

COMPARISON OF HEALTH OF MEDITATOR AND NON-MEDITATOR UNDERGRADUATE STUDENTS

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Abstract

In the present hectic world, we are so much occupied with work that our health is ignored. There is a need to take a break from the stressful lifestyle to heal our body and mind for which meditation can help. Meditation is a natural healing and rejuvenating process. The present study was conducted to find the effect of meditative practices on health. The descriptive survey method was used to collect the data on health from the individuals who were practicing meditation regularly and those who did not practice meditation. A purposive sampling technique was used and the sample included 34 students pursuing graduation from Panjab University, Chandigarh. The total sample comprised 17 meditator and 17 non-meditator undergraduate students. The data was analyzed using an independent sample t-test and the results revealed that the individuals who were practicing meditation had statistically significantly better overall health i.e., physical, mental, and social than those who did not practice meditation.

Keywords: meditation, physical health, mental health, social health, overall health, undergraduate students

Introduction

Meditation is a family of self-regulation practices that focus on training attention and awareness to bring mental processes under greater voluntary control (Walsh and Shapiro, 2006). Meditative practices make students learn lifelong skills to take personal responsibilities such as regarding their health, happiness and success, and social responsibilities such as being compassionate, empathetic and inclusive to others. (Ramasubramanian, 2017). The practice of mindfulness meditation resulted in improvements in well-being among the practitioners (Fazia et al., 2023; Hanna & Pidgeon, 2018; Ramasubramanian, 2017; De Vibe et al., 2013; Yang et al., 2018).

Meditative practices work on both surfaces i.e., external and internal to prolong the body's anabolic process of growth and repair, reduce catabolism, prevent and cure diseases, and bring the elements of the body to optimum levels with the help of vibrations of meditative practices penetrating all the cells (Sharma, 2018). Meditative practices significantly improved cardiovascular efficiency and homeostatic control of the body and played a significant beneficial role in the prevention of heart disease and stroke (Shilpa et al., 2020). The Transcendental Meditation program helps in reducing the risk of mortality, myocardial infarction, and stroke in the case of coronary heart disease patients; (Schneider, 2012) and is effective in improvements in blood pressure and cardiovascular function among adolescents at risk for hypertension (Barnes, 2001). Sahaja Yoga Meditation resulted in significant improvements in the blood pressure of the participants (Chung et al., 2012); and the same results were repeated with the Mantra Meditation (Steinhubl et al., 2015). Mindfulness meditation effectively reduced systolic blood pressure among nursing students (Chen et al., 2013) and produced demonstrable effects on the immune function of the practitioners (Davidson, 2003). Brain education-based meditation resulted in significant reductions in the levels of LDL cholesterol among diabetic and hypertension patients (Lee et al., 2019). Meditative practices can be effective in lowering tension and promoting healing throughout the body (Kornfield, 2018).

Meditation works on different levels i.e., senses, mind, intellect, and emotions (Sharma, 2015); further, as an effective tool for the reduction of psychological distress (Phang et al., 2016; Valosek, 2021).

Mindfulness meditative practices helped to improve psychological health among college students (Ramasubramanian, 2017); decreased mental distress among medical and psychology students (Phang et al., 2015; De Vibe et al., 2013); and reduced overall distress among medical students (Fazia et al., 2023).

The practice of meditation resulted in lower levels of fatigue among the participants (Bleasdale et al., 2020; Mo et al., 2021; Tang et al., 2007). Mindful-based training exhibited significant reductions in compassion fatigue among human service professionals (Hanna & Pidgeon, 2018). Chaplains working in hospices for older adults practicing meditation exhibited lesser emotional exhaustion and depersonalization as burnout markers (Pandya, 2020); also, practicing meditation resulted in preventing burnout among human service professionals (Hanna & Pidgeon, 2018; Sepalla et al., 2014).

The practice of meditation led to a reduction in the scores of stress among college students (Burns et al., 2011; Dorais & Gutierrez, 2021; Lemay et al., 2019; Oman et al., 2008; Ramasubramanian, 2017; Ueberholz & Fiocco, 2022). Significantly reduced stress levels were exhibited among college and university students as a result of practicing mindfulness meditation (Borjalilu, 2018; Cavanagh et al., 2013; Huberty et al., 2019; Lyzwinski, 2019). The practice of mindfulness-based meditation led to significant reductions in the levels of stress among the participants of the study (Axelsen, 2022; Champion et al., 2018; Kemper & Khirallah, 2015). Mindfulness practice further resulted in effective reductions in perceived stress scores among medical and nursing students (Erogul et al., 2014; Fazia et al., 2023; Phang et al., 2015; Phang et al., 2015; Ratanasiripong, 2015; Spadaro & Hunker, 2016; De Vibe et al., 2013; Warnecke et al., 2011; Yang et al., 2018); and the same results were obtained for student counselors after practicing Jyoti meditation (Gutierrez et al., 2016). There was an improvement in mental health and a reduction in perceived stress among passage meditation practitioners (Oman, Hedberg & Thoresen, 2006).

Practicing Integrative meditation led to lower levels of depression in Chinese undergraduates (Tang et al., 2007). Students showed significant reductions in depression scores as a result of practicing transcendental meditation (Bleasdale et al., 2020; Borjalilu, 2018; Burns et al., 2011) and mindfulness-based meditation (Bennett & Dorjee, 2015; Cavanagh et al., 2013). Loving-kindness meditation helped in reducing harmful elements of depression at work among the employees of Microsoft Corporation in the United Kingdom (Quirk & Ivztan, 2018). Preksha meditation is conducive to calming the brain and getting control over normal wandering nature by increasing alpha waves in the brain (C Sanchetee & Pragya, 2020).

Practicing meditative interventions resulted in improvements in emotional regulation among the participants (Fazia et al., 2023; Menezes et al., 2013). The practice of meditation helped to decrease anxiety significantly among the students at different levels (Bennett & Dorjee, 2015; Bleasdale et al., 2020; Borjalilu, 2018; Burns et al., 2011; Cavanagh et al., 2013; Chen et al., 2013; Greif & Kaufman, 2019; Lemay et al., 2019; Menezes et al., 2013; Paul et al., 2007; Ratanasiripong, 2015; Tang et al., 2007; Warnecke et al., 2011; Wendt et al., 2015); and same results were repeated among the practitioners of Sahaja Yoga Meditation (Chung et al., 2012). The students who practiced meditation showed significant reductions in anger (Bleasdale et al., 2020; Tang et al., 2007); further, the practice of Deep breathing meditation exhibited decreased nervousness, self-doubt and concentration loss among the students (Paul et al., 2007).

Meditation is a method of physical and mental self-regulation that can adjust mental state and correct behavioral patterns (Mo et al., 2021). Mindfulness can serve as a useful tool to boost positive emotions that can correct negative emotions (Ramasubramanian, 2017). The practice of a brief integrative meditation resulted in a higher positive mood in Chinese undergraduates (Tang et al., 2007). Health professionals who practiced mindfulness-based meditation significantly improved their empathy levels

(Kemper & Khirallah, 2015). Participants of online meditation programs exhibited greater geriatric social work competencies (Pandya, 2019).

Regular practice of meditation can help in developing habitual, unconscious micro behaviors that may produce extensive positive effects on both the physical and psychological functioning of the human body (Manocha, 2001). Preksha Meditation helps in improving physical, psychological and social health; and decreasing stress among elders (Sanchetee, Jain & Agarwal, 2017). Long-term Sahaja Yoga meditation practitioners experience better quality of life and functional health than the general population (Manocha, Black & Wilson, 2012). Through the regular practice of meditation, the mind becomes pure, clear and spiritually motivated (Sharma, 2018). It helps us to discover new possibilities to awaken our dormant capacity to live more wisely, more compassionately, more lovingly, and more fully (Kornfield, 2018).

Objectives

1. To find out the difference between the physical health of meditator and non-meditator undergraduate students of Panjab University.
2. To find out the difference between the mental health of meditator and non-meditator undergraduate students of Panjab University.
3. To find out the difference between the social health of meditator and non-meditator undergraduate students of Panjab University.
4. To find out the difference between the overall health of meditator and non-meditator undergraduate students of Panjab University.

Methodology

In the present study, the descriptive survey method of research was employed and the data was collected on health from the individuals who were practicing meditation regularly and those who did not practice meditation. Four departments i.e., Department of Physics, Chemistry, Geology and Mathematics were randomly selected from Panjab University, Chandigarh and then purposive sampling technique was used to collect data from the sample of 34 students comprising 17 meditators and 17 non-meditators. The students who regularly practice meditation were purposively selected as meditators and the same number of students from the same class who don't practice meditation were selected randomly as non-meditators. Those students who had been practicing meditation for at least an hour per week from at least the last six months were selected as meditators and those who had never done meditation in their life were taken as non-meditators.

The five-point Likert Scale which was administered to collect data on health was developed by the researcher keeping in view the objectives of the study. It consisted of three dimensions of health i.e., physical, mental and social; and comprised of 27 items out of which 7 items were of physical dimension, 14 items were of mental dimension and 6 items were of social dimension. The items on the scale were in terms of both positive and negative statements; each statement had 5 options i.e., always, often, can't say, sometimes and never. The scale was given to the experts for face and content validity and the items agreed by the experts were retained and other items were either modified or discarded. The scoring was done as 5 for always, 4 for often, 3 for can't say, 2 for sometimes and 1 for never for positive statements and 1 for always, 2 for often, 3 for can't say, 4 for sometimes and 5 for never for negative statements.

Results and Interpretation

The scores were analyzed by using a t-test to find out the difference between the health of meditator and non-meditator undergraduates and results were interpreted at 0.05 level of significance.

Variable	Group	N	Mean	SD	SEM	SED	df	t-value	Sig.	Result
Physical	Meditators	17	23.588	2.895	.702	1.188	32	4.111	.000	Statistically

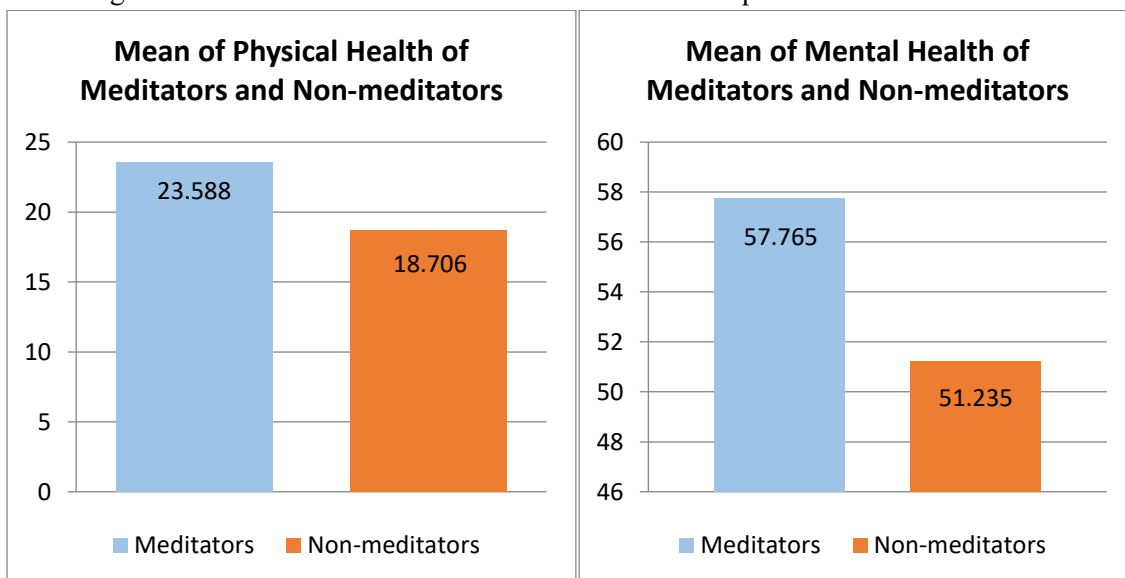
Health	Non-meditators	17	18.706	3.949	.958					significant
Mental Health	Meditators	17	57.765	7.750	1.880	2.694	32	2.424	.021	Statistically significant
	Non-meditators	17	51.235	7.957	1.930					
Social Health	Meditators	17	21.647	3.823	.928	1.388	32	2.204	.035	Statistically significant
	Non-meditators	17	18.588	4.258	1.033					
Overall Health	Meditators	17	103.00	11.880	2.881	4.355	32	3.323	.002	Statistically significant
	Non-meditators	17	88.529	13.463	3.265					

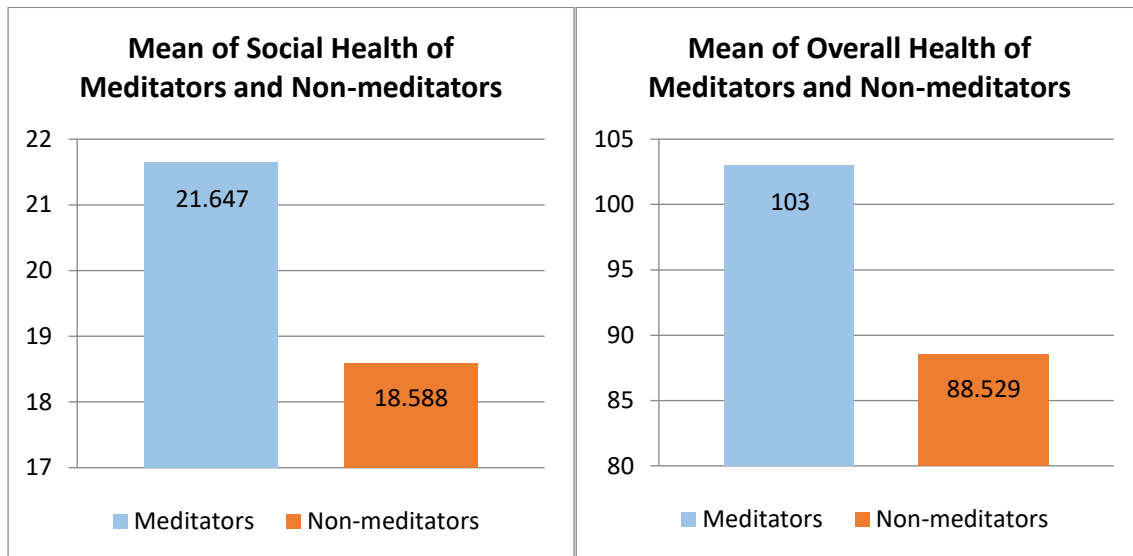
The value of t-ratio calculated in the table for physical health was found to be 4.111 which was higher than the table value (1.96) at 0.05 level of significance, showing a significant difference in physical health of meditator and non-meditator undergraduate students. The mean for meditator students (23.588) was found to be higher than the mean for non-meditator students (18.706) on physical health, indicating meditator students have better physical health as compared to non-meditator students.

The value of the t-ratio calculated in the table for mental health was found to be 2.424 which was higher than the table value (1.96) at 0.05 level of significance, showing a significant difference in the mental health of meditator and non-meditator undergraduate students. The mean for meditator students (57.765) was found to be higher than the mean for non-meditator students (51.235) on mental health, indicating meditator students have better mental health as compared to non-meditator students.

The value of t-ratio calculated in the table for social health was found to be 2.204 which was higher than the table value (1.96) at 0.05 level of significance, showing a significant difference in the social health of meditator and non-meditator undergraduate students. The mean for meditator students (21.647) was found to be higher than the mean for non-meditator students (18.588) on social health, indicating meditator students have better social health as compared to non-meditator students.

The value of the t-ratio calculated in the table for overall health was found to be 3.323 which was higher than the table value (1.96) at 0.05 level of significance, showing a significant difference in the overall health of meditator and non-meditator undergraduate students. The mean for meditator students (103.00) was found to be higher than the mean for non-meditator students (88.529) on overall health, indicating meditator students have better overall health as compared to non-meditator students.





Discussion

We are living in the chaotic world of the 21st century which could be referred to as an era of stress and strain. We are living so fast that we don't have time for ourselves and we have been so engrossed in our daily lives that health has taken a backseat. Therefore, we need time to get out of this lifestyle to live again, to come closer to ourselves, and to heal our bodies, minds and souls.

Meditation is a natural healing and rejuvenating process which is a practice of mind and body that is known for increasing calmness and physical relaxation, improving psychological balance and enhancing overall health and wellbeing (n.d., 2019). Results of the present study have shown that it aids in the betterment of the overall health of undergraduate students which covers every aspect of their life i.e., physical, mental and social. These findings are aligned with the previous research that showed the positive effects of meditative practices on physical health (Barnes, 2001; Chen et al., 2013; Chung et al., 2012; Davidson, 2003; Kornfield, 2018; Lee et al., 2019; Schneider, 2012; Sharma, 2018; Shilpa et al., 2020; Steinhubl et al., 2015); mental health (Cheng, 2016; Fazia et al., 2023; Phang et al., 2015; Phang et al., 2015; Ramasubramanian, 2017; Valosek, 2021; De Vibe et al., 2013); and social health (Hanna & Pidgeon, 2018; Hutcherson et al., 2008; Pandya, 2020; Seppala et al., 2014).

Implications

According to WHO (1948), "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Physical health refers to the state when all body organs function well. If physical balance gets disturbed, one may need treatment to bring that balance again (Felman, n.d.). Various factors contribute to the proper working of the heart, appropriate rate of breathing, muscular strength, flexibility and body composition; and meditative practices are a strong tool for preventing and curing diseases (Sharma, 2018); for removing physical disorders (Rai, 2015); and for healing the body (Kornfield, 2018).

The mental health of a person is a state of complete psychological, emotional and spiritual wellness. It relies on the ability of a person to adapt to adversity, achieve his potential and enjoy life. Meditative practices can be used as a preventive and curative measure to promote mental wellness (Cheng, 2016). We are not only individual beings; we are also parts of some societies and communities which makes the space of social health in the definition of health by WHO. Social health stands for a sense of belongingness and concern for others including positive relations with family and friends that build a support system around an individual which makes him healthier. Meditative practices expand the consciousness of a person and make him more aware of himself and his surroundings. The practice of

meditation for just a few minutes increases feelings of social connection and positivity towards novel individuals on both implicit and explicit levels (Hutcherson et al., 2008).

Limitations

The results of the study are to be carefully interpreted as the study has various limitations; the small sample size is the first limitation of the study. Secondly, as the study was descriptive; there is no clarity about the types of meditations practiced by the students. Further, the whole research relies on self-reported measures; for the record of the practice of meditation as well as for the filling up of questionnaires; which may result in response bias as per social desirability instead of original data. After this, students selected as meditators and non-meditators were not matched on the demographic variables; instead, the same number of non-meditators as that of meditators were selected randomly from the class from which the meditators were selected. The above limitations were stated to improve the further research for which the present research may serve as a base or reference.

Suggestions for further research

The study can be replicated on various other types of populations to generalize the results to a more diverse population. The study can be replicated with different study designs such as experimental designs to see the specific effects of different meditative practices on the different aspects of the health of the students. The psychophysiological and neurocognitive tests can be used in further studies that may record the subtle effects of meditative practices on health. The study can be extended keeping in view the above suggestions to add more to the effects of meditative practices on the health and well-being of people.

Conclusion

The results show that meditator students have better physical, mental, social and overall health as compared to non-meditator students. Meditation works as a tonic to heal the mind and body (AAMI, 2020). It is being embraced as a valuable tool for stress reduction and a device for healing both physical and mental disorders by healthcare professionals as well as laypeople (Manocha, 2001). Regular practice of meditation enhances the well-being of an individual (Carmody and Baer, 2007). So, one must meditate regularly to have better health, overall as well as in all dimensions i.e., physical, mental and social. Meditation is considered as perfect therapy to keep the body, mind and soul balanced (Rai, 2015; Sampaio, 2016). It has the power to turn your life into a celebration (Sharma, 2018).

References

- Axelsen, J. L., Meline, J. S., Staiano, W., & Kirk, U. (2022). Mindfulness and music interventions in the workplace: Assessment of sustained attention and working memory using a crowdsourcing approach. *BMC Psychology*, *10*(1). <https://doi.org/10.1186/s40359-022-00810-y>
- Barnes, V. A., Treiber, F. A., & Davis, H. (2001). Impact of transcendental meditation® on cardiovascular function at rest and during acute stress in adolescents with high normal blood pressure. *Journal of Psychosomatic Research*, *51*(4), 597-605. [https://doi.org/10.1016/s0022-3999\(01\)00261-6](https://doi.org/10.1016/s0022-3999(01)00261-6)
- Bennett, K., & Dorjee, D. (2015). The impact of a mindfulness-based stress reduction course (MBSR) on well-being and academic attainment of sixth-form students. *Mindfulness*, *7*(1), 105-114. <https://doi.org/10.1007/s12671-015-0430-7>
- Bleasdale, J. E., Peterson, M. C., & Nidich, S. (2019). Effect of meditation on social/Emotional well-being in a high-performing high school. *Professional School Counseling*, *23*(1), 2156759X2094063. <https://doi.org/10.1177/2156759x20940639>
- Borjalilu, S., Mazaheri, M. A., & Talebpour, A. (2019). Effectiveness of mindfulness-based stress management in the mental health of Iranian University students: A comparison of blended therapy, face-

- to-face sessions, and mHealth app (Aramgar). *Iranian Journal of Psychiatry and Behavioral Sciences*, 13(2). <https://doi.org/10.5812/ijpbs.84726>
- Burns, J. L., Lee, R. M., & Brown, L. J. (2011). The Effect of Meditation on Self-Reported Measures of Stress, Anxiety, Depression, and Perfectionism in a College Population. *Journal of College Student Psychotherapy*, 25(2), 132-144. doi:10.1080/87568225.2011.556947
- C Sanchetee, P., & Shreyas Pragya, S. (2020). Impact of preksha meditation on Alpha waves in EEG. *Indian Journal of Clinical Anatomy and Physiology*, 5(4), 519-524. <https://doi.org/10.18231/2394-2126.2018.0119>
- Carmody, J., & Baer, R. A. (2007). Relationships 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*, 31(1), 23-33. <https://doi.org/10.1007/s10865-007-9130-7>
- Cavanagh, K., Strauss, C., Cicconi, F., Griffiths, N., Wyper, A., & Jones, F. (2013). A randomised controlled trial of a brief online mindfulness-based intervention. *Behaviour Research and Therapy*, 51(9), 573-578. <https://doi.org/10.1016/j.brat.2013.06.003>
- Champion, L., Economides, M., & Chandler, C. (2018). The efficacy of a brief app-based mindfulness intervention on psychosocial outcomes in healthy adults: A pilot randomised controlled trial. *PLOS ONE*, 13(12), e0209482. <https://doi.org/10.1371/journal.pone.0209482>
- Chen, Y., Yang, X., Wang, L., & Zhang, X. (2013). A randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Education Today*, 33(10), 1166-1172. <https://doi.org/10.1016/j.nedt.2012.11.014>
- Cheng, F. K. (2016). Is meditation conducive to mental well-being for adolescents? An integrative review for mental health nursing. *International Journal of Africa Nursing Sciences*, 4, 7-19. <https://doi.org/10.1016/j.ijans.2016.01.001>
- Chung, S., Brooks, M. M., Rai, M., Balk, J. L., & Rai, S. (2012). Effect of Sahaja Yoga meditation on quality of life, anxiety, and blood pressure control. *The Journal of Alternative and Complementary Medicine*, 18(6), 589-596. <https://doi.org/10.1089/acm.2011.0038>
- Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., Urbanowski, F., Harrington, A., Bonus, K., & Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, 65(4), 564-570. <https://doi.org/10.1097/01.psy.0000077505.67574.e3>
- De Vibe, M., Solhaug, I., Tyssen, R., Friborg, O., Rosenvinge, J. H., Sørli, T., & Bjørndal, A. (2013). Mindfulness training for stress management: A randomised controlled study of medical and psychology students. *BMC Medical Education*, 13(1). <https://doi.org/10.1186/1472-6920-13-107>
- Dorais, S., & Gutierrez, D. (2021). The effectiveness of a centering meditation intervention on college stress and mindfulness: A randomized controlled trial. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.720824>
- Erogul, M., Singer, G., McIntyre, T., & Stefanov, D. G. (2014). Abridged mindfulness intervention to support wellness in first-year medical students. *Teaching and Learning in Medicine*, 26(4), 350-356. <https://doi.org/10.1080/10401334.2014.945025>
- Fazia, T., Bubbico, F., Nova, A., Buizza, C., Cela, H., Iozzi, D., Calgan, B., Maggi, F., Floris, V., Sutti, I., Bruno, S., Ghilardi, A., & Bernardinelli, L. (2023). Improving stress management, anxiety, and mental well-being in medical students through an online mindfulness-based intervention: A randomized study. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-35483-z>

- Felman, A. (n.d.). *What is health?: Defining and preserving good health*. Medical and health information. Retrieved January 31, 2020, from <https://www.medicalnewstoday.com/articles/150999.php>
- Greif, T. R., & Kaufman, D. A. (2019). Immediate effects of meditation in college students: A pilot study examining the role of baseline attention performance and trait mindfulness. *Journal of American College Health, 69*(1), 38-46. <https://doi.org/10.1080/07448481.2019.1650052>
- Gutierrez, D., Conley, A. H., & Young, M. (2016). Examining the effects of Jyoti meditation on stress and the moderating role of emotional intelligence. *Counselor Education and Supervision, 55*(2), 109-122. <https://doi.org/10.1002/ceas.12036>
- Hanna, A., & M. Pidgeon, A. (2018). Leveraging Mindfulness to Build Resilience and Professional Quality of Life in Human Service Professionals. *OBM Integrative and Complementary Medicine, 3*(2). doi:10.21926/obm.icm.1802007
- Huberty, J., Green, J., Glissmann, C., Larkey, L., Puzia, M., & Lee, C. (2019). Efficacy of the mindfulness meditation mobile app “Calm” to reduce stress among college students: Randomized controlled trial. *JMIR mHealth and uHealth, 7*(6), e14273. <https://doi.org/10.2196/14273>
- Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. *Emotion, 8*(5), 720-724. <https://doi.org/10.1037/a0013237>
- Ivtzan, I., & Quirk, M. J. (2018). Soft is hard: building resilience with loving kindness meditation at work. *International Journal of Complementary & Alternative Medicine, 11*(3), 125-131. doi:10.15406/ijcam.2018.11.00381
- Kemper, K. J., & Khirallah, M. (2015). Acute effects of online mind-body skills training on resilience, mindfulness, and empathy. *Journal of Evidence-Based Complementary & Alternative Medicine, 20*(4), 247-253. <https://doi.org/10.1177/2156587215575816>
- Kornfield, J. (2010). *Meditation for beginners* (8th ed.). Jaico Publishing House.
- Lee, S., Hwang, S., Kang, D., & Yang, H. (2019). Brain education-based meditation for patients with hypertension and/or type 2 diabetes. *Medicine, 98*(19), e15574. <https://doi.org/10.1097/md.00000000000015574>
- Lemay, V., Hoolahan, J., & Buchanan, A. (2019). Impact of a Yoga and Meditation Intervention on Students' Stress and Anxiety Levels. *American Journal of Pharmaceutical Education, 83*(5), 747-752. doi:10.5688/ajpe7001
- Lyzwinski, L. N., Caffery, L., Bambling, M., & Edirippulige, S. (2019). The mindfulness app trial for weight, weight-related behaviors, and stress in University students: Randomized controlled trial. *JMIR mHealth and uHealth, 7*(4), e12210. <https://doi.org/10.2196/12210>
- Manocha, R. (2001). Why meditation? *Australian Family Physician, 29*(12), 1135-1138. https://www.researchgate.net/publication/12189441_Why_meditation
- Manocha, R., Black, D., & Wilson, L. (2012). Quality of life and functional health status of long-term meditators. *Evidence-Based Complementary and Alternative Medicine, 2012*, 1-9. <https://doi.org/10.1155/2012/350674>
- Menezes, C. B., De Paula Couto, M. C., Buratto, L. G., Erthal, F., Pereira, M. G., & Bizarro, L. (2013). The improvement of emotion and attention regulation after a 6-Week training of focused meditation: A randomized controlled trial. *Evidence-Based Complementary and Alternative Medicine, 2013*, 1-11. <https://doi.org/10.1155/2013/984678>
- Mo, X., Qin, Q., Wu, F., Li, H., Tang, Y., Cheng, Q., & Wen, Y. (2021). Effects of breathing meditation training on sustained attention level, mindfulness attention awareness level, and mental state of operating room nurses. *American Journal of Health Behavior, 45*(6), 993-1001. <https://doi.org/10.5993/ajhb.45.6.4>

- Oman, D., Hedberg, J., & Thoresen, C. E. (2006). Passage meditation reduces perceived stress in health professionals: A randomized, controlled trial. *Journal of Consulting and Clinical Psychology, 74*(4), 714-719. <https://doi.org/10.1037/0022-006x.74.4.714>
- Oman, D., Shapiro, S. L., Thoresen, C. E., Plante, T. G., & Flinders, T. (2008). Meditation Lowers Stress and Supports Forgiveness Among College Students: A Randomized Controlled Trial. *Journal of American College Health, 56*(5), 569-578. doi:10.3200/jach.56.5.569-578
- Pandya, S. P. (2020). Online meditation program builds resilience and competencies among social work students working with older adults. *Journal of Social Work Education, 58*(1), 63-75. <https://doi.org/10.1080/10437797.2020.1817817>
- Pandya, S. P. (2019). Meditation app alleviates burnout and builds resilience for chaplains in hospices for older adults in Asian and African cities. *Journal of Health Care Chaplaincy, 27*(3), 129-145. <https://doi.org/10.1080/08854726.2019.1670539>
- Paul, G., Elam, B., & Verhulst, S. J. (2007). A Longitudinal Study of Students' Perceptions of Using Deep Breathing Meditation to Reduce Testing Stresses. *Teaching and Learning in Medicine, 19*(3), 287-292. doi:10.1080/10401330701366754
- Phang, C. K., Chiang, K. C., Ng, L. O., Keng, S., & Oei, T. P. (2015). Effects of brief group mindfulness-based cognitive therapy for stress reduction among medical students in a Malaysian University. *Mindfulness, 7*(1), 189-197. <https://doi.org/10.1007/s12671-015-0399-2>
- Phang, C. K., Mukhtar, F., Ibrahim, N., Keng, S., & Mohd. Sidik, S. (2015). Effects of a brief mindfulness-based intervention program for stress management among medical students: The mindful-gym randomized controlled study. *Advances in Health Sciences Education, 20*(5), 1115-1134. <https://doi.org/10.1007/s10459-015-9591-3>
- Rai, R. (2015). Yoga and Meditation is Strong Device for Eradicate Academic Stress and Depression. *International Journal of Humanities & Social Science Studies, 2*(2), 246-251. <http://oaji.net/articles/2015/1115-1443862265.pdf>
- Ramasubramanian, S. (2017). Mindfulness, stress coping and everyday resilience among emerging youth in a university setting: a mixed methods approach. *International Journal of Adolescence and Youth, 22*(3), 308-321. doi: 10.1080/02673843.2016.1175361
- Ratanasiripong, P., Park, J. F., Ratanasiripong, N., & Kathalae, D. (2015). Stress and anxiety management in nursing students: Biofeedback and mindfulness meditation. *Journal of Nursing Education, 54*(9), 520-524. <https://doi.org/10.3928/01484834-20150814-07>
- Sampaio, C. V., Lima, M. G., & Ladeia, A. M. (2016). Meditation, health and scientific investigations: Review of the literature. *Journal of Religion and Health, 56*(2), 411-427. <https://doi.org/10.1007/s10943-016-0211-1>
- Sanchetee, P., Jain, A., & Agarwal, H. (2017). Preksha meditation and mental health in elderly. *Journal of the Indian Academy of Geriatrics, 13*(3). <https://doi.org/10.35262/jiag.v13i3.131-138>
- Schneider, R. H., Grim, C. E., Rainforth, M. V., Kotchen, T., Nidich, S. I., Gaylord-King, C., Salerno J. W., Kotchen J. M., Alexander, C. N. (2012). Stress Reduction in the Secondary Prevention of Cardiovascular Disease. *Circulation: Cardiovascular Quality and Outcomes, 5*(6), 750-758. <https://doi.org/10.1161/circoutcomes.112.967406>
- Seppala, E. M., Hutcherson, C. A., Nguyen, D., Doty, J. R., & Gross J. J. (2014). Loving-kindness meditation: a tool to improve healthcare provider compassion, resilience and patient care. *Journal of Compassionate Health Care, 1*(5),1-9. doi: 10.1186/s40639-014-0005-9
- Sharma, H. (2015). Meditation: Process and effects. *AYU (An International Quarterly Journal of Research in Ayurveda), 36*(3), 233. <https://doi.org/10.4103/0974-8520.182756>

- Sharma, S. K. (2018). *Health and Meditation*. Bhartiya Vidya Prakashan.
- Shilpa, M., Tejaswini, K. S., Raghunandana, R., Narayana, K., & Marigowda, S. (2020). Effects of meditation compared with effects of meditation with autosuggestion on cardiovascular variables and autonomic functions - An analytical study. *National Journal of Physiology, Pharmacy and Pharmacology*, (0), 1. <https://doi.org/10.5455/njppp.2020.10.03074202002042020>
- Social health | National health Portal of India*. (2019). National Health Portal of India, Gateway to Authentic Health Information. Retrieved January 29, 2020, from https://www.nhp.gov.in/social-health_pg
- Spadaro, K. C., & Hunker, D. F. (2016). Exploring the effects of an online asynchronous mindfulness meditation intervention with nursing students on stress, mood, and cognition: A descriptive study. *Nurse Education Today*, 39, 163-169. <https://doi.org/10.1016/j.nedt.2016.02.006>
- Steinhubl, S. R., Wineinger, N. E., Patel, S., Boeldt, D. L., Mackellar, G., Porter, V., Redmond, J. T., Muse, E. D., Nicholson, L., Chopra, D., & Topol, E. J. (2015). Cardiovascular and nervous system changes during meditation. *Frontiers in Human Neuroscience*, 9. <https://doi.org/10.3389/fnhum.2015.00145>
- Tang, Y., Ma, Y., Wang, J., Fan, Y., Feng, S., Lu, Q., Yu, Q., Sui, D., Rothbart, M. K., Fan, M., & Posner, M. I. (2007). Short-term meditation training improves attention and self-regulation. *Proceedings of the National Academy of Sciences*, 104(43), 17152-17156. <https://doi.org/10.1073/pnas.0707678104>
- Ueberholz, R. Y., & Fiocco, A. J. (2022). The effect of a brief mindfulness practice on perceived stress and sustained attention: Does priming matter? *Mindfulness*, 13(7), 1757-1768. <https://doi.org/10.1007/s12671-022-01913-8>
- Valosek, L., Wendt, S., Link, J., Abrams, A., Hipps, J., Grant, J., Nidich, R., Loiselle, M., & Nidich, S. (2021). Meditation effective in reducing teacher burnout and improving resilience: A randomized controlled study. *Frontiers in Education*, 6. <https://doi.org/10.3389/feduc.2021.627923>
- Walsh, R., & Shapiro, S. L. (2006). The meeting of meditative disciplines and western psychology: A mutually enriching dialogue. *American Psychologist*, 61(3), 227-239. <https://doi.org/10.1037/0003-066x.61.3.227>
- Warnecke, E., Quinn, S., Ogden, K., Towle, N., & Nelson, M. R. (2011). A randomised controlled trial of the effects of mindfulness practice on medical student stress levels. *Medical Education*, 45(4), 381-388. <https://doi.org/10.1111/j.1365-2923.2010.03877.x>
- Wendt, S., Hipps, J., Abrams, A., Grant, J., Valosek, L., & Nidich, S. (2015). Practicing Transcendental Meditation in High Schools: Relationship to Well-being and Academic Achievement Among Students. *Contemporary School Psychology*, 19(4), 312-319. doi: 10.1007/s40688-015-0066-6
- WHO. n.d. *Frequently asked questions*. WHO | World Health Organization. Retrieved April 18, 2021, from <https://www.who.int/about/who-we-are/frequently-asked-questions>
- Why meditation is important in today's world*. n.d. @AAMI. Retrieved January 31, 2020, from <https://www.aami.com.au/aami-informed/your-health-and-life/your-health/benefits-of-meditation.html>
- Yang, E., Schamber, E., Meyer, R. M., & Gold, J. I. (2018). Happier healers: Randomized controlled trial of mobile mindfulness for stress management. *The Journal of Alternative and Complementary Medicine*, 24(5), 505-513. <https://doi.org/10.1089/acm.2015.0301>