The benefits of mindfulness in improving mental health and well-being

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During the last few years, psychological construct mindfulness has drawn attention as a form of clinical intervention. This article first discusses the nature, definition, origin of mindfulness and also briefly review the self report mindfulness measures, mindfulness meditation and its clinical intervention in improving mental health. We conclude that mindfulness foster positive qualities such as psychological well-being, self compassion, reduce cognitive & emotional reactivity, psychological symptoms and improve over all mental health. Mindfulness meditation is used to improve cognitive function, resolve emotional exhaustion and reduce perceived stress. Mindfulness-oriented interventions effectively treat a range of mental problems such as anxiety, depression, drug dependency, borderline personality disorder. Suggestion are made for future studies in the field.

Keywords: mindfulness, acceptance and commitment therapy (ACT), dialectical behaviour therapy (DCT)

According to Brown and Rayn (2003) "Mindfalness can be defined as an open and receptive awareness and attention, or quality of consciousness, characterized by a clear awareness in the present".

Kabat-Zinn (1944) given the most widely accredited definition of mindfulness "Mindfulness is awareness, cultivated by paying attention in a sustained and particular way: on purpose, in the present judge mentally." Smalley and Winston (2010) said that mindfulness state can differentiate with mindless state. In mindless state being preoccupied with one's thoughts, not consciously aware of one's present experiences, and act on the autopilot.

Practice of mindfulness possibly began 2500 years ago in the eastern culture. Mindfulness is acquired from Pali term 'satipatthanaas,' word sati has the root meaning attentiveness to the present or wakefulness, awareness and patthana means 'keeping present' (Theran, 1973). Satipatthanasutra is one of the oldest and most significant element of Buddhist traditions and also a special meditation techniques to systematic cultivation of mindfulness. (Soma, 1949). In 1979, Kabat-Zinn established a clinic to reduce stress where he applied Buddhist teaching on mindfulness in the scientific context and developed stress reduction and relaxation program (Wilson & Jeff, 2014). Now know passable as Mindfulness-Based Stress Reduction programme (MBSR). Because of the development of MBSR applications mindfulness popularized in western psychology.

Using mindfulness strategies have developed several other interventions, are: mindfulness based cognitive therapy (MBCT) combines some aspects of cognitive behavioral techniques with mindfulness meditation practices (Segal, Williams, & Teasdale, 2002). Mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) are both therapies based on group format with eight week sessions that teach mindfulness skills through a series of formal mindfulness practices

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Department of Kayachikitsa, Faculty of Ayurveda Banaras Hindu University, Varanasi, Uttar Pradesh E-mail: dipintisingh55@gmail.com and informal also. The key components of the mindfulness meditation practices are walking meditation, sitting meditation, hatha Yoga and body scan (a sustained practice of mindfulness where attention is focused sequentially on different body parts (Kabat-Zinn, 1990). Acceptance and Commitment therapy (ACT) developed by (Hayes, 1982); (Freeman & Arthur, 2010); Dialectical Behaviour Therapy (DBT; Linehan, 1993a). Both DBT and ACT less focus on mindfulness meditation. In this review, we are considered all the technique MBSR, MBCT, ACT, & DBT to evaluate efficacy of mindfulness in clinical setting.

Last: few decade scientific community interpret mindfulness concept into measurable terms and provide a empirically based valid operational definitions (Black, 2011). According to Black these measures asses mindfulness in a three possible ways

- Dispositional or trait mindfulness- relatively permanent characteristics,
- An outcome or state mindfulness- present moment awareness state arising from cultivation of mindfulness
- A practice- practicing mindfulness meditation itself (Black, 2011).

Several psychometric questionnaire for the asses of trait and state mindfulness include Buchheld et al. (2001) develop Freiburg Mindfulness Inventory (FMI), Krik Warren Brown and Richard Rayan (2003) develop Mindful Attention Awareness Scale (MAAS), Baer et al. (2004) develop Kentucky Inventory of Mindfulness Skills (KIMS), Cognitive and Affective Mindfulness Scale-Revised (CAMS-R) developed by (Feldman et al., 2007); Five-Facet Mindfulness Questionnaire (FFMQ) developed by (Baer et al., 2006); Philadelphia Mindfulness Scale (PHLMS) developed by Cardaciotto et al. (2008). These above mention mindfulness inventory asses the trait mindfulness whereas few measures have been developed for asses state mindfulness include the Toronto Mindfulness Scale (TMS) was developed by Lau et al. (2006) and State Mindfulness Scale (SMS) developed by Tanany and Berntein in 2013.

Multiple Studies have been shown on the association between self-report mindfulness inventory and psychological health. Brown and Ryan (2003) have found a positive correlation between self report mindfulness and overall well being including pleasure affects, positive emotional experience, state of aliveness, life satisfaction, optimism, self awareness and self-esteem (Thompson & Waltz, 2008; Rasmussen & Pidgeon, 2010); agreeableness and conscientiousness (Thompson & Waltz, 2007); positive health perception & health related behaviour (Kimberly et al., 2010); unconditional self-acceptance (Thompson & Waltz, 2008); According to Brown and Ryan (2003), trait mindfulness was also linked with three basic needs competence, autonomy and relatedness. Studies have been shown mindfulness negatively associated with mood disturbance and stress, neuroticism, anxiety, depression, unpleasant and negative affects (Brown & Ryan 2003); neuroticism (Thompson & Waltz, 2007); state and trait anxiety, (Beauchemin et al., 2008); stress (Kimberly et al., 2010); Impulsivity (Peters et al., 2011); social anxiety (Rasmussen & Pidgeon, 2010); experiential avoidance, alexithymia, dissociation (Baer et al., 2004); and also negatively correlated with perceived stress (Atanes et al., 2015).

The research has also examined the relationship between mindfulness meditation training and mental health. According to Kabat-Zinn (1990), "mindfulness training can provide a way to cultivate emotional balance and weaken the hold of habitual patterns that obscure perception and impair judgement in thinking." Mindfulness meditation training has significantly enhanced cognitive abilities including visual-spatial processing, working memory and executive functioning ,make more attentive and also reduced fatigue, anxiety (Zeidan et al., 2010); improve attentionrelated behavioral responses (Jha et al., 2007); reduce destractive and ruminative thoughts and behaviours and distress (Jain et al., 2007); improve executive cognitive function and reduce rumination, depressive symptoms (Chambers et al., 2007); Ortner et al. (2007) have also demonstrate Mindfulness mediation minimize prolonged reactivity to emotional stimuli. Mindfulness practices improved relationship happiness (Carson et al., 2004); influential role in romantic relationship well-being (Sean Barnes et al., 2007). Mindfulness training reduces emotional fatigue, regulate emotion, and improves joh satisfaction at organization (Hulsheger et al., 2013); mindfulness meditation training reduce anxiety level, promotes social skills, and improved academic outcomes which have learning disabilities (Beauchemin et al., 2008).

Studies found that Mindfulness based stress reduction (MBSR) effectively reduce stress and increase quality of life and selfcompassion (Shapiro et al., 2005); reduce psychological distress, state and trait anxiety and enhance empathy (Shapiro et al. 1998); reduce psychological symptoms, prevention of relapse in affective disorders, enhance sense of spirituality (Astin, 1997); reduce mood disturbance, depression, emotional irritability, cognitive disorganization and also lower overall symptoms of stress (Speca et al., 2000); increase sustain attention (Anderson et al., 2007); reduce symptoms of generalized social anxiety disorder (Koszycki et al., 2007); and also depression symptoms (Sephton et al., 2007); increase psychological well-being and positive affect and reduce posttraumatic avoidance symptoms (Branstrom et al., 2010); significantly increase sense of coherence (Weisshecker et al., 2002); significantly reduce psychological distress, daily hassles and improve mental health (Williams et al., 2001).

MBCT shown immediate effect on bipolar disorder with suicidal conduct (Williams et al., 2008). MBCT significantly reduces residual depressive symptoms and psychiatric co-morbidity and

improves quality of life in both physical and psychological (Kuyken et al., 2008). As a cognitive therapy, MBCT helps to identify automatic negative thoughts that maintain depressive symptoms, disengage the onset of negative thoughts and see thoughts as mental events rather than as reality (Barnhofer et al., 2009). MBCT showed a significant reduction in short and long term depressive mood and enhance positive moods and quality of life (Goldfrin & Heeringen, 2010). MBCT can reduce thought suppression and residual depression (Hepburn et al., 2009). MBCT effectively treat epilepsy with depressive symptoms (Thompson et al., 2010); and MBCT is also a useful and inexpensive treatment for social phobia (Piet et al., 2010); and also reduce cognitive reactivity to sad mood and prevent from depressive relapse (Raes et al., 2009).

Dialectical behavioral therapy combines with Zen philosophy and certain elements of Cognitive behaviour therapy and focus on acceptance and behavioural change strategies to treat disorders involving emotion dysregulation (Linehan, 1993a). Dialectical behaviour therapy (DBT) has been shown to effectively reduce symptoms of self mutilation and self damaging impulsive behaviours in patients with borderline personality disorder (Verheul et al., 2003); DBT intervention significantly reduce substance abuse (Linehan et al., 1999); and reduce risk of suicidal attempts (Linehan et al., 2006); DBT show significantly improvement of aged patients with chronic depression (Lynch et al., 2003); effectively treat hinge eating disorder (Telch et al., 2001); DBT effectively treat bulimia nervosa and reduce hinge behaviour (Safer et al., 2001).

A number of research have been conducted to assess the efficacy of therapy Acceptance and Commitment therapy (ACT) in treating various mental health issues. Forman et al. (2007) the goal of ACT is to increase the acceptance of the whole range of subjective experiences, including distressing thoughts, beliefs, feelings, and sensations in an attempt to promote a desired behavior change that leads to a better quality of life. ACT intervention significantly treat anxiety, depression and foster functioning and quality of life (Forman et al., 2007); effective at reducing substance use and nicotine-dependence (Gifford et al., 2004); ACT effectively treat trichotillomania and decrease experiential avoidance (Woods et al., 2006); decrease rate of rehospitalisation of psychotic patients (Bach & Hayes, 2002); and reduces psychotic symptoms like hallucination (Gaudiano & Herbert, 2006).

The results of mindfulness interventions studies are promising and in need of further replication.

Conclusion

There are a substantial number of studies affirming the cultivation of mindfulness is useful not only for normal population but also in clinical intervention. Mindfulness foster positive qualities like psychological well-being, self compassion, reduce cognitive and emotional reactivity, psychological symptoms and improve over all mental health. Mindfulness meditation is used to improve cognitive function, resolve emotional exhaustion and reduce perceived stress. Mindfulness- oriented interventions effectively treat a range of mental problem as like anxiety, depression, drug dependency, borderline personality disorder. The research on mindfulness is still in its growing stage, there are rigorous research needed to hetter understanding of nature & mechanism of mindfulness and mindfulness practices which enhance potential benefits to clinical intervention as well as normal population.

References

- Anderson, N.D., Lan, M.A., Segal, Z.V., & Bishop, S.R. (2007). Mindfulness-based stress reduction and attentional control. Clinical Psychology and Psychotherapy, 14(6), 449-463.
- Astin, J.A. (1997). Stress reduction through mindfulness meditation: Effects on psychological symptomatology, sense of control, and spiritual experiences. *Psychotherapy and Psychosomatics*, 66(2), 97-106.
- Atanes, A.C., Andreoni, S., Hirayama, M.S., Moatero-Marin, J., Barros, V.V., Ronzani, T.M., Kozasa, E.H., Soler, J., Cebolla, A., Garcia-Campayo, J., & Demarzo, M.M. (2015). Mindfulness, perceived stress, and subjective well-being: A correlational study in primary care health professionals. BMC Complementary and Alternative Medicine, 2(15), 303. DOI 10.1186/s12906-015-0823-0
- Bach, P., & Hayes, S.C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. Journal of Consulting and Clinical Psychology, 70(5), 1129-1139.
- Baer, R.A., Smith, G.T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. Assessment, 13(1), 27-45. PubMed1
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky inventory of mindfulness skills. Assessment, 11(3), 191-206.
- Barnes, S., Brown, K.W., Krusemark, E., Campbell, W.K., & Rogge, R.D. (2007). The role of mindfulness incomantic relationship satisfaction and responses to relationship stress. *Journal of Marital and Family Therapy*, 33(4), 482-500. https://doi.org/10. 1111/j.1752-0606.2007.00033.x
- Barnhofer, T., Crane, C., & Didonna, F. (2009). Mindfulness-based cognitive therapy for depression and suicidality. In F. Didonna (Ed.), Clinical handbook of mindfulness (pp. 221-243). New York, NY: Springer.
- Beauchemin, J., Hutchins, T. L., & Patterson, F. (2008). Mindfulness meditation may lessen anxiety, promote social skills, and improve academic performance among adolescents with learning disabilities. Complementary Health Practice Review, 13(1),34-45. https://doi.org/10.1177/1533210107341624
- Black, D.S. (2011). A brief definition of mindfulness. Mindfulness Research Guide. Accessed from htw://www.mindfulesperience.org)
- Bränström, R., Kvillemo, P., Brandberg, Y., & Moskowitz, J.T. (2010). Self-report mindfulness as a mediator of psychological well-being in a stress reduction intervention for cancerpatients: Arandomized study. *Annals of Behavioral Medicine*, 39(2), 151-161.
- Brown, K.W., & Ryan, R.M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822-848. [PubMed
- Buchheld, N., Grossman, P., & Walach, H. (2001). Measuring mindfulness in insight meditation (vipassana) and meditation-based psychotherapy: The development of the Freiburg mindfulness inventory (FMI). Journal for Meditation and Meditation Research, 1(1), 11-34.
- Cardaciotto, L., Herbert, J. D., Forman, E.M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: The Philadelphia Mindfulness Scale. Assessment, 15(2), 204-223.
- Carson, J. W., Carson, K. M., Gil, K. M., & Baucom, D. H. (2004). Mindfulness-based relationship enhance-ment. Behavior Therapy, 35(3), 471494.
- Cash, M., & Whittingham, K. (2010). What facets of mindfulness contribute to psychological well-being and depressive, anxious, and stress-related symptomatology? Mindfulness, 1(3), 177-182. doi:10.1007/s12671-010-0023-4
- Chambers, R., Lo, B. C. Y., & Allen, N. B. (2008). The impactof intensive mindfulness training on attentional control, cognitive style, and affect. Cognitive Therapy and Research, 32(3), 303-322. https://doi.org/10.1007/s10608-007-9119-0
- Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J. P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective N findfulnessScale-Revised (CAMS-R). Journal of Psychopathology and BehavioralAssessment, 29(3), 177-190.
- Forman, E.M., Herbert, J.D., Moitra, E., Yeomans, P.D., & Geller, P.A. (2007). A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression. *Behavior Modification*, 31(6), 772-799.
- Freeman, A. (2010). Cognitive and behavioral theories in clinical practice. NewYork, NY: The Guilford Press. p. 125. ISBN 978-1-60623-342-9.
- Gaudiano, B.A., & Herbert, J.D. (2006). Acute treatment of inpatients with psychotic symptoms using acceptance and commitment therapy: Pilot results. *Behaviour Research and Therapy*, 44, 415-437.
- Galia, T., & Bernstein, A. (2013). State Mindfulness Scale (SMS): Development and initial validation. Psychological Assessment, 25(4), 1286-1299. doi: 10.1037/a0034 04410652000;62:613622.
- Gifford, E.V., Kohlenberg, B.S., Hayes, S.C., Antonuccio, D.O., Piasecki, M.M.,

- Rasmussen-Hall, M.L., & Palm, K.M. (2004). Acceptance-based treatment for smoking cessation. *Behavior Therapy*, 35(4), 689-705.
- Godtrin, K. A., & Van Heeringen, C. (2010). The effects of mindfulness-based cognitive therapy on recurrence of depressive episodes, mental health and quality of life: A randomized connolled study. Behaviour Research and Therapy; 48(8), 738-746.
- Hepburn, S.R., Crane, C., Barnhofer, T., Duggan, D.S., Fennell, M.J.V., & Williams, J.G.W. (2009). Mindfulness-based cognitive therapy may reduce thought suppression: Findings from a preliminary study. British Journal of Clinical Psychology, 45, 209-215.
- Hülsheger, U. R., Alberts, H. J. E. M., Feinholdt, A., & Lang, J. W. B. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, andjob satisfaction. *Journal of Applied Psychology*, 98(2), 310-325.
- Jha, A. P., Krompinger, J., & Baime, M. J. (2007). Mindfulness training modifies subsystems of attention. Cognitive Affective and Behavioral Neuroscience, 7(2), 109-119.
- Jain, S., Shapiro, S.L., Swanick, S., Roesch, S.C., Mills, P.J., Bell, I., & Schwartz, G.E. (2007). A randomized controlled trial of mindfulness meditation versus relaxation training: Effects on distress, positive states of mind, rumingion, and distraction. Annols of Behavioral Medicine, 33(1), 11-21.
- Kabat-Zinn, J. (1990). Full catastrophe living: Using the wisdom of your body andmind to facestress, pain, and illness. New York, NY: Bantam Dell.
- Kabat-Zian, J. (1990). Full catastrophe living: The program of the stress reduction clinic at the university of massachusetts medical center. New York: Delta.
- Kabat-Zinn, J. (1994). Whereveryou go there you are. New York: Hyperion
- Kimberly, C., Roberts, M.A., & Danoff-Burg, S. (2010). Mindfulness and health, behaviors: Is paying attention good for you? *Journal of American College Health*, 59(3), 165-173. DOI: 10.1080/07448481.2010.484452
- Koszycki, D., Benger, D., Shlik, J., & Bradwejn, J. (2007). Randomized trial of ameditation-based stress reduction program and cognitive behavior therapy in generalized social anxiety disorder. Behaviour Research and Therapy, 45(10), 2518-2526.
- Kuyken, W., Byford, S., Taylor, R.S., Watkins, E., Holden, E., White, K., & Teasdale, J.D. (2008). Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *Journal of Consulting and Clinical Psychology*, 76(6), 966-978.
- Lau, M.A., Bishop, S.R., Segal, Z.V., Buis, T., Anderson, N.D., Carlson, L., Shapiro, S., Carmody, J., Abbey, S., & Devins, G. (2006). The Toronto Mindfulness Scale: Development and validation. *Journal of Clinical Psychology*, 62(12), 1445-1467.
- Linehan, M. (1993a). Cognitive-behavioral treatment of borderline personalitydisorder. New York: Guilford Press.
- Linehan, N. M., Compis, K.A., Murray, A.M., Brown, M.Z., Gallop, R.J., Heard, H.L., Korshind, K.E., Tutek, D.A., Reynolds, S.K., & Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder, Archives of General Psychiatry, 63(7), 757-766. Doi:10.1001/archpsyc.63.7.757
- Lynch, T.R., Morse, J.Q., Mendelson, T., & Robins, C.J. (2003). Dialectical behavior therapy for depressed older adults: A randomized pilot study. American Journal of Geriatric Psychiatry, 11(1), 33-45.
- Linehan, M.M., Schmidt, H., Dimetf, L.A., Craft, J.C., Kanter, J., & Comtois, K.A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *American Journal on Addictions*, 8(4), 279-292. DOI: 10.1080/105504999305686
- Peters, J.R., Erisman, S.M., Upton, B.T., Baer, R.A., & Roemer, L. (2011). A preliminary investigation of the relationships between dispositional mindfulness and impulsivity. *Mindfulness*, 2(4), 228-235. doi: 10.1007/s12671-011-0065-2. [CrossRef][GoogleScholar]
- Piet, J., Hougaard, E., Hecksher, M.S., & Rosenberg, N.K. (2010). A randomized pilot study of mindfulness-based cognitive therapy and group cognitive-behavioral therapy for young adults with social phobia. Scandinavian Journal of Psychology; 51(5),403-410. [PubMed]
- Raes, F., Dewulf, D., Van Heeringen, C., & Williams, J.M.G. (2009). Mindfulness and reduced cognitive reactivity to sad mood: Evidence from a correlational study and a non-randomized waiting list controlled study. Behaviour Research and Therapy, 47(7), 623-627. [PubMed]
- Rasmussen, M.K., & Pidgeon, AM. (2010). The direct and indirect benefits of dispositional mindfulness on self-esteem and social anxiety. Arxiety, Stress; and Coping, 24(2), 227-233. In press. [PubMed]
- Safer, D.L., Telch, C.F., & Agras, W.S. (2001). Dialectical behavior therapy forbulimia nervosa. American Journal of Psychiatry, 158(4), 632-634. [PubMed]
- Segal, Z.V., Williams, J.M.G., & Teasdale, J.D. (2002). Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse. New York, NY: Guilford Press.
- Sephton, S.E., Salmon, P., Weissbecker, I., Ulmer, C., Floyd, A., Hoover, K., & Studts, J.L. (2007). Mindfulnessmeditation alleviates depressive symptoms in women with

- Fibromyalgia: Results of a randomized clinical trial. Arthritis and Rheumatism, 57(1), 77-85.
- Shapiro, S.L., Astin, J.A., Bishop, S.R., & Cordova, M. (2005). Mindfulness-based Stress reduction for health care professionals: Results from a randomized trial. International Journal of Stress Management, 12(2), 164-176.
- Shapiro, S.L., Schwartz, G., & Bonner, G. (1993). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, 21(6), 531-599.
- Smalley, S. L., & Winston, D. (2010). Fully present: The science, art, and practice of mindfulness. Philadelphia, PA: Da Capo Press.
- Somab, H.I.K.K.HU (1949). The way of mindfulness. Lake House Bookshop, Colombo.
- Speca, M., Carlson, L. E., Goodey, E., & Angen, M. (2000). A randomized, wait-list controlled clinical trial: The effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. *Psychosometic Medicine*, 62(5), 613-622. http://dx.doi.org/10.1097/00006842-200009000-00004
- Telch, C. F., Agras, W. S., & Linehan, M. M. (2001). Dialectical behavior therapy for binge eating disorder. *Journal of Consulting and Clinical Psychology*, 69(6), 1061-1065. doi:10.1037/0022-006X.69.6.1061.
- Theran, Y. (1973). The heart of Buddhist meditation. New York: Samuel Weiser.
- Thompson, N.J., Walker, E.R., Obolensky, N., Winning, A., Barmon, C., & Dilorio, C., (2010). Compton, M.T. Distance delivery of minifoliness-based cognitive therapy for depression: Project UPLIFT. Epilepsyand Behaviorin press.
- Thompson, B.L., & Waltz, J. (2007). Everyday mindfulness and mindfulness meditation: Overlapping constructs ormot? Personality and Individual Differences, 43(7), 1875-1885.

- Thompson, B.L., & Waltz, J.A. (2007). Mindfulness, self-esteen, and unconditional: Self-acceptance. Journal of Rational-Emotive and Cognitive-Behavior Therapy, 26(2), 119-126. https://doi.org/10.1007/s10942-007-0059-0
- Verheul, R., Van Den Bosch, L., Koeter, M., De Ridder, M., Stijnen, T., & Van Den Brink, W. (2003). Dialectical behaviour therapy for women with borderline personality disorder: 12-month, randomised clinical trial in the Netherlands. British Journal of Psychiatry, 182(2), 135-140. Doi:10.1192/bjp.132.2.135
- Weissbecker, I., Sahnon, P., Studts, J.L., Floyd, A.R., Dedert, E.A., & Sephton, S.E. (2002). Mindfulness-based stress reduction and sense of coherence among women with fibromyalgia. Journal of Clinical Psychology in Medical Settings, 9(4), 297-307.
- Williams, J.M.G., Alatiq, Y., Crane, C., Barnhofer, T., Fennell, M.J.V., Duggan, D.S., & Goodwin, G.M. (2008). Mindfulness-based cognitive therapy (MBCT) in bipolar disorder: Preliminary evaluation of immediate effects on between-episode functioning. Journal of Affective Disorders, 107, 275-279.
- Williams, J.M.G., Teasdale, J.D., Segal, Z.V., & Soulsby, J. (2000). Mindfulness-based cognitive therapy reduces over general autobiographical memory in formerly depressed patients. *Journal of Abnormal Psychology*, 109(1), 150-155.
- Williams, K.A., Kolar, M.M., Reger, B.E., & Pearson, J.C. (2001). Evaluation of a wellness-based mindfulness stress reduction intervention: A controlled trial. American Journal of Health Promotion, 15(6),422-432.
- Wilson, J. (2014). Mindful America: The mutual transformation of Buddhist meditation and American culture. Oxford University Press. P.35.
- Zeidan, F., Johnson, S.K., Diamond, B.J., David, Z., & Goolfcasian, P. (2010). Mindfulness meditation improves cognition: Evidence of brief mental training. Consciousness and Cognition, 19(2), 597-605.

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