness meditation, qigong meditation and Mind–Body Bridging (MBB) – were associated with decreased cravings, stress, anxiety, and relapse risk; increased emotional regulation; enhanced psychological well-being; and improved sleep quality. Additionally, a methodological review of the literature indicated methodological weaknesses such as the lack of consistency in intervention procedures and the limited number of long-term follow-up studies.

Keywords

Addiction Rehabilitation, Mindfulness-Based Interventions, Mindfulness-Based Meditation, Mindfulness-Based Relapse Prevention, Sleep Quality, Substance Craving, Substance Use Disorder.

INTRODUCTION

Substance use disorder (SUD) is a significant public health problem which has physical, psychological, and social consequences. Substance cravings, emotional fluctuations, stress, anxiety, and sleep issues are common and ongoing experiences for clients during rehabilitation that can lead to relapse and poor recovery outcomes [1]. Emotional regulation is known to be one of the most significant predictors of relapse, and poor sleep quality contributes to further compromising emotional regulation and well-being in people who have experienced addiction [2]. In rehabilitation clinics, standard pharmaceutical interventions are frequently employed; however, they can have side effects, dependency issues, and short-term efficacy, necessitating alternative non-pharmacological methods [3].

Mindfulness-Based Meditation (MBM) is a therapeutic technique that has proven to be an effective treatment in the field of addiction. Mindfulness interventions emphasize being aware in the present moment, regulating emotions, and accepting thoughts and desires without judgment [4]. Previous research has demonstrated that mindfulness exercises can reduce automatic drug seeking behavior and enhance coping skills during stress [5]. Mindfulness-based interventions, including Mindfulness-Based Relapse

Prevention (MBRP) and Mindfulness-Based Stress Reduction (MBSR) have successfully lowered the intensity of cravings, enhanced emotional regulation and lessened risks of relapse in substance-dependent people [6].

Mindfulness interventions have also been shown to have a positive effect on sleep quality in people with alcohol and drug dependence. Mindfulness practices have been shown to be relaxing, to calm the cognitive arousal of the stress response, and to restore physiological balance related to sleep regulation [7]. Mindfulness-based therapies have been shown to improve sleep duration, sleep regularity and psychological functioning in persons with SUDs [8]. In addition, mindfulness practices have been linked to stress, anxiety, depression and other high-risk behaviors that are often associated with addiction recovery, such as aggression [9].

The benefits of mindfulness-based interventions for addiction were also recently reviewed in systematic reviews and meta-analyses. Mindfulness-based therapies have been shown to be effective in decreasing dependency, cravings and emotional dysregulation in both behavioral and substance addictions [10]. But researchers also have called for additional context-specific research and longer-term studies to further support empirical evidence with a focus on rehabilitation and more diverse populations.

Substance abuse remains a significant social and health problem in India, particularly for those in need of

rehabilitation. Although there is growing global evidence of the benefits of mindfulness-based interventions, the benefits of these interventions in Indian rehabilitation centres are yet poorly researched, and there has been no research on effect of these interventions on both craving reduction and improvements in sleep quality. The present study is thus an attempt to see the effectiveness of the Mindfulness Based Meditation on the reduction of substance craving and the improvement of sleep quality among rehabilitation centre's clients in Nadia, West Bengal, India. This study's results could be useful in developing effective and comprehensive supportive treatment for addiction and relapse.

METHODOLOGY

Review Design

A systematic literature review (SLR) methodology was used to critically review and synthesize the current evidence of the effectiveness of mindfulness based meditation (MBMM) interventions for reducing substance cravings and improve sleep quality among patients with SUDs. To ensure transparency, methodological rigor, reproducibility and reliability in the review process, the review was designed with consideration of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines. The main aim of the review was to explore the effectiveness of mindfulness-based interventions (MBIs) including Mindfulness Based Relapse Prevention (MBRP), Mindfulness Based Stress Reduction (MBSR), mindfulness meditation, qigong meditation, Mind–Body Bridging (MBB) and other meditation-based interventions in addiction rehabilitation and recovery settings. The purpose of this review was also to identify emerging trends, predominant therapeutic outcomes, methodological approaches and gaps in the current literature concerning craving reduction, relapse prevention, emotional regulation, psychological well-being and sleep quality improvement among people receiving drug and/or alcohol treatment.

Literature Search Strategy

A thorough and systematic literature review was carried out on a variety of electronic academic databases including Scopus, Web of Science, PubMed, ScienceDirect, Google Scholar and Emerald Insight. They were chosen because of the comprehensive coverage of indexed peer-reviewed literature on psychology, psychiatric, nursing, behavioral sciences, addiction medicine, rehabilitation and mental health interventions. A literature search was conducted to identify studies published between 2010 and 2025, reflecting more recent mindfulness theory development, advances and empirical studies in substance use rehabilitation.

Relevant and complete studies were retrieved by using carefully selected keywords and Boolean operators for the search process. The most common search terms were, “mindfulness-based meditation”, “mindfulness-based intervention”, “mindfulness-based relapse prevention”,

“mindfulness-based stress reduction”, “substance use disorder”, “addiction treatment”, “substance craving”, “relapse prevention”, “sleep quality”, “sleep disturbance”, “rehabilitation centre”, “emotional regulation”, “stress reduction”, “meditation therapy”, and “psychological well-being.” Boolean operators (AND, OR, NOT) were employed to narrow and/or expand the search strategy. Example of search terms used in the databases: “mindfulness meditation” OR “mindfulness-based intervention” OR “MBSR” OR “MBRP” AND “sleep quality” OR “sleep disturbance” OR “sleep improvement” AND “substance use disorder” OR “addiction” OR “substance craving”. Aside from the database searching, both backward and forward citation tracking were used to find highly cited and influential studies on mindfulness-based therapies and addiction recovery. A total of 520 records were found during the first search in the database.

Inclusion and Exclusion Criteria

All the selected studies were relevant, of good quality and methodological consistency, which was achieved by applying predefined inclusion and exclusion criteria during the screening and eligibility process. Studies were considered if they involved MBIs and were published in peer-reviewed journals in any of the following contexts: substance use disorders, addiction recovery, relapse prevention, reduction of craving, emotional regulation, psychological well-being, stress management, or improvement in sleep quality. Randomized controlled trials, quasi-experimental studies, pilot studies, mixed methods, qualitative studies, systematic reviews, and meta-analyses of meditation or mindfulness-based interventions in people under treatment for substance dependence were included in the review. Studies examining interventions that were directly relevant to the objectives of the review were also included, such as MBSR, MBRP, mindfulness meditation, MORE, qigong meditation, yoga-based mindfulness, and Mind–Body Bridging.

Studies that used validated assessment instruments and methodological procedures were given preference. The papers that used standardized outcome measures for craving, sleep quality, stress, anxiety, depression, mindfulness, emotional regulation and relapse risk were deemed most relevant for the purposes of this review. To ensure consistency and comparability of the studies, only publications in the English language were considered.

Studies were excluded if there was not methodological clarity, if the studies were not specifically about mindfulness or meditation based intervention, or if the study was not related to substance use disorder and addiction rehabilitation. Articles that were not peer-reviewed, dissertations, conference abstracts without full-text, editorials, opinion papers, duplicate studies, or studies that only discussed the treatment of behavior using drugs, without any mindfulness aspect were not included in the review process. Some studies lacked empirical evidence, poorly defined intervention

procedures, and poorly reported outcomes, and therefore were not included to assure methodological rigor of the final synthesis.

Study Selection Process

The selection of studies was carried out in a transparent and systematic way with the help of the PRISMA 2020 framework. In the identification phase, a total of 520 records were identified from the selected electronic databases. Following 95 duplicate studies were removed, 425 studies were left for title and abstract screening. All the titles and abstracts of the retrieved studies were thoroughly screened to identify studies relevant to the present research including studies on mindfulness-based meditation, addiction treatment, reduction of cravings, improvement of sleep quality, emotional regulation, and rehabilitation outcomes.

At the screening stage, 310 studies were discarded due to thematic or methodological mismatch with the criteria of the review. This resulted in 115 full-text articles being evaluated. Eligibility assessment included an in-depth analysis of the research design, intervention characteristics, participant population, methodological quality, outcome measures, and direct relevance to the objectives of the review in each study. At this stage, studies that were not sufficiently methodologically rigorous, or had unclear intervention protocols, or were limited in relevance to substance craving or sleep-related outcomes were excluded. As a result, 75 studies were excluded because they lacked empirical quality, reporting, were thematically redundant, or had a lack of applicability to the research goals. Finally, 40 studies were included in the qualitative synthesis and thematic analysis. The whole selection process is documented by the PRISMA 2020 flow diagram in order to provide transparency and reusability of the review process.

Quality Assessment of Included Studies

To increase the methodological rigor and reliability of the review, a systematic quality appraisal process was carried out for all studies included. The selected articles were assessed for methodological quality based on the critical appraisal forms that were used for the various types of study designs. The Joanna Briggs Institute (JBI) critical appraisal tools were used to assess the randomized controlled trials and experimental studies and Critical Appraisal Skills Programme (CASP) checklist was used for qualitative studies. The methodological transparency, risk of bias and the quality of evidence synthesis in systematic reviews and meta-analyses were analyzed.

The quality assessment process included examining study purpose statements, the appropriateness of research design, participant selection methods, validity and reliability of outcome measures, intervention consistency, methods of statistical analysis, and the adequacy of reported findings. Good methodological quality and reporting standards were emphasized in the studies during the synthesis process. Although some studies had a number of limitations (small

samples, brief intervention times, and no long-term follow-up evaluations), they were included if they offered important conceptual or clinical lessons applicable to mindfulness-based addiction treatment. The quality appraisal process enhanced the reliability, validity and academic rigor of the review in total.

Data Extraction and Thematic Synthesis

The data extraction process was structured to systematically gather and organize relevant data from the studies included. Data regarding authors, year of study, country of study, design of the study, participant characteristics, mindfulness intervention type, duration of intervention, assessment instruments, outcome variables, and key findings of the studies on craving reduction, sleep quality improvement, emotional regulation, relapse prevention, and psychological well-being were recorded using a standardized extraction format. Other data regarding the treatment setting, feasibility of interventions, participant compliance, and implementation issues were also collected to obtain a complete picture of the available mindfulness-based rehabilitation approaches.

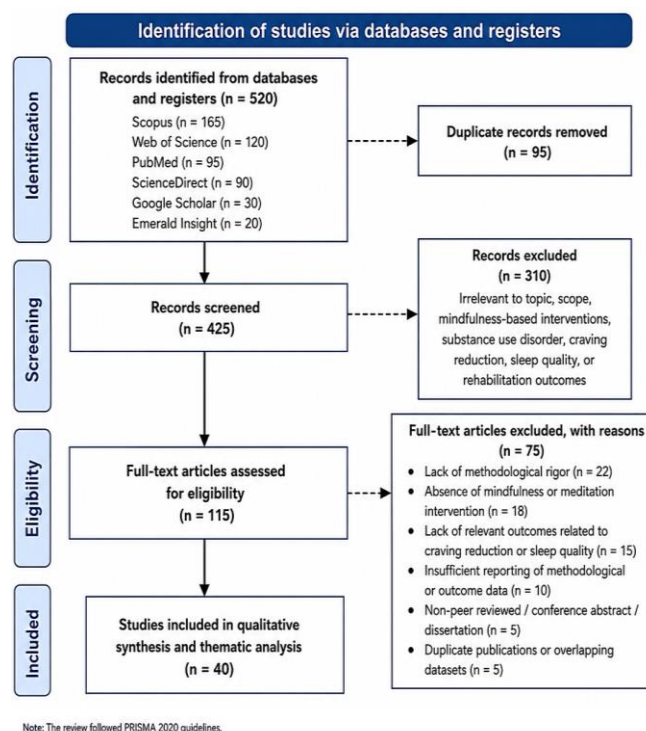


Figure 1. PRISMA Flow Diagram Illustrating the Study Selection Process for Systematic Review

Data extraction was then followed by a qualitative thematic synthesis approach to analyze and synthesize the data extracted from the studies selected. Thematic analysis facilitated the categorisation of the literature for the identification of common themes, therapeutic trends, methodological trends and research gaps. The major themes that emerged from the synthesis were reducing substance craving, improving sleep quality, regulating emotions,

reducing stress and anxiety, preventing relapse, increasing mindfulness and awareness, and psychological well-being. The thematic synthesis also identified new trends of research regarding digital mindfulness interventions, culturally adapted meditation programs, community-based rehabilitation applications, and integrative therapeutic models. This analytical approach allowed for a holistic interpretation of the current evidence and better understanding of the impact of MBM in addiction recovery and rehabilitation contexts.

RESULTS, FINDINGS AND DISCUSSION

Overview of Included Studies

The systematic review analyzed 40 studies on the effectiveness of mindfulness-based interventions (MBIs) for substance use and cravings, sleep quality, emotional

regulation, and addiction recovery outcomes among people with substance use disorders. Included studies were randomized controlled trials, pilot studies, qualitative studies, mixed methods studies, systematic reviews, meta-analyses, and narrative reviews in a variety of rehabilitation and clinical settings. The interventions mainly comprised Mindfulness-Based Relapse Prevention (MBRP), Mindfulness-Based Stress Reduction (MBSR), mindfulness meditation, qigong meditation, Mindfulness-Oriented Recovery Enhancement (MORE), and Mind-Body Bridging (MBB). All of the studies presented showed increasing evidence of the effectiveness of mindfulness-based interventions as complementary interventions for the treatment of addiction and relapse.

Table 1. Summary of Included Studies and Major Findings

Ref	Intervention	Population / Setting	Major Findings
[11]	MBIs	Substance use populations	Reduced substance use and craving
[12]	MBIs	Substance abuse recovery	Improved emotional regulation and coping
[13]	MBRP	Vulnerable Brazilian population	Reduced craving and improved mental health
[14]	MBSR	TBI and SUD patients	Improved coping and emotional awareness
[15]	Qigong meditation	Residential treatment	Reduced craving and anxiety
[16]	Meditation practices	SUD treatment center	Identified barriers to mindfulness adoption
[17]	MORE	Alcohol-dependent adults	Improved self-regulation and relapse prevention
[18]	MBB	Women with SUM	Reduced cravings and sleep disturbances
[19]	Brief MBIs	Inpatient SUD women	Feasible but mixed quantitative outcomes
[20]	MBSR	Substance dependence	Significant stress reduction
[21]	Mindfulness meditation	Addiction recovery	Improved quality of life
[22]	Digital mindfulness IMI	Cannabis users	Proposed scalable intervention model
[23]	Mindfulness therapies	Co-occurring disorders	Supported spiritual and holistic recovery
[24]	MBIs	Multiple health conditions	Broad therapeutic effectiveness
[25]	MBSR	Homeless men	Reduced anxiety and impulsivity
[26]	Yoga and mindfulness	Internet addiction	Improved emotional regulation
[27]	MAT	Sex addiction	Reduced craving and improved sleep
[28]	Buddhist-derived interventions	Correctional settings	Reduced negative affect and substance tendencies
[29]	Integrative recovery model	Rehabilitation center	Enhanced holistic recovery
[30]	Mindfulness training	Incarcerated adolescents	Improved self-awareness and coping
[31]	Yoga and meditation	Correctional rehabilitation	Improved emotional regulation
[32]	MBIs	Mental health treatment	Strong therapeutic potential
[33]	Mobile mindfulness	Substance abuse counselor	Reduced burnout

Ref	Intervention	Population / Setting	Major Findings
	intervention		
[34]	MBRP + Matrix model	SUD patients	Improved attendance and abstinence
[35]	Mindfulness meditation	Problem gambling	Increased mindfulness and emotional control
[36]	Mindfulness training	Juvenile rehabilitation	Reduced aggression and improved empathy
[37]	MBSR/MBCT	Employees	Improved sleep and mental well-being
[38]	MBRP	Substance use disorders	Reduced impulsivity and relapse risk
[39]	Meditation therapy	Addiction recovery	Improved stress management
[40]	HRVB and controlled breathing	Substance craving populations	Reduced craving intensity

Findings to Substance Craving Reduction

Most of the studies reviewed showed that the mindfulness-based interventions were highly effective in decreasing substance cravings in those who were undergoing addiction treatment. Practices like MBRP, MBSR, mindfulness meditation, and MORE improved participants' self-awareness, their capacity to control their thinking, and their emotional regulation, so they could respond more mindfully to cues associated with craving, rather than reacting impulsively. Other studies have found large decreases in craving intensity and relapse-related behaviours after mindfulness-based interventions (MBIs), as shown in studies [11], [13], [17], [18] and [38]. Likewise, studies shown in [15] have reported that the participants who practised Qigong meditation showed more decreases in

craving and withdrawal symptoms than the participants in the standard stress management group.

Multiple studies also reported positive findings about the ability of mindfulness interventions to enhance nonreactivity to substance cues and coping ability during stress. In the study number [34] it is shown that adding MBRP to the matrix model greatly enhanced abstinence and treatment adherence. In addition to the above in study number [27] it is demonstrated that more mindfulness-based interventions were associated with decreased addictive compulsive behaviors and increased sleep quality and emotional regulation. The overall picture is clear: mindfulness-based meditation is a very promising complementary approach to managing craving and preventing relapse during addiction treatment programs.

Table 2. Major Outcomes Related to Substance Craving Reduction

Intervention Type	Key Outcomes	Supporting Studies
MBRP	Reduced craving and relapse risk	[13] [34] [38]
MBSR	Improved emotional regulation and stress reduction	[14] [20] [25]
Qigong meditation	Reduced craving and anxiety	[15]
MORE	Improved coping and nonreactivity	[17]
MBB	Reduced cravings and trauma-related symptoms	[18]
Meditation therapy	Improved self-awareness and emotional control	[21] [27] [39]
Controlled breathing and HRVB	Reduced craving intensity	[40]

Findings to Sleep Quality Improvement

Many studies found that mindfulness-based interventions improved the sleep quality of people who suffer from SUDs. Sleep problems are frequently experienced by people in addiction treatment and are highly correlated with vulnerability to relapse, emotional instability, anxiety, and poorer psychological functioning. Nakamura et al. [18] reported large decreases in sleep disturbances in those who received Mind-Body Bridging interventions. In the study number [27], it is reported that sleep quality changes in favour of Meditation Awareness Training, as well as

decreases in addictive behaviours and psychological distress.

It appears that mindfulness practices have other therapeutic benefits beyond addiction, as shown in study number [37], and it is noted that there were improvements in sleep quality among employees who received mindfulness-based stress reduction interventions. Due to their beneficial effects on managing insomnia, stress and psychological symptoms that harm sleep. The study number [24] highlighted the importance of mindfulness-based interventions. Overall, the results suggest that mindfulness meditation can be used to induce relaxation, autonomic

regulation, emotional stability and cognitive calmness, which leads to better sleep quality and long-term outcomes for recovery in substance-dependent individuals.

Findings to Emotional Regulation and Psychological Well-Being

Emotional regulation was a key mechanism in the reviewed literature that underpinned mindfulness-based interventions as an aid to addiction recovery. People with substance use disorders often have anxiety, depression, impulsivity, stress, and emotional instability, which can increase the risk of relapse. Mindfulness practices were shown to foster present moment awareness and nonjudgmental acceptance, which led to enhanced emotional awareness, self-control, empathy and resilience.

From the studies [12], [25], [30], [36] and [21], it is found that mindfulness interventions had a positive effect on emotional regulation, coping, empathy, self-awareness, and psychological well-being. Likewise, studies [17] and [20] found that participants in mindfulness-based treatment programs experienced those decreases in stress and emotional distress. In correctional and rehabilitation-based research, mindfulness practices also were associated with a decrease in aggression and hostility, impulsiveness and negative affect, and an increase in optimism and psychological resilience [28], [31], [36].

The current results suggest that meditation practice associated with mindfulness is not only effective for tackling addictive behaviour but also has a positive impact on psychosocial rehabilitation, such as emotional stability, quality of life, stress management and social functioning.

Emerging Trends and Research Gaps

The review highlighted several recent trends in the field of mindfulness-based addiction. One is the growing interest in the adoption of mindfulness interventions delivered using digital/distance and mobile technology to enhance access and scalability. The studies from [22] and [33] have pointed out that mindfulness interventions via the internet and mobile apps are becoming more common for addiction recovery and stress management, respectively. Second, studies are increasingly focusing on the integrative treatment models which integrate mindfulness with spiritual, cognitive-behavioural, positive psychology, and community-based rehabilitation [23], [29].

There are several methodological limitations that are apparent in the literature reviewed. Small sample size, brief intervention duration, no long-term follow-up evaluations, various outcome measures, and low methodological quality were common features of many studies [11], [24], [28], [40]. There was also some variation in treatment adherence and participant engagement, especially in vulnerable populations in some interventions [13], [16]. In addition, there is limited evidence from low- and middle-income countries, underscoring the need for mindfulness interventions that are culturally adapted, and for context-specific rehabilitation

studies.

The review also found insufficient research that simultaneously targeted both substance craving reduction and sleep quality improvement within the rehabilitation centre (RC) environment, especially in India. This is an overshadowed area, highlighting the need for empirical research with rehabilitation clients in areas like Nadia, West Bengal, to provide context-specific evidence for the effectiveness of mindfulness-based meditation for addiction recovery.

Discussion

The results of the present systematic review show that mindfulness-based meditation interventions can have significant potential in supporting addiction recovery by reducing cravings, regulating emotions, managing stress, preventing relapse and improving sleep quality. The reviewed studies all show that mindfulness training can increase awareness of craving, thoughts, and emotional triggers, which can lead to better self-regulation and decrease impulsive substance-seeking. Mindfulness-based interventions seem especially effective when offered as part of a larger rehabilitation program, in addition to psychological counselling and behavioral therapy and supportive care. The interventions demonstrated excellent effectiveness in enhancing coping and reducing the risk of relapse in a variety of groups, including alcohol dependent persons, incarcerated populations, adolescents, homeless people and women in rehabilitation treatment. Additionally, there were more general psychosocial advantages of mindfulness practices, such as reducing anxiety, depression, impulsivity, and aggression and improving quality of life. The results also indicate that mindfulness-based meditation might be a safe and low-cost complementary rehabilitation tool in environments where psychological long-term therapy might not be readily available. But the differences in duration, implementation strategies and methodological rigour in the studies suggest a need for more consistent and more extensive clinical research. Long-term studies, culturally adapted mindfulness interventions, and controlled intervention trials that look at reducing craving and sleep quality outcomes separately from each other should be investigated in the future.

CONCLUSION

According to the present systematic review, mindfulness-based meditation interventions are effective in decreasing substance craving and sleep disturbance among substance use disorder patients. The literature reviewed confirmed that interventions including MBRP, MBSR, mindfulness meditation and their related practices led to improvements in emotional regulation, stress and risk of relapse, as well as psychological well-being and quality of life. The results also suggest that mindfulness practices have a beneficial effect on sleep quality, fostering relaxation and emotional balance during the process of addiction recovery.

In spite of some promising evidence, the literature currently available is limited by methodological inconsistencies and by a lack of long-term investigations. Overall, mindfulness-based meditation is a valuable complementary and holistic approach to addiction rehabilitation. Future research should be conducted in a culturally sensitive manner and strive to be rigorous, longitudinal and culturally adapted to continue the validation of its effectiveness in rehabilitation settings.

REFERENCES

- [1] M. Yaghubi and F. Zargar, "Effectiveness of Mindfulness-based Relapse Prevention on Quality of Life and Craving in Methadone-treated Patients: A Randomized Clinical Trial," *Addict. Health*, vol. 10, no. 4, 2018. <https://doi.org/10.22122/AHJ.V10I4.573>
- [2] Y. Wang *et al.*, "Effect of short-term mindfulness-based stress reduction on sleep quality in male patients with alcohol use disorder," *Front. Psychiatry*, vol. 14, p. 928940, 2023. <https://doi.org/10.3389/fpsyt.2023.928940>
- [3] P. S. Hosseini, S. Z. Eftekhari, F. R. Johari, and others, "Effects of mindfulness-based relapse prevention therapy on drug craving and emotion regulation of therapeutic community centers clients," 2023. <https://doi.org/10.5812/jhrt-136888>
- [4] Demina, B. Petit, V. Meille, and B. Trojak, "Mindfulness interventions for craving reduction in substance use disorders and behavioral addictions: systematic review and meta-analysis of randomized controlled trials," *BMC Neurosci.*, vol. 24, no. 1, p. 55, 2023. <https://doi.org/10.1186/s12868-023-00821-4>
- [5] Iranshahri and H. Jenaabadi, "The effectiveness of mindfulness therapy in controlling under treatment addicts' drug cravings," *Open J. Med. Psychol.*, vol. 4, no. 03, pp. 88–98, 2015. DOI: 10.4236/ojmp.2015.43009
- [6] M. Sancho *et al.*, "Mindfulness-based interventions for the treatment of substance and behavioral addictions: A systematic review," *Front. Psychiatry*, vol. 9, p. 95, 2018. <https://doi.org/10.3389/fpsyt.2018.00095>
- [7] J. M. Shujaat, K. Saifullah, and H. Saifullah, "Investigating the Impact of Mindfulness-Based Interventions (MBIs) on Craving Reduction and Relapse Prevention among Individuals with Substance Use Disorder," *Contemp. J. Soc. Sci. Rev.*, vol. 3, no. 4, pp. 121–131, 2025. DOI: <https://doi.org/10.63878/cjssr.v3i4.1696>
- [8] Zgierska, D. Rabago, N. Chawla, K. Kushner, R. Koehler, and A. Marlatt, "Mindfulness meditation for substance use disorders: A systematic review," *Mindfulness-Relat. Treat. Addict. Recovery*, pp. 4–32, 2013. DOI:10.1080/08897070903250019
- [9] Q. Ho, "Mindfulness Meditation Practice by Individuals with Substance Dependent Behavior," PhD Thesis, Walden University, 2017. <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=4886&context=dissertations>
- [10] F. Hamidi and S. Kheiran, "Mindfulness-based relapse prevention to reduce high risk behaviors of people addicted to methamphetamine," 2019. <https://doi.org/10.5812/ijhrba.92609>
- [11] Chiesa and A. Serretti, "Are mindfulness-based interventions effective for substance use disorders? A systematic review of the evidence," *Subst. Use Misuse*, vol. 49, no. 5, pp. 492–512, 2014. <https://doi.org/10.3109/10826084.2013.770027>
- [12] K.-S. Chang, L.-H. Lee, S.-L. Chen, Y.-C. Chen, and C.-I. Yang, "Factors influencing the effects of the mindfulness-based interventions of patients with substance abuse: A qualitative systematic review and meta-synthesis," *Heliyon*, vol. 9, no. 8, 2023. doi: 10.1016/j.heliyon.2023.e18911
- [13] M. P. A. Machado, E. S. Opaleye, A. Bedendo, S. Bowen, and A. R. Noto, "A mindfulness-based intervention for Substance Use Disorder in a Brazilian vulnerable population: a feasibility mixed method study," *Front. Public Health*, vol. 12, p. 1381489, 2024. <https://doi.org/10.3389/fpubh.2024.1381489>
- [14] G. K. Kristofersson, *The effects of a mindfulness based intervention on impulsivity, symptoms of depression, anxiety, experiences and quality of life of persons suffering from substance use disorders and traumatic brain injury*. University of Minnesota, 2012. <https://conservancy.umn.edu/server/api/core/bitstreams/233eb63d-217a-49fc-9be5-72ed389be1b2/content>
- [15] K. W. Chen, A. Comerford, P. Shinnick, and D. M. Ziedonis, "Introducing qigong meditation into residential addiction treatment: a pilot study where gender makes a difference," *J. Altern. Complement. Med. Paradigm Pract. Policy Adv. Integr. Health*, vol. 16, no. 8, pp. 875–882, 2010. doi: 10.1093/scan/nsy113
- [16] T. Champagne-Langabeer *et al.*, "Assessing barriers to meditation in patients with substance use disorder," *Complement. Ther. Clin. Pract.*, vol. 59, p. 101957, 2025. 10.1016/j.canrad.2025.104590
- [17] E. L. Garland, N. R. Schwarz, A. Kelly, A. Whitt, and M. O. Howard, "Mindfulness-oriented recovery enhancement for alcohol dependence: Therapeutic mechanisms and intervention acceptability," *J. Soc. Work Pract. Addict.*, vol. 12, no. 3, pp. 242–263, 2012. doi: 10.1007/s12671-020-01444-0
- [18] Y. Nakamura, D. L. Lipschitz, E. Kanarowski, T. McCormick, D. Sutherland, and M. Melow-Murich, "Investigating impacts of incorporating an adjuvant mind-body intervention method into treatment as usual at a community-based substance abuse treatment facility: a pilot randomized controlled study," *Sage Open*, vol. 5, no. 1, p. 2158244015572489, 2015. <https://doi.org/10.1177/2158244015572489>
- [19] K. Colbert, "Brief Mindfulness Intervention with Women in an Inpatient Substance Use Treatment Setting," PhD Thesis, University of Pennsylvania, 2020. doi: 10.1002/14651858.CD011723.pub2
- [20] D. A. Solomon, S. K. Bharathi, R. Vijayaraghavan, and M. Krishnan, "A randomised controlled trial of mindfulness-based stress reduction programme for substance abuse patients in deaddiction centre," *Indian J. Physiol. Pharmacol.*, vol. 68, no. 3, pp. 237–242, 2024. DOI:10.1097/01.PSY.0000074003.35911.41
- [21] Chadderdon, *Mindfulness, Quality of Life, and Relapse Prevention: Development of an Empirically Grounded Theoretical Model of Recovery*. Adler University, 2018. DOI:10.6084/m9.figshare.31302370
- [22] M. Dey *et al.*, "Comparing a mindfulness-and CBT-based guided self-help Internet-and mobile-based intervention against a waiting list control condition as treatment for adults with frequent cannabis use: a randomized controlled trial of CANreduce 3.0," *BMC Psychiatry*, vol. 22, no. 1, p. 215, 2022. doi: 10.1186/s12888-022-03802-9

- [23] T. L. Chandler, T. G. Matthews, K. Barrett, and M. L. Coker, "Consciousness: Mindfulness-Based Therapies Spirituality, Mindfulness, Meditation, and Mindfulness-Based Therapies," in *Co-occurring mental illness and substance use disorders*, Routledge, 2022, pp. 210–225. <https://doi.org/10.1097/HRP.000>
- [24] D. Zhang, E. K. Lee, E. C. Mak, C. Y. Ho, and S. Y. Wong, "Mindfulness-based interventions: an overall review," *Br. Med. Bull.*, vol. 138, no. 1, pp. 41–57, 2021. DOI: 10.1093/bmb/ldab005
- [25] Maddock, D. Hevey, and K. Eidenmueller, "Mindfulness training as a clinical intervention with homeless adults: A pilot study," *Int. J. Ment. Health Addict.*, vol. 15, no. 3, pp. 529–544, 2017. DOI:10.1002/ajcp.12422
- [26] Tripathi, "Impact of internet addiction on mental health: an integrative therapy is needed," *Integr. Med. Int.*, vol. 4, no. 3–4, pp. 215–222, 2019. DOI:10.1159/000491997
- [27] W. Van Gordon, E. Shonin, and M. D. Griffiths, "Meditation awareness training for the treatment of sex addiction: A case study," *J. Behav. Addict.*, vol. 5, no. 2, pp. 363–372, 2016. doi: 10.1556/2006.2020.00075
- [28] E. Shonin, W. Van Gordon, K. Slade, and M. D. Griffiths, "Mindfulness and other Buddhist-derived interventions in correctional settings: A systematic review," *Aggress. Violent Behav.*, vol. 18, no. 3, pp. 365–372, 2013. DOI:10.1016/j.avb.2013.01.002
- [29] G. Du Plessis, "The integrated recovery model for addiction treatment and recovery," 2010. https://www.researchgate.net/publication/274391482_Du_Plessis_G_P_2014_An_Integral_Ontology_of_Addiction_A_multiple_object_existing_as_a_continuum_of_ontological_complexity_Journal_of_Integral_Theory_and_Practice_91_38-54
- [30] S. Himmelstein, S. Saul, A. Garcia-Romeu, and D. Pinedo, "Mindfulness training as an intervention for substance user incarcerated adolescents: A pilot grounded theory study," *Subst. Use Misuse*, vol. 49, no. 5, pp. 560–570, 2014. <https://doi.org/10.1016/j.heliyon.2023.e18911>
- [31] D. Derlic, "A systematic review of literature: Alternative offender rehabilitation—Prison yoga, mindfulness, and meditation," *J. Correct. Health Care*, vol. 26, no. 4, pp. 361–375, 2020. <https://doi.org/10.1177/1078345820953837>
- [32] S. İ. Azizoğlu, H. Ş. Burhan, and F. B. Alptekin, "Nurturing the Present: A Comprehensive Exploration of Mindfulness-Based Interventions and Their Impact on Mental and Physical Health," *Psychother Res*, vol. 14, no. 1, pp. 73–88, 2025. DOI:10.14744/JCBPR.2024.74118
- [33] K. A. Callender, C. E. Trustey, L. Alton, and Y. Hao, "Single case evaluation of a mindfulness-based mobile application with a substance abuse counselor," *Couns. Outcome Res. Eval.*, vol. 12, no. 1, pp. 16–29, 2021. doi: 10.1371/journal.pone.0306757
- [34] D. J. Uhlig, "Mindfulness based relapse prevention and the matrix model in substance abuse relapse prevention," PhD Thesis, Walden University, 2009. DOI: <https://doi.org/10.22100/ijhs.v7i2.848>
- [35] P. Chen, F. Jindani, J. Perry, and N. L. Turner, "Mindfulness and problem gambling treatment," *Asian J. Gambl. Issues Public Health*, vol. 4, no. 1, p. 2, 2014. DOI:10.1080/14459795.2019.1686766
- [36] G. A. Afrooz, "Effect of mindfulness-based training on aggression and empathy of adolescents at the juvenile correction and rehabilitation center," *J. Res. Health*, 2019. DOI:10.32598/jrh.9.6.505
- [37] M. Janssen, Y. Heerkens, W. Kuijer, B. Van Der Heijden, and J. Engels, "Effects of Mindfulness-Based Stress Reduction on employees' mental health: A systematic review," *PloS One*, vol. 13, no. 1, p. e0191332, 2018. DOI:10.1371/journal.pone.0191332
- [38] Bartone and R. Van Patten, "Mindfulness-Based Relapse Prevention as a Health Promotion Tool for Substance Use Disorders in Adults," *JANANY*, p. 58, 2021. DOI:10.47988/janany.23103123.2.1
- [39] M. E. Young, L. de A. DeLorenzi, and L. Cunningham, "Using meditation in addiction counseling," *J. Addict. Offender Couns.*, vol. 32, no. 1–2, pp. 58–71, 2011. <https://doi.org/10.1002/cvj.12069>
- [40] N. Alayan, L. Eller, M. E. Bates, and D. P. Carmody, "Current evidence on heart rate variability biofeedback as a complementary anticraving intervention," *J. Altern. Complement. Med. Paradigm Pract. Policy Adv. Integr. Health*, vol. 24, no. 11, pp. 1039–1050, 2018. DOI: 10.1589/jpts.27.3337