

Mindfulness meditation to improve the quality of life for patients with cannabis abuse

Ambika C¹, Dr. Karaline Karunagari D², Dr. Sreedevi J³

¹ PhD Scholar, Rani Meyyammai College of Nursing, Annamalai University,
Chidambaram, Tamil Nadu

² Professor and Former Principal, Rani Meyyammai College of Nursing, Annamalai University,
Chidambaram, Tamil Nadu

³ Associate Professor, Government College of Nursing,
Kozhikode, Kerala

Abstract

Treatment of cannabis use disorder among the youth is a challenging task. Cannabis abuse can lead to immediate and long term complications on health, personal and social life. The long term use can affect the quality of life as well. While addressing the issues related to management of cannabis abuse, measures to improve quality of life also need to be considered. The health care professionals should bear in mind that, blaming the patients with cannabis abuse is of no use. Helping them to realize their present situation is very important. Meditation is one of the techniques which will help the individual to introspect into oneself. There is increased evidence showing that meditation can improve the joys of life, ability to cope with illness, and possibly improve physical and emotional health. Mindfulness meditation is a recently evolved meditation technique which will help an individual to understand and live in the present moment without judging the past or without being anxious about the future. This increased awareness can lead to improvement in subjective well-being and quality of life.

Key words: Mindfulness meditation, Cannabis abuse, Quality of life

Date of Submission: 01-01-2021

Date of acceptance: 13-01-2021

I. Introduction

According to Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2016, it was found that the most common drug use disorders were cannabis dependence (22.1 million cases; age-standardised prevalence 289.7 cases per 100 000 people, 95% UI 248.9-339.1)¹. Cannabis use can cause both long term and short term effects in individuals including cognitive decline, personality disintegration and ultimately reduces the quality of life.^{2,3,4,5,6} Medical management combined with measures to improve quality of life can demonstrate better treatment outcomes for patients with cannabis abuse. Quality of life is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.⁷ In order to improve the quality of life, one can adopt different non pharmacological measures including mindfulness meditation. Mindfulness meditation is an emerging meditation technique proved to improve the overall quality of life and psychological well-being of patients with various problems. Mindfulness is defined as "the awareness that emerges by way of paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment." It has two main components which are awareness and non-judgemental attitude which will help to deal with common psychological distress like fear, anxiety, rumination etc.^{8,9,10}

Origin of mindfulness

Mindfulness has its original roots in ancient cultures like Hinduism and Buddhism^{11,12} Even though the exact origin of mindfulness is not recorded in Hinduism, Bhagavad Gita and Vedic meditation describes about focussed meditation. Similarly Buddhism plays a great role in mindfulness. Buddhism and Hinduism have many common features, both originated in the Asian subcontinent and 'dharma' is the basic concept of both. This concept is very difficult to define or translate, yet includes a way of life influenced by the natural order of the universe. According to Buddhism, mindfulness (Sati) is considered to be the first step towards enlightenment.

Even though mindfulness has its roots in Buddhism, people are practicing mindfulness in the western countries based on the empirical evidences of its efficacy. Prof. John Kabat Zinn introduced mindfulness to the western society during 1970s¹³. He is the founder of Mindfulness Based Stress Reduction (MBSR), an eight

weeks training session aimed at reducing the stress¹⁴ Later on several research studies proved its efficacy in reducing distressing symptoms like depression, sleeplessness, anxiety as well as improving overall well-being and quality of life¹⁵.

Mindfulness can be cultivated by several disciplines and practices like yoga, tai chi and qigong, but most research studies have focused on mindfulness that is developed through mindfulness meditation. In short, mindfulness meditation can be regarded as those self-regulation practices that focus on training attention and awareness with a view to bring mental processes under greater voluntary control and thereby improve general mental well-being and development. It also help in improving capacities such as calmness, clarity and concentration^{16,17}.

Systematic reviews of meditation-based tools such as meditation using focused attention, Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Therapy (MBCT) have shown reduced anxiety, depression and post-traumatic stress disorder, stress, blood pressure, cortisol levels and other physiologic markers of stress¹⁸⁻²¹. Having a regular meditation practice can benefit people working in the health service including patients with different mental disorders²². One of the major advantage of Meditation technique is, it is easy to learn. Even though learning in the present situation has shifted to online platforms, meditation can be taught and supported through online²³. It can be done as individual as well as group practice. Meditation techniques can be adapted for almost all age groups including, children, teens, adults and elderly. It is beneficial even for those with intellectual disabilities²⁴. More than this, mindfulness as a trait has been associated with higher levels of life satisfaction, agreeableness, self-esteem, empathy, conscientiousness, sense of autonomy, competence, optimism, vitality, and pleasant affect²⁵⁻²⁹.

Benefits of mindfulness

There are many benefits for mindfulness. The most important one is, it is a cost effective method and can be practiced without the help of some equipment. The most relevant benefit of mindfulness is psychological well-being. According to the principles of mindfulness, the elements namely awareness and non-judgmental acceptance of one's moment-to-moment experience, are potentially effective against common forms of psychological distress like rumination, anxiety, worry, fear, anger, and so on. Most of these feelings are associated with maladaptive tendencies to avoid, suppress, or over-engage with one's distressing thoughts and emotions³⁰.

The benefits of mindfulness can be broadly classified as

- Reduce rumination
- Reduce stress
- Increase positive affect
- Boosts the working memory
- Help to improve focus
- Less emotional reactivity
- More cognitive flexibility
- Improve the quality of life

Reduce rumination: Rumination is wandering of thoughts. Even though it causes distress to an individual, he may not be able to control it. Regular practice of mindfulness help individuals to reduce rumination. There are many research studies which proved that mindfulness practices can reduce rumination in variety of conditions like ADHD, Anxiety disorders, substance use disorders and so on³¹.

Improve affective and cognitive responses: Many studies show that practicing mindfulness reduces stress. In 2010, Hoffman et al. conducted a meta-analysis of 39 studies that explored the use of mindfulness-based stress reduction and mindfulness-based cognitive therapy. The researchers concluded that mindfulness-based therapy may be useful in altering affective and cognitive processes that underlie multiple clinical issues³².

Boosts the working memory. Improvements to working memory appear to be another benefit of mindfulness. A study conducted in 2010 documented the benefits of mindfulness meditation among a military group who participated in an eight-week mindfulness training, a non-meditating military group and a group of non-meditating civilians. Both military groups were in a highly stressful period before deployment. The researchers found that the non-meditating military group had decreased working memory capacity over time, whereas working memory capacity among non-meditating civilians was stable across time. Within the meditating military group, however, working memory capacity increased with meditation practice³⁴.

Focus. Mindfulness is found to have the power to improve the focus of attention among different category of people who regularly practice mindfulness. In a study the researchers compared a group of experienced mindfulness meditators with a control group that had no meditation experience. They found that the meditation

group had significantly better performance on all measures of attention and had higher self-reported mindfulness.³⁵

Less emotional reactivity. There are empirical evidences to prove that mindfulness meditation decreases emotional reactivity. In a study of people who had anywhere from one month to 29 years of mindfulness meditation practice, researchers found that mindfulness meditation practice helped people disengage from emotionally upsetting pictures and enabled them to focus better on a cognitive task as compared with people who saw the pictures but did not meditate³⁶.

More cognitive flexibility. Many researchers found that mindfulness not only help the people to be less reactive, but also boost greater cognitive flexibility. One study found that people who practice mindfulness meditation appear to develop the skill of self-observation, which neurologically disengages the automatic pathways that were created by prior learning and enables present-moment input to be integrated in a new way. Meditation also activates the brain region associated with more adaptive responses to stressful or negative situations. Activation of this region corresponds with faster recovery to baseline after being negatively provoked^{37,38}.

Relationship satisfaction. Several studies find that a person's ability to be mindful can help predict relationship satisfaction — the ability to respond well to relationship stress and the skill in communicating one's emotions to a partner³⁹.

Structural changes observed while performing mindfulness meditation

There are many empirical evidence which proved that people who have meditated over the long-term show changes in areas of the brain concerned with stress and anxiety. The prefrontal cortex, the cingulate cortex and the hippocampus show increased activity, and the amygdala shows decreased activity consistent with improved emotional regulation^{41,42,43}.

Improve psychological well-being and quality of life

Many researchers identified the efficacy of mindfulness meditation in improving the psychological well-being and quality of life. This is achieved through one's ability to focus on present moment without any judgement as well as increased awareness about oneself.

Process of mindfulness meditation

There are many interventions based on mindfulness like mindfulness meditation (MM), mindfulness based cognitive therapy (MBCT), mindfulness based stress reduction (MBSR) etc. The steps of these interventions may have variations. But the basic principle is mindfulness. In mindfulness meditation, the person will be taught about meditation by a trained therapist. Outcome is measured using different instruments. Mindfulness Attention and Awareness scale (MASS) and quality of life scale are some of the instruments used to measure the efficacy of mindfulness.

II. Conclusion

Quality of life is related to one of the basic human desires, which is to live well and feel good. Substance use causes problems related to increased mortality and morbidity and contributes to various forms of mental illness and social complications. Cannabis use may be a risk factor which will affect the neurological development, cognitive function, emotional well-being and quality of life adversely. Along with the pharmacological treatment, it is the prime responsibility of the health care professionals to address the issues related to Quality of life and implement non pharmacological interventions to improve the quality of life of patients with cannabis abuse.

References

- [1]. Peacock A, Leung J, Larney S, Colledge S, Hickman M, Rehm J, Giovino GA, West R, Hall W, Griffiths P, Ali R, Gowing L, Marsden J, Ferrari AJ, Grebely J, Farrell M, Degenhardt L. Global statistics on alcohol, tobacco and illicit drug use: 2017 status report. *Addiction*. 2018 Oct;113(10):1905-1926. doi: 10.1111/add.14234. Epub 2018 Jun 4. PMID: 29749059. <https://pubmed.ncbi.nlm.nih.gov/29749059/>
- [2]. Jackson NJ, Isen JD, Khoddam R, et al. Impact of adolescent marijuana use on intelligence: Results from two longitudinal twin studies. *Proc Natl Acad Sci U S A*. 2016;113(5):E500-E508. <https://pubmed.ncbi.nlm.nih.gov/26787878/>
- [3]. McCaffrey DF, Pacula RL, Han B, Ellickson P. Marijuana Use and High School Dropout: The Influence of Unobservables. *Health Econ*. 2010;19(11):1281-1299. <https://pubmed.ncbi.nlm.nih.gov/19937639/>
- [4]. Ates N, Unubol B, Bestepe EE, Bilici R. The effect of perceived social support on quality of life in Turkish men with alcohol, opiate and cannabis use disorder. *J Ethn Subst Abuse*. 2019 Nov 5:1-21. <https://pubmed.ncbi.nlm.nih.gov/31686619/>
- [5]. Rey JM, Martin A, Krabman P. Is the party over? Cannabis and juvenile psychiatric disorder: the past 10 years. *J Am Acad Child Adolesc Psychiatry*. 2004 Oct;43(10):1194-205. <https://pubmed.ncbi.nlm.nih.gov/15381886/>
- [6]. Memedovich KA, Dowsett LE, Spackman E, Noseworthy T, Clement F. The adverse health effects and harms related to marijuana use: an overview review. *CMAJ Open*. 2018 Aug 16;6(3):E339-E346. doi: 10.9778/cmajo.20180023. PMID: 30115639; PMCID: PMC6182105. <https://pubmed.ncbi.nlm.nih.gov/30115639/>
- [7]. World Health Organization. (n.d) Definition of Quality of life. Retrieved from http://www.who.int/definition/quality_of_life

- [8]. Hayes AM, Feldman G. Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*. 2004;11:255–262. <https://psycnet.apa.org/record/2004-15972-005>
- [9]. Kabat-Zinn J. *Full catastrophe living: How to cope with stress, pain and illness using mindfulness meditation*. New York, NY: Bantam Dell; 1990.
- [10]. K. W. Brown and R. M. Ryan, “The benefits of being present: mindfulness and its role in psychological well-being,” *Journal of Personality and Social Psychology*, vol. 84, no. 4, pp. 822–848, 2003. <https://pubmed.ncbi.nlm.nih.gov/12703651/>
- [11]. Joaquín Selva, Bc.S History of mindfulness from East to West and Religion to science. <https://positivepsychology.com/history-of-mindfulness/> September 2020. Accessed on 14/10/2020 <https://positivepsychology.com/history-of-mindfulness/>
- [12]. Leonard A ,Roots to Rise: Tracing back along the history of mindfulness. <http://blinkist.com/history-and-origin-of-mindfulness/> July 2020. Accessed on 05/10/2020. <https://www.blinkist.com/magazine/posts/history-of-mindfulness>
- [13]. Kabat-Zinn J. *Wherever you go there you are: Mindfulness meditation in everyday life*. New York, NY: Hyperion; 1994.
- [14]. Kabat-Zinn J. Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*. 2003;10:144–156. <https://psycnet.apa.org/record/2003-03824-002>
- [15]. Vederhus JK, Pripp AH, Clausen T. Quality of Life in Patients with Substance Use Disorders Admitted to Detoxification Compared with Those Admitted to Hospitals for Medical Disorders: Follow-Up Results. *Subst Abuse*. 2016 May 18;10:31-7.
- [16]. <https://pubmed.ncbi.nlm.nih.gov/27226719/>
- [17]. Shapiro SL, Carlson LE, Astin JA, Freedman B. Mechanisms of mindfulness. *Journal of Clinical Psychology*. 2006;62:373–386. <https://pubmed.ncbi.nlm.nih.gov/16385481/>
- [18]. Shapiro SL, Oman D, Thoresen CE, Plante TG, Flinders T. Cultivating mindfulness: Effects on well-being. *Journal of Clinical Psychology*. 2008;64:840–862. <https://pubmed.ncbi.nlm.nih.gov/18484600/>
- [19]. Montero-Marin J, Garcia-Campayo J, Pérez-Yus MC, Zabaleta-Del-Olmo E, Cuijpers P (2019). Meditation techniques. *Psychological Medicine* 49(13), 2118–2133. <https://pubmed.ncbi.nlm.nih.gov/31322102/>
- [20]. Khusid MA, Vythilingam M (2016). The emerging role of mindfulness meditation as effective self-management strategy, Part 1: clinical implications for depression, post-traumatic stress disorder, and anxiety. *Military Medicine* 181(9), 961–968. <https://pubmed.ncbi.nlm.nih.gov/27612338/>
- [21]. Pascoe MC, Thompson DR, Jenkins ZM, Ski CF (2017). Mindfulness mediates the physiological markers of stress: systematic review and meta-analysis. *Journal of Psychiatric Research* 95, 156–178 <https://pubmed.ncbi.nlm.nih.gov/28863392/>
- [22]. Krusche A, Cyhlarova E, King S, Williams JM. Mindfulness online: a preliminary evaluation of the feasibility of a web-based mindfulness course and the impact on stress. *BMJ Open*. 2012 May 21;2(3):e000803. <https://pubmed.ncbi.nlm.nih.gov/22614170/>
- [23]. <https://pubmed.ncbi.nlm.nih.gov/22614170/>
- [24]. Chadi N, Weisbaum E, Vo DX, Ahola Kohut S (2020). Mindfulness-based interventions for adolescents: time to consider telehealth. *Journal of Alternative and Complementary Medicine* 26(3), 172–175. <https://pubmed.ncbi.nlm.nih.gov/31765222/>
- [25]. Champion L, Economides M, Chandler C. The efficacy of a brief app-based mindfulness intervention on psychosocial outcomes in healthy adults: A pilot randomised controlled trial. *PLoS One*. 2018 Dec 31;13(12) <https://pubmed.ncbi.nlm.nih.gov/30596696/>
- [26]. Singh NN, Hwang YS. Mindfulness-based programs and practices for people with intellectual and developmental disability. *Curr Opin Psychiatry*. 2020 Mar;33(2):86-91. <https://pubmed.ncbi.nlm.nih.gov/31725422/>
- [27]. Brown KW, Ryan RM. The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*. 2003;84:822–848. <https://pubmed.ncbi.nlm.nih.gov/12703651/>
- [28]. Brown KW, Ryan RM, Creswell JD. Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*. 2007;18:211–237. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2679512/>
- [29]. Giluk TL. Mindfulness, big five personality, and affect: A meta-analysis. *Personality and Individual Differences*. 2009;47:805–811. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4359274/>
- [30]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4359274/>
- [31]. Thompson BL, Waltz J. Everyday mindfulness and mindfulness meditation: Overlapping constructs or not? *Personality and Individual Differences*. 2007;43:1875–1885. <https://psycnet.apa.org/record/2007-14850-025>
- [32]. Dekeyser M, Raes F, Leijssen M, Leysen S, Dewulf D. Mindfulness skills and interpersonal behaviour. *Personality and Individual Differences*. 2008;44:1235–1245. <https://psycnet.apa.org/record/2008-02200-018>
- [33]. Hayes AM, Feldman G. Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*. 2004;11:255–262. <https://psycnet.apa.org/record/2004-15972-005>
- [34]. Villa, Christopher & Hilt, Lori. (2014). Brief Instruction in Mindfulness and Relaxation Reduce Rumination Differently for Men and Women. *International Journal of Cognitive Therapy*. 10.1521/ijct_2014_07_02. <https://www.researchgate.net/publication/269279187>
- [35]. <https://www.researchgate.net/publication/269279187>
- [36]. Van Dam, N.T., Hobkirk, A.L., Sheppard, S.C. et al. How Does Mindfulness Reduce Anxiety, Depression, and Stress? An Exploratory Examination of Change Processes in Wait-List Controlled Mindfulness Meditation Training. *Mindfulness* 5, 574–588 (2014). <https://link.springer.com/article/10.1007/s12671-013-0229-3#citeas>
- [37]. Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical psychology*, 78(2), 169–183. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2848393/>
- [38]. Jha AP, Stanley EA, Kiyonaga A, Wong L, Gelfand L. Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion*. 2010;10:54–64. <https://pubmed.ncbi.nlm.nih.gov/20141302/>
- [39]. Moore A, Malinowski P. Meditation, mindfulness and cognitive flexibility. *Consciousness and Cognition*. 2009;18:176–186. <https://pubmed.ncbi.nlm.nih.gov/19181542/>
- [40]. Ortner CNM, Kilner SJ, Zelazo PD. Mindfulness meditation and reduced emotional interference on a cognitive task. *Motivation and Emotion*. 2007;31:271–283. <https://link.springer.com/article/10.1007/s11031-007-9076-7>
- [41]. Davidson RJ, Kabat-Zinn J, Schumacher J, Rosenkranz M, Muller D, Santorelli SF, Sheridan JF. Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*. 2003;65:564–570. <https://pubmed.ncbi.nlm.nih.gov/12883106/>
- [42]. Segal ZV, Williams JMG, Teasdale JD. *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York, NY: Guilford Press; 2002.
- [43]. Dekeyser M, Raes F, Leijssen M, Leysen S, Dewulf D. Mindfulness skills and interpersonal behaviour. *Personality and Individual Differences*. 2008;44:1235–1245. <https://psycnet.apa.org/record/2008-02200-018>
- [44]. Carmody J, Baer RA. Relationship between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine*. 2008;31:23–33. <https://pubmed.ncbi.nlm.nih.gov/17899351/>
- [45]. Afonso RF, Kraft I, Aratanha MA, Kozasa EH (2020). Neural correlates of meditation: a review of structural and functional MRI studies. *Frontiers in Bioscience (Scholars Edition)* 12, 92–115. <https://pubmed.ncbi.nlm.nih.gov/32114450/>

- [46]. Gotink RA, Meijboom R, Vernooij MW, Smits M, Hunink MG (2016). 8-week mindfulness based stress reduction induces brain changes similar to traditional long-term meditation practice – a systematic review. *Brain and Cognition* 108, 32–41. <https://pubmed.ncbi.nlm.nih.gov/27429096/>
- [47]. Juul L, Pallesen KJ, Bjerggaard M, Nielsen C, Fjorback LO (2020). A pilot randomised trial comparing a mindfulness-based stress reduction course, a locally-developed stress reduction intervention and a waiting list control group in a real-life municipal health care setting. *BMC Public Health* 20(1), 409. <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-020-08470-6>
- [48]. I. Nyklíček and K. F. Kuijpers, “Effects of mindfulness-based stress reduction intervention on psychological well-being and quality of life: is increased mindfulness indeed the mechanism?” *Annals of Behavioral Medicine*, vol. 35, no. 3, pp. 331–340, 2008. <https://pubmed.ncbi.nlm.nih.gov/18535870/>
- [49]. J. A. Brewer, J. H. Davis, and J. Goldstein, “Why is it so hard to pay attention, or is it? Mindfulness, the factors of awakening and reward-based learning,” *Mindfulness*, vol. 4, no. 1, pp. 75–80, 2013. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3827730/>
- [50]. Bueno, Viviane & Kozasa, Elisa & Aparecida, Maria & Silva, Da & Alves, Tânia & Louza, Mario & Pompeia, Sabine. (2015). Research Article Mindfulness Meditation Improves Mood, Quality of Life, and Attention in Adults with Attention Deficit Hyperactivity Disorder. *BioMed Research International*. 2015. 10.1155/2015/962857. <https://pubmed.ncbi.nlm.nih.gov/26137496/>
- [51]. Pagnini, F., Bercovitz, K. E., & Phillips, D. (2018). Langerian mindfulness, quality of life and psychological symptoms in a sample of Italian students. *Health and quality of life outcomes*, 16(1), 29. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5801901/>

Ambika C, et. al. “Mindfulness meditation to improve the quality of life for patients with cannabis abuse.” *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 10(1), 2021, pp. 32-36.