

Effectiveness of Mindfulness Based Body Scan Meditation: A Case Study of Alcohol Dependence Patient

Shobha Yadav^{1*}

ABSTRACT

The present study examines the effectiveness of body scan meditation of mindfulness based stress reduction on craving in patient with alcohol dependence. An inpatient of 36 year old with diagnosis of alcohol dependence disorder as per ICD-10 DCR criterion was selected purposively, from Central Institute of Psychiatry, Ranchi. Following detoxification subject was evaluated for withdrawal symptoms, severity of alcohol dependence and craving. The subject was purposefully assigned for receiving body scan meditation, underwent 45 minutes guided meditation and 15 minutes discussion for one week. Patient showed significant reduction in craving after one week body scan meditation. Findings of current study shows that there is significant reduction in craving after one week of body scan meditation in alcohol dependence patient.

Keywords: Alcohol dependence, craving, Mindfulness, Pre-assessment, Post assessment.

Alcohol dependence is a substance-related disorder in which an individual is physically or psychologically dependent upon drinking alcohol. Alcohol use disorder has been conceptualized as chronic relapse condition. Relapse has been defined as a process of behaviour change (Witkiewitz, Marlatt & Walker, 2004). One of the strongest predictors of relapse is craving (Sinha & Li, 2002). Many of the promising pharmacotherapy and most effective psychotherapies for addiction have focused on managing substance craving. Craving is the subjective experience of an urge or desire to use substances.

In Buddhist perspective craving is considered a core component of human existence and, craving are viewed as the root cause of human suffering (Bodhi, 2005). Marlatt recognized that craving and addiction could be targeted by mindfulness meditation. As per the cognitive perspective, craving is rooted in cognitive processes (memory, expectancies) that reflect higher order information processing (Tiffany, 1999) and which evolve in automatic process of use (Tiffany, 1990). Stress induced craving is an example of how cognitive interpretation of an event can trigger craving (Sinha & Li, 2007).

¹ M. Phil. Dept. of Clinical Psychology, Central Institute of Psychiatry, Ranchi, India

*Responding Author

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Mindfulness is defined as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experiences moment by moment” (Kabat-Zinn, 2003). In practicing mindfulness, one becomes aware of the current internal and external experiences, observes them carefully, accepts them, and allows them to be let go of in order to attend to another present moment experience. Mindfulness has its origins in the Buddhist tradition, through Eastern practices of meditation.

Mindfulness based therapies have emerged as the third force in the field of psychology and psychological therapies. Literature is full of studies that have proved efficacy of Mindfulness based stress reduction (MBSR) programs in chronic pain conditions such as fibromyalgia, headache, rheumatoid arthritis etc. besides psychiatric conditions like PTSD, grief, anxiety, anger, ADHD, eating disorders etc. Popular and commonly used approaches in mindfulness based therapy (MBT) include Mindfulness based cognitive therapy (MBCT; Segal, et al, 2002), dialectical behavior therapy (DBT; Linehan, 1993), acceptance and commitment therapy (Hayes, et al., 1999). The methods may vary but the fundamental idea behind all the approaches is the development of mindfulness skills. Recent modifications developed for substance abuse population include mindfulness based relapse prevention and mindfulness based community therapy.

In the field of mindfulness based therapies MBSR is the hallmark developed by the pioneer, Dr. Jon Kabat-Zinn at the University of Massachusetts Medical Centre. Since its inception, MBSR has evolved into a common form of complementary medicine addressing a variety of health problems ranging from daily stress and pain to physical, psychosomatic and psychiatric illnesses. MBSR is usually an eight week intensive training program which meets on a weekly basis. However, the duration may vary from six to ten weeks depending on the need, population, and time constraints. Research has shown no significant difference in the effectiveness of shorter duration of MBSR in comparison to the standard eight week therapy schedule (Carmody et al. 2009). It is a structured program, usually administered in a group, and uses techniques such as mindful meditation, hath yoga, mindful eating, mindful walking, mindful breathing and the body scan. Body scan technique is a very powerful technique used to re-establish contact with the body is known as body scanning, because minute focus on the body in body scanning is effective for developing both concentration and flexibility of attention simultaneously. It involves lying on your back and moving your mind through the different regions of body to develop enhanced awareness of moment-to-moment experience of perceptible mental processes with the assumption that greater awareness provides exact perception resulting in a positive influence on health and coping.

Rational for study

Despite supporting evidence, potential shortcomings of traditional addiction treatments have been identified, including focus on avoidance-based goals (i.e., avoiding high-risk situations)

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v/s approach-based goals and on controlling causes of negative affect or craving v/s learning to tolerate these states. (Bowen et al, 2014).

Current MBSR programmes are intensive, typically entailing an 8 week group programme (Carmody and Baer, 2009). While these programmes are effective and highly valued, not all patients will be interested in, or have the resources or time to attend such intensive programmes. Brief interventions (e.g., body scans) may be more readily used by individuals in their own environment, at a lower cost and with little training. Body scan is a cognitive relaxation technique that requires individuals to move their focus of attention around different parts of their body. In comparison to others meditation techniques of mindfulness based interventions, body scans are easy to learn and often used as an accessible entry point to mindfulness meditation (Kabat-Zinn, 1990).

There is dearth of research assessing the efficacy of brief mindfulness based programs and/or its specific techniques in clinical population. A few have studied immediate effects of 10 minute guided body scan meditation. However, these do not fulfil the criteria of mindfulness meditation based technique as they did not encourage focussed awareness which is important in mindfulness based intervention (Zgierska et al., 2009). Body scan practice improved the accuracy of somatosensory decision making suggesting that different types of interceptive attention have different perceptual effects. Findings indicate that changing the nature of bodily attention has implication for somatic perception (Mehling et.al,2009).

Thus this study aims to assess the efficacy of mindfulness meditation based body scan in alcohol dependent patients.

METHODOLOGY

Design

Present study incorporated single –subject case design. This design is sensitive to the individual differences. In order to evaluate the effect of the interventions being used with the participant over time, this design proves to be efficacious. As intervention for alcohol dependence patient is different for different individual, single subject approach responds to the uniqueness of the interventions.

Participant

Index patient A.L/36y old married, male, hailing from higher socioeconomic status, belongs to urban area of Ranchi, educated up to Bachelor in technology, currently employed as manager in a bank, with family history of paralysis in father, came here with chief complaints of intake of alcohol from last 20 years but increased from last 3 years there was history of abstinences for 20 days with determinates as family pressure, history of relapse in 2015 with determinates as loneliness feeling and craving. Impact of illness present on the patient as impairment in the social, vocational and family adjustment. Considering family mother is a nominal head and father is a functional head of the family. There is a direct communication with the family members. Patient seems to be in cooperative attitude, mental status

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examination findings suggestive of normal with pre-contemplation stage of motivation and external locus of control.

Description of tools

- 1. Socio-demographic and clinical data sheet**-Semi-structured proforma containing information much as age, sex, occupation, education, chief complaints, precipitating factor, duration of illness, age onset, course, previous episode, past history, treatment history, family history, personal history, pre-morbid history, mental status history, diagnosis.
- 2. The Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar revised version)(Sullivan et al. 1989)** – It is a ten item scale used in the assessment and management of alcohol withdrawal. Each item on the scale is scored independently, and the summation of the scores yields an aggregate value that correlates to the severity of alcohol withdrawal. The maximum score is =67. The alcohol withdrawal scale is mild alcohol withdrawal score ≤ 15 , moderate with scores of 16-20, and severe with any score ≥ 20 . Reliability is 0.89.
- 3. Severity of Alcohol Dependence Questionnaire (SADQ) (Stockwell et al. 1994)**– The Severity of Alcohol Dependence Questionnaire was developed by the Addiction Research Unit at the Maudsley Hospital. It is a measure of the severity of dependence. Each item is rated on ranging from 0=almost never or nearly always=3.The SADQ questions cover the following aspects of dependency syndrome: physical withdrawal symptoms, affective withdrawal symptoms, relief drinking, frequency of alcohol consumption, speed of onset of withdrawal symptoms. Maximum score=60 and minimum score=0.reliability is 0.85.
- 4. Penn alcohol craving scale (PACS) (Flannery et al. 1999)** – The Penn Alcohol Craving Scale (PACS), which has been used in several clinical trials at the University of Pennsylvania's Treatment Research Centre. The PACS is a five-item, self-report measure that includes questions about the frequency, intensity, and duration of craving, the ability to resist drinking, and asks for an overall rating of craving for alcohol for the previous week. Each question is scaled from 0,1,2,3,4,5,6. The reliability score is 0.91 and validity score is 0.66.

Phases of Intervention

Rapport was established with patient through giving an introduction about the therapist and informal conversation about the important events in his life. He was then asked about the history of the substance intake behaviour. Initial sessions were taken for baseline assessment. In baseline assessment subject was first be evaluated all semi-structure performa for socio-demo-graphic and clinical variables. Subject was further evaluated for all the clinical institute withdrawal assessment for alcohol, severity of alcohol dependence questionnaire, Penn alcohol craving scale. The subject was assigned to receive body scan meditation underwent 45 minutes guided meditation and 15 minutes discussion after detoxification phase as completed.

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The subject received pharmacological treatment as prescribed by treating team. After one week of body scan meditation, patient was re-evaluated on Penn alcohol craving scale. During intervention following instruction has been given by therapist lying on your back and moving your mind through the different regions of your body. The focus begins with the toes of the left foot and slowly moving up the foot and leg, feeling the sensation as we go and directing the breath in to and out from the different regions. From the pelvis, we go to the toes of the right foot and move up the right leg back to the pelvis. From there, we move up through the torso, through the low back and stomach, the upper back and chest and shoulders. Then we go to the finger of both hands and move up simultaneously in both arms, returning to the shoulders. Then move through the neck and throat, and finally all the region of the face, the back of the head and the top of the head. We wind up breathing through an imaginary hole in the very top of the head.

RESULTS AND DISCUSSION

The screening tools which has been used for screening purpose severity of alcohol dependence questionnaire revealed a score of 39 reflective of moderate alcohol dependence and Clinical Institute Withdrawal Assessment for Alcohol scales revealed a score of 4 suggestive of no withdrawal symptoms (Table. 1).

Table-1. Score of Severity of alcohol dependence questionnaire (SADQ) and Clinical Institute Withdrawal Assessment of Alcohol scale revised (CIWA-Ar) of a patient.

Scales	Total Score	Indication
SADQ	39	Moderate dependency
CIWA-r	4	Absence of Withdrawal symptoms

Comparison of score on Penn Alcohol Craving Scale (PACS) of alcohol dependence patient between baseline (pre assessment) and after one week treatment of body scan meditation (post assessment). The body scan meditation intervention over the period of one week, lead to decreament in the patient craving behavior (**Figure.1**). A qualitative analysis indicated that the patient experienced significant difficulty in controlling craving. Studies have shown the positive effects of mindfulness meditation on patient with alcohol dependence. Westbrook et al.(2013) have shown that the practice of mindfulness meditation reduce neural aspects of craving. They found that the brain regions that are typically activated during craving (including the subgenual anterior cingulate cortex) showed reduced activity during mindful attention of smoking images, as compared to looking at the smoking images without mindful attention. Another study also found that individuals who received mindfulness-based relapse prevention (MBRP) reported significantly lower levels of craving following treatment in comparison to a treatment-as-usual control group (Bowen et al.,2009). In the present study also we found significant decrement in craving scores from pre-assessment(score=16) to post-assessment(score=7) after one week of body scan meditation in patients. According to Groves and Farmer (1994) in the context of addictions, mindfulness might mean becoming aware of triggers for craving and choosing to do something else, which might prevent craving, so weakening the habitual response. The craving responses that

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are common in addiction, create a complex system composed of environmental cues and rigid cognitive responding (subjective experience of craving), positive outcome expectancies for the desired effects of the substance and subsequent reductions in negative affect or withdrawal symptoms may provide positive and negative reinforcement for the initiation or continued use of substances. Mindfulness meditation may disrupt this system by providing heightened awareness and acceptance of the initial craving response without judging, analyzing, or reacting. By interrupting this system, meditation acts as a form of counter conditioning, in which a state of meta-cognitive awareness and relaxation replaces the positive and negative reinforcement previously associated with engaging in the addictive behaviour. In this sense, mindfulness may serve as an alternative addiction; more than just a coping strategy for dealing with urges and temptations, but rather as a gratifying replacement behaviour. Increased mindfulness may also reduce an individual's susceptibility to act in response to a drug cue or cue stimulus, and decrease an individual's inclination to behave impulsively.

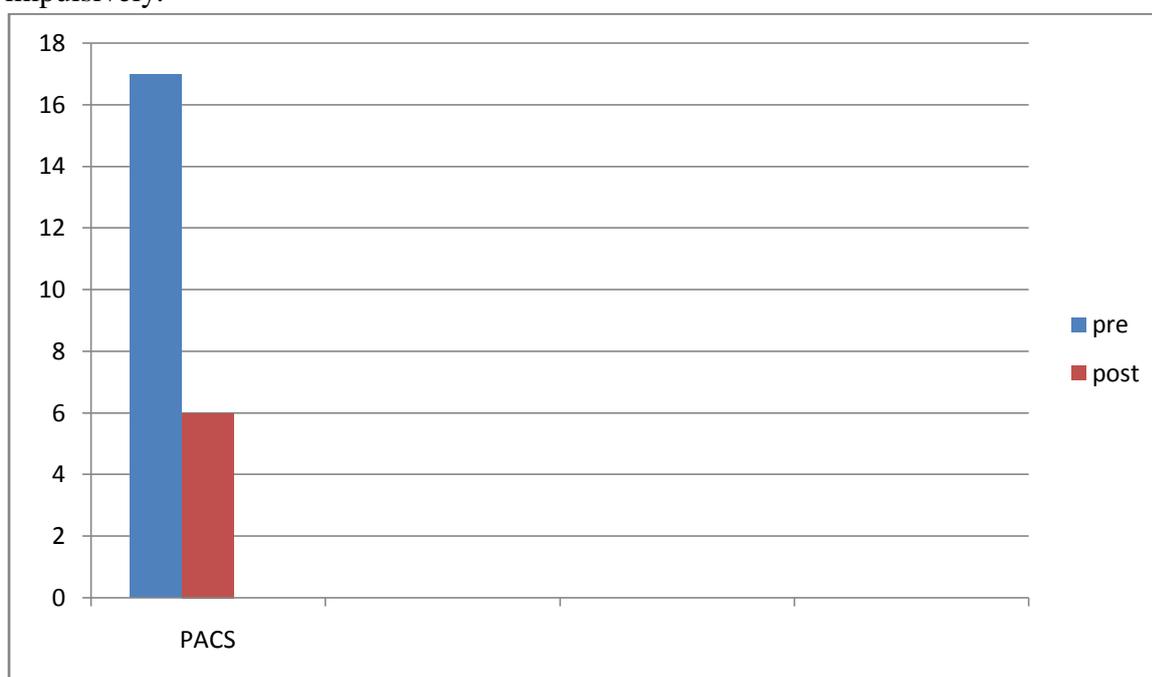


Figure 1. Pre-assessment reporting on Penn alcohol craving scale revealed a score of 16 suggestive of severe level of craving in patient with alcohol dependence.

SUMMARY AND CONCLUSION

The present study, conducted at Central Institute of Psychiatry, Kanke, Ranchi in which a patients with alcohol dependence syndrome was selected from S.S. Raju ward for de-addiction centre in Psychiatry of Central Institute of Psychiatry (CIP) Ranchi, Jharkhand using purposive sampling with the aim of studying the effectiveness of mindfulness based body scan meditation in patients diagnosed with alcohol dependence. Patient diagnosed with mental and behavioral disorder due to use of alcohol dependence syndrome as per ICD 10-DCR criteria & meeting the inclusion and exclusion criteria was selected after that patient was subjected to one week of mindfulness based body scan after that patient was assessed on

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SADQ, CIWA-r, Penn Alcohol Craving Scale, after detoxification for baseline assessment and after one week of body scan meditation.

On the basis of the index study, it can be concluded that body scan meditation lead to significant reduction in craving of the patient with alcohol dependence.

Although this study had the following limitations

1. Both pre and post assessment was done inside the hospital, and there was no follow-up assessments efficacy of intervention could not be assessed after discharge from the hospital.
2. In study, the self-ratings were used to assess the outcome measures and no objective method was used.
3. The long term effects of body scan meditation could not be assessed. Thus, it cannot be commented whether the beneficial effects of body scan meditation are maintained.

Future Directions

The following improvements are suggested the future studies:

1. Longer follow up studies are needed to see whether the results obtained are maintained in long term.
2. Larger sample sizes are needed.
3. Body scan meditation can be compared with other psychological therapies to understand the efficacy of different therapeutic modules.

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REFERENCES

- Bodhi B. In the Buddha's Words (2005): An Anthology of Discourses from the Pali Canon. Somerville, MA: *Wisdom Publications*.
- Bowen, S., Witkiewitz, K., Clifasefi, S. L., Grow, J., Chawla, N., Hsu, S. H., & Larimer, M. E. (2014). Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: a randomized clinical trial. *JAMA psychiatry*, 71(5), 547-556.
- Carmody, J., & Baer, R. A. (2009). How long does a mindfulness-based stress reduction program need to be? A review of class contact hours and effect sizes for psychological distress. *Journal of clinical psychology*, 65(6), 627-638.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy*. New York: Guilford Press.
- Kabat-Zinn J. (1990) Full catastrophe living using the wisdom of your body and mind to face stress, pain and illness. *New York (NY): Dell Publishing*.

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- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical psychology: Science and practice*, 10(2), 144-156.
- Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. Guilford press.
- Mehling, W. E., Gopisetty, V., Daubenmier, J., Price, C. J., Hecht, F. M., & Stewart, A. (2009). Body awareness: construct and self-report measures. *PloS one*, 4(5), e5614.
- Sinha, R., & Li, C. S. R. (2002). Imaging stress-and cue-induced drug and alcohol craving: association with relapse and clinical implications. *Drug and alcohol review*, 26(1), 25-31
- Tiffany, S. T. (1990). A cognitive model of drug urges and drug-use behavior: role of automatic and nonautomatic processes. *Psychological review*, 97(2), 147.
- Tiffany, S. T. (1999). Cognitive concepts of craving. *Alcohol Research and Health*, 23(3), 215-224.
- Witkiewitz, K., Marlatt, G. A., & Walker, D. (2004). Mindfulness-based relapse prevention for alcohol and substance use disorders. *Journal of Cognitive Psychotherapy*, 19(3), 211-228.
- Zgierska, A., Rabago, D., Zuelsdorff, M., Coe, C., Miller, M., & Fleming, M. (2009). Mindfulness meditation for alcohol relapse prevention: a feasibility pilot study. *Journal of Addiction Medicine*, 2(3), 165.

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