

Impact of Mindfulness-based Relapse Prevention (MBRP) on Psychological Capital among Patients with Alcohol Dependence Syndrome.

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KEYWORDS

Mindfulness, Mindfulness-based Relapse Prevention, Alcoholism, Substance use disorders, Treatment.

ABSTRACT

Background: Psychological capital is a person's good mental growth state. It is made up of four parts: self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). Previous study has also shown that all aspects of psychological capital are strongly connected to drug abuse. People who are addicted to drugs are known to think and act on impulse and have low tolerance levels. Few resourceful studies have been done on how to help people deal with problems and keep them from relapsing. The purpose of this research is to examine the impact of mindfulness-based cognitive therapy on psychological capital, specifically how it cultivates increased awareness of one's own thoughts, feelings, and emotions in the here and now via the practice of non-reaction and non-judgment modes of attention. This research investigates the efficacy of mindfulness-based therapy in assisting alcoholics in establishing psychological capital and so reducing the likelihood of relapse. **Materials & Methods:** Forty participants between the age range of 20-40 years diagnosed with alcohol dependence that fulfilled inclusion and exclusion criteria were selected from inpatient wards of hospital was assessed using socio demographic data sheet, five facet mindfulness questionnaire and psychological capital questionnaire on pre-post phase of the study. A pre-post experimental group with control group design was used. 20 participants were assigned in experimental group and 20 participants in the control group. **Results:** There was significant difference in the psychological capital in post intervention among experimental group as compared to control group.

Introduction

Psychological capital is a dynamic and multifaceted psychological state characterized by hope, optimism, self-sufficiency, and resilience. (Luthans et al., 2007). It involves creating positive pathways for success in both the present and future, as well as persistence in pursuing goals and adaptability in changing strategies to achieve those goals. Additionally, it encompasses resilience, the ability to endure and bounce back from difficult problems and challenges. A plethora of studies investigating the effects of a mindfulness intervention on psychological capital has been conducted in the field of organizational behaviour. Research indicates that instructing individuals in mindfulness can significantly enhance their levels of optimism, self-efficacy, psychological well-being, self-assurance, and self-perception, and decrease their levels of stress. However, there is limited published research in the field of psychological capital, specifically focusing on mindfulness among individuals diagnosed with alcohol dependent syndrome.

Numerous well-established therapy modalities are accessible for individuals suffering from alcoholism. However, relapse remains a prevalent occurrence among individuals who have completed a program for alcohol dependency therapy. Around 80% to 90% of patients undergoing alcoholism treatment encounter a relapse, even following a prolonged period of abstinence. Other variables are contributing to this decline.

Adverse emotional states play a crucial role in both the start of problematic drinking and the relapse of alcohol addiction. Anxiety and depression have been recognized as elements that enhance the risk of developing and prolonging alcohol dependence, as well as increasing the chances of relapse. Studies suggest that the level of mindfulness, hope, self-efficacy, resilience, optimism, craving, and self-regulation in a person has a major impact on the chances of relapse. The mindfulness-based intervention methods (MBRP) were deliberately employed to precisely target and exploit these elements as intervention tools. The research has indicated that the clinging nature of craving is opposed by the practice of accepting one's physiological state and affecting state as they are at any given time. Mindfulness meditation diminishes the neurological component of craving, as evidenced by a decrease in activity within the brain region associated with craving during mindfulness practice. Despite supporting evidence, potential shortcomings of Relapse Prevention have been identified, including focus on avoidance-based goals (i.e., avoiding high-risk situations) vs approach-based goals and on controlling causes of negative affect or craving vs learning to tolerate these states. (Thakker, J & Ward, T, 2010; Larimer.et.al,1999)

When wanting is identified as the primary cause of relapse, there is currently a dearth of literature focusing on a therapeutic approach that directly address craving. People who are addicted to alcohol face severe social stigma related to their alcoholism, unrealistic expectations from family members to maintain abstinence, expectations to be responsible about family, create more stress on alcoholics to prevent relapse. Living in a society with traditional view points as sole bread earner of the family, at times co-dependency from peer groups, easy accessibility to alcohol, Failures to get social support often pose threat to their psychological capital and may lead to relapse.

Additionally, this study was carried out with alcoholics who were receiving care in a hospital. Studies show that people who are forced to go through therapy are under more stress than they were in the past. Agnew's (2001) general stress theory says that stress comes from three different types of events: positive stimuli going away, negative stimuli appearing, and not being able to reach the desired goal. The patients who were admitted in hospital were not having drugs, feels alone, not able to enjoy freedom as they were outside, not able to contact their family members and not being able to use drugs (Chen et al., 2020). These psychological barriers were actually testing their frustration tolerance capacity and people with a lot of psychological capital are generally able to handle these pressures well, while people with less psychological capital may experience worse feelings when these pressures happen. This shows how important this study is as Its main goal is to look into Mindfulness-Based relapse prevention (MBRP) as a way to help people with cravings and also to develop more sense of control by building their psychological capital and lowering their risk of relapse.

Materials & Method

Objectives

- To measure the level of mindfulness, and psychological capital among patient with alcohol dependence syndrome.
- To evaluate the extent of MBRP effective on Psychological Capital among patients with alcohol dependence syndrome.
- To evaluate the extent MBRP effective on Mindfulness among patient with alcohol dependence syndrome.

Sample

A pre-post experimental study design was employed, utilizing random sampling to identify forty participants and those who met the diagnostic criteria of Alcohol dependence as per ICD10-DCR criteria and diagnosed by psychiatrist. Participants were considered as those without multiple substance abuse or due to any other substance abuse, mental illness, mental retardation and without

any other comorbid conditions. The participants were chosen from the inpatient units of two different Hospital inpatient units after obtaining informed consent from patients and ethical clearance from hospital research committee. The selected participants were divided equally into an experimental group and a control group. Participants in the study were males with adequate education and between the age ranges of 20-40. Among the selected sample population almost 80 percent of them were married and others were either remained single or separated.

Tools used for the study

1. **Socio-demographic data sheet** to collect the socio demographic details of the participant and also to assess risk of relapse and to identify triggers
2. **Five Facet Mindfulness Questionnaires:** The Five Facet Mindfulness Questionnaire (FFMQ), a multifactorial scale developed by Baer et al. (2006) .The Five Facet Mindfulness Questionnaire is a 39-item self-report measure assessing the level of mindfulness in daily life. It includes five facets of mindfulness: observing (attending to or noticing internal and external stimuli, such as sensations, emotions, cognitions, sights, sounds, and smells
3. **Psychological Capital Questionnaires (PCQ):** Developed by Lorenz, Beer, Pütz, and Heinitz (2016), this scale has been claimed to be proper for measuring the construct of psychological capital through the literature. This questionnaire has made use of the standardized values that are widely employed to measure such structures as hope, resilience, optimism, and self-efficacy whose reliability and validity have been verified. This scale includes 12 items measuring one's psychological capital. The items had to be answered on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Procedure of the Study

After obtaining ethical clearance and informed consent form from the participants, the selected participants were randomly assigned using lottery method to experimental and control group. These 40 participants were equally assigned to the experimental and control groups. A pilot phase of the study on two participants was conducted to ensure the applicability of tools. After individual baseline examinations of both experimental and control group, the participants of experimental group began the intervention program. The initial session was focused on briefly explaining about the procedure and concept of the study. Furthermore sessions were conducted for almost 14-16 sessions or as needed over a period of 8-10 weeks. Control group participants were kept in the waitlist and they were undergoing treatment as usual till the experimental group completed the intervention and post assessments. After the final session, both experimental and control group participants were completed post intervention assessment. The session were included psychoeducation to understand and accept the disorder, mindfulness training with body scan, sitting, mindful walking, emotional regulation and relapse recognition strategies were also used. After six months, a follow up assessment was also conducted to understand the impact and to determine the durability of treatment.

Results and Discussion

A pre-post experimental study design conducted in hospital inpatient units and participants were selected using simple random sampling to identify forty participants and those who met inclusion and exclusion criteria were diagnosed by psychiatrist. The participants were equally distributed to experimental and control group using lottery method. Among the selected participants almost 80 percent of them were married and others were either remained single or separated with adequate education background of up to post graduation. After obtaining informed consent from participants and hospital research committee the study was conducted.

Table 1 presents the results of a repeated measures ANOVA assessing the effects of an experimental intervention versus a control condition on various mindfulness and psychological capital measures.

Variable	Group (Mean ± SD)				Follow up (Mean±SD)		F Value (interaction)	Significance
	Experimental		Control		Experimental	control		
	Baseline	Post	Baseline	Post				
Mindfulness observing	15.85±5.98	26.15±7.39	15.55±2.74	18.85±3.66	22.58±4.54	17.27±3.58	7.68	0.001*
Mindfulness-cribing	16.5±3.14	26.2±6.33	16.8±2.50	20.6±2.70	23.9±4.93	16.60±3.71	16.2	.001*
Mindfulness-ving with areness	16.75±3.63	25.9±6.09	17.35±2.13	19.45±3.72	22.74±5.66	17.85±3.68	13.18	.001*
Mindfulness-udging	17.15±2.91	26.45±5.83	22.02±4.63	16.75±2.05	19.80±4.02	16.43±3.14	9.88	.001*
Mindfulness-ctivity	15.05±3.82	25.75±4.41	14.50±1.67	18.05±3.15	24.13±4.93	17.72±3.50	15.98	.001*
Psychological capital	27.0±5.24	49.8±11.83	25.5±3.12	30.3±5.80	41.93±11.2	30.59±7.34	19.47	.001*

* P < .05 level

Table 2 presents results from pairwise comparisons between an Experimental Group and a Control Group at three different time points (Pre, Post1, and Last FP)

Pairwise Comparisons							
Measure: Compound psychological capital							
Time point	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	p-value	95% Confidence Interval for Difference ^b	
						Lower Bound	Upper Bound
Pre	Experimental Group	Control Group	1.500	1.364	.278	-1.261	4.261
Post1	Experimental Group	Control Group	19.550*	2.947	<0.001*	13.584	25.516
Last FP	Experimental Group	Control Group	11.337*	2.996	.001*	5.271	17.403
Based on estimated marginal means							
*. The mean difference is significant at the .05 level.							

Discussion

There are many established treatment methods available for alcoholic patients. But still relapse is a common phenomenon for many drinkers who have undergone alcohol dependent treatment programs. Between 80 and 90 percent of people treated for alcoholism relapse even after many years of abstinence. This relapse is caused by a variety of factors. Clinical research has shown that alcohol-

dependent people are more sensitive to relapse-inducing cues and stimuli than nondependent people. Withdrawal-related anxiety is one element that contributes to relapse, and it is most likely the result of adaptive changes in the brain in response to persistent alcohol consumption. These alterations, for example, influence the body's stress response system. The link between withdrawal, stress, and relapse has consequences for the management of alcoholic patients. Both clinical and experimental investigations indicate that long-term physiological and emotional alterations associated with dependency may play a role in persisting vulnerability to relapse (Becker, 2008).

In general, there are three types of events that can strongly lead to relapse: exposure to small amounts of alcohol (also known as alcohol-induced priming), exposure to alcohol-related cues or environmental settings (also known as conditioned cues), and stress. Studies in clinical laboratories have shown that alcohol-dependent people are more sensitive than to these triggers and events' ability to make them crave and feel bad, which probably makes them want to drink more (Fox et al. 2007; Sinha. et al. 2008).

According to prospective research, anxiety and depression are also risk factors for the development and persistence of alcohol dependence, as well as the likelihood of relapse (Kessler et al., 1997). In a similar line, research indicates that exposure to alcohol stimuli and stress leads to substantial increases in alcohol craving, anxiety, and negative emotions, as well as decreases in positive emotions (Fox .et al., 2007). These factors play a major role in relapse and to minimize the effect of relapse or to reduce the rate of relapse, it's considered that individual ability to cope with these pressures is pivotal.

Research has been conducted on the application of various mindfulness techniques to various forms of addiction. Each type yielded inconsistent outcomes. The results also indicated that the brief mindfulness training substantially increased levels of state mindfulness and decreased levels of distress. (Luberto, 2015)

Studies show that an individual's level of mindfulness, hope, self-efficacy, Resilience, and optimism has a major role in relapse. These factors contribute to the psychological capital of an individual. The current study was focused on investigating the extent to which Mindfulness based relapse prevention programme was effective in improving psychological capital among patients with alcohol-dependent syndrome.

Mindfulness reflects the ability to focus one's attention on the present moment. Rather than ruminating, this silent acknowledgment and acceptance of one's feelings, thoughts, and sensations may aid in providing a state of mind favourable to the endorsement of specific recovery capital. In similar lines studies suggested mindfulness and meditation improve pro-social emotions, behaviour, also improves the ability to regulate addictive behaviours and prevent relapse. (Sancho et al., 2018; Luberto et al., 2018; crane et.al, 2017). According to Buddhist doctrine, attachment is the root cause of suffering, which is perpetuated by craving. An individual will be able to identify a path that alleviates such suffering once they have achieved enlightenment. This enlightenment is facilitated by mindfulness, which involves being conscious and reflective of the experiences of each moment. Mindfulness is not limited to mere awareness; it also encompasses the acceptance of these experiences as they are and the ability to let go. (Hussain, 2015). Mindfulness training enables practitioners to observe their cravings through their bodily sensations, but they are instructed not to react to them, despite the fact that they may appear unpleasant. This is a two-step process that teaches practitioners that cravings are temporary physical sensations that pass after they reach their peak. Although cravings may develop gradually, the individual's failure to react promptly and instead observe them will lead to a breakdown of the associative learning process, which in turn disrupts the automated response. The practice of mindfulness involves a specific level of discipline, and it is worth considering whether those who engage in the practice are more likely to derive benefits. (Brewer et al; 2013). Mindfulness practice in MBRP may weaken the link between cravings and drug use and make people less likely to return. (Enkema ,2016).

Table 1 shows how a mindfulness-based relapse prevention program uses repeated measures of ANOVA to compare the effects of an experimental intervention to a control condition on mindfulness and psychological capital measures. The results from Table 1 demonstrate that the experimental

intervention led to significant improvements across all measured variables (mindfulness-observing, describing, acting with awareness, non-judging, non-reactivity, and psychological capital) compared to the control group. The significant F-values and low p-values (all < .01) confirm that the changes observed are statistically significant, indicating that the intervention was effective in enhancing various aspects of mindfulness and psychological capital.

This supports many previous studies that show mindfulness-based treatments for substance use disorders have had varying significant effects on post-treatment abstinence, substance cravings, and stress in substance use disorder populations (Li et al., 2017). Mindfulness also reduces substance seeking, usage, and emotional reaction to inhibition (Enkema et al., 2021; Garland et al., 2019; Murphy & MacKillop, 2014). Studies also indicate that mindfulness training may rapidly enhance one's ability to develop strong social and community bonds, take responsibility for one's actions, and master self and duties. Response inhibition is linked to adaptive functioning like emotional regulation, ego resilience, empathy, agreeableness, conscientiousness, openness to experience, and psychological well-being (Sahdra et al., 2011). The pairwise tests in Table 2 show that there was no significant difference between the experimental and control groups in terms of compound psychological capital at the level before the intervention. The experimental group did much better than the control group after the intervention, with a substantial mean difference and a very significant p-value. At the last follow-up, the experimental group was better as compared to the control group in terms of compound psychological capital.

Luthans et al. (2013) suggest that psychological capital may assist individuals in the development of prospective cognitive autonomy processes, such as perseverance, positive expectations, rebounding from misfortune, and employing alternative methods. Research has demonstrated a substantial correlation between substance use and psychological capital (Krasikova et al., 2015). Previous research has also indicated that individuals who possess higher levels of self-efficacy are more likely to retain information for an extended period and have a lower likelihood of relapsing (Abdollahi et al., 2014). Additionally, resilience has been shown to increase the likelihood of abstaining from substance abuse (Fadardi et al., 2010), and hope has been shown to increase the motivation to cease drug use (Irving et al., 1998).

Overall, the intervention demonstrated a significant positive effect on psychological capital and influenced mindfulness-related variables, with changes observed in the experimental group and not in the control group. These findings underscore the effectiveness of the intervention and its lasting impact on the measured outcomes. However, the current study was time bound study and sample size was small. Hence generalization of results is difficult.

Substance abuse disorders involves multifactorial reasons and just addressing psychological capital itself may not yield fruitful results. Hence it requires more sample, time, frequency of practice of mindfulness also need to be studied to establish a sustainable relapse prevention skills.

Conclusion

The findings of the present study suggest that mindfulness-based relapse prevention therapy was found effective in improving the psychological capital which includes hope, self-efficacy, optimism and resilience which are significantly important for reducing the chances of relapse among patients with alcoholism. The study also indicates the effects of intervention was sustainable as indicated in follow up but to maintain the durability of effects these patients may need to get involve in consistent practice of mindfulness-based techniques.

References

1. Abdollahi, Z., Rahimi, S., Farhadi, M., & Mohammadi, A. (2014). Relationship between addiction relapse and self-efficacy rates in injection drug users referred to Maintenance Therapy Center of Sari, 1391. *Global Journal of Health Science*, 6(3). <https://doi.org/10.5539/gjhs.v6n3p138>

2. Anker, J. (2019). Co-occurring alcohol use disorder and anxiety: Bridging the psychiatric, psychological, and neurobiological perspectives. *Alcohol Research*, 40(1). <https://doi.org/10.35946/arcr.v40.1.03>
3. Becker, H. C. (2008). Alcohol dependence, withdrawal, and relapse. *Alcohol Research & Health*, 31(4), 348–361. PMID: 23584009; PMCID: PMC3860472.
4. Brewer, J. A., Elwafi, H. M., & Davis, J. H. (2012). Craving to quit: Psychological models and neurobiological mechanisms of mindfulness training as treatment for addictions. *Psychology of Addictive Behaviors*, 27(2), 366–379. <https://doi.org/10.1037/a0028490>
5. Crane, R. S., Brewer, J., Feldman, C., Kabat-Zinn, J., Santorelli, S., Williams, J. M., & Kuyken, W. (2017). What defines mindfulness-based programs? The warp and the weft. *Psychological Medicine*, 47(6), 990–999. <https://doi.org/10.1017/S0033291716003317>
6. Enkema, M. C., Hallgren, K. A., Crane, N. A., & Witkiewitz, K. (2021). Craving management: Exploring factors that influence momentary craving-related risk of cannabis use among young adults. *Addictive Behaviors*, 115, 106750. <https://doi.org/10.1016/j.addbeh.2020.106750>
7. Fadardi, J. S., Azadi, Z., & Mettler, J. (2010). The relationship between resilience, motivational structure, and substance use. *Procedia - Social and Behavioral Sciences*, 5, 1956–1960. <https://doi.org/10.1016/j.sbspro.2010.07.395>
8. Fox, H. C., Bergquist, K. L., Hong, K. A., & Sinha, R. (2007). Stress-induced and alcohol cue-induced craving in recently abstinent alcohol-dependent individuals. *Alcoholism: Clinical and Experimental Research*, 31(3), 395–403. <https://doi.org/10.1111/j.1530-0277.2006.00320.x>
9. Garland, E. (2009). Biopsychosocial assessment of a mindfulness-oriented cognitive intervention for alcohol dependent adults. <https://doi.org/10.17615/gsey-8692>
10. Garland, E. L., Bryan, M. A., Priddy, S. E., Riquino, M. R., Froeliger, B., & Howard, M. O. (2019). Effects of mindfulness-oriented recovery enhancement versus social support on negative affective interference during inhibitory control among opioid-treated chronic pain patients: A pilot mechanistic study. *Annals of Behavioral Medicine*, 53(10), 865–876. <https://doi.org/10.1093/abm/kay096>
11. Garland, E. L., & Howard, M. O. (2018). Mindfulness-based treatment of addiction: Current state of the field and envisioning the next wave of research. *Addiction Science & Clinical Practice*, 13(1). <https://doi.org/10.1186/s13722-018-0115-3>
12. Hussain, D. (2015). Meta-cognition in mindfulness: A conceptual analysis. *Psychological Thought*, 8(2), 132–141. <https://doi.org/10.5964/psyct.v8i2.139>
13. Irving, L. M., Seidner, A. L., Burling, T. A., Pagliarini, R., & Robbins-Sisco, D. (1998). Hope and recovery from substance dependence in homeless veterans. *Journal of Social and Clinical Psychology*, 17(4), 389–406. <https://doi.org/10.1521/jscp.1998.17.4.389>
14. Kessler, R. C. (1997). Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the national comorbidity survey. *Archives of General Psychiatry*, 54(4), 313. <https://doi.org/10.1001/archpsyc.1997.01830160031005>
15. Krasikova, D. V., Lester, P. B., & Harms, P. D. (2015). Effects of psychological capital on mental health and substance abuse. *Journal of Leadership and Organizational Studies*, 22(3), 280–291. <https://doi.org/10.1177/1548051815585853>
16. Larimer, M. E., Palmer, R. S., & Marlatt, G. A. (1999). Relapse prevention: An overview of Marlatt's cognitive-behavioral model. *Alcohol Research & Health*, 23(2), 151–160. PMID: 10890810; PMCID: PMC6760427.
17. Li, W., Howard, M. O., Garland, E. L., McGovern, P., & Lazar, M. (2017). Mindfulness treatment for substance misuse: A systematic review and meta-analysis. *Journal of Substance Abuse Treatment*, 75, 62–96. <https://doi.org/10.1016/j.jsat.2017.01.008>
18. Luberto, C. M., Cotton, S., McLeish, A. C., Minges, K. E., & O'Bryan, E. M. (2017). A systematic review and meta-analysis of the effects of meditation on empathy, compassion, and prosocial behaviors. *Mindfulness*, 9(3), 708–724. <https://doi.org/10.1007/s12671-017-0841-8>

19. Luthans, F., Youssef, C. M., & Avolio, B. J. (2012). Meeting the leadership challenge of employee well-being through relationship PsyCap and health PsyCap. *Journal of Leadership & Organizational Studies*, 20(1), 118–133. <https://doi.org/10.1177/1548051812465893>
20. Murphy, C. M., & MacKillop, J. (2014). Mindfulness as a strategy for coping with cue-elicited cravings for alcohol: An experimental examination. *Alcoholism: Clinical and Experimental Research*, 38(4), 1134–1142. <https://doi.org/10.1111/acer.12322>
21. Onaemo, V. N., & Chireh, B. (2024). Alcohol, depression, and anxiety. In *Springer eBooks* (pp. 1–21). https://doi.org/10.1007/978-3-031-32046-0_130-1
22. Sancho, M., de Gracia, M., Rodríguez, R. C., Mallorquí-Bagué, N., Sánchez-González, J., Trujols, J., & Verdejo-García, A. (2018). Mindfulness-based interventions for the treatment of substance and behavioral addictions: A systematic review. *Frontiers in Psychiatry*, 9. <https://doi.org/10.3389/fpsyt.2018.00095>
23. Sahdra, B. K., MacLean, K. A., Ferrer, E., & Greenwald, R. (2011). Enhanced response inhibition during intensive meditation training predicts improvements in self-reported adaptive socioemotional functioning. *Emotion*, 11(2), 299–312. <https://doi.org/10.1037/a0022764>
24. Sinha, R., Fox, H. C., Hong, K. A., Hansen, J., Tuit, K., & Kreek, M. J. (2008). Enhanced negative emotion and alcohol craving, and altered physiological responses following stress and cue exposure in alcohol dependent individuals. *Neuropsychopharmacology*, 34(5), 1198–1208. <https://doi.org/10.1038/npp.2008.78>
25. Thakker, J., & Ward, T. (2010). Relapse prevention: A critique and proposed reconceptualisation. *Behaviour Change*, 27(3), 154–175. <https://doi.org/10.1375/bech.27.3.154>