Survey Article

International Research Journal of Ayurveda & Yoga
Vol. 5 (3),158-162, March, 2022
ISSN: 2581-785X; https://irjay.com/
DOI: https://doi.org/10.47223/IRJAY.2022.5323

Effect of "*Om*" Chanting on Depression Among College Students - A Pilot Study

Naresh Kumar P,[1] V.S. Srimathi,[2] Jincy Sundaran[3]

1-Assistant Professor cum Research officer Department of Community Medicine JSS Institute of Naturopathy and Yogic Sciences, Coimbatore
2-Medical officer, Holistic Department, Lotus Multispecialty Hospital, Erode.
3-Assistant Professor Department of Psychology JSS Institute of Naturopathy and Yogic Sciences, Coimbatore

Article Info

Article history:
Received on: 20-02-2022
Accepted on: 18-03-2022
Available online: 31-03-2022

Corresponding author-
Naresh Kumar P, Assistant Professor cum Research officer Department of Community Medicine JSS Institute of Naturopathy and Yogic Sciences, Coimbatore
Email: -naresh2009@gmail.com

ABSTRACT:

Background: Depression in the early life stage can lead to negative consequences in adult life, which necessitates targeting the young adult population to facilitate prevention. The objective of this study is to assess the effect of "*Om*" chanting 108 times per day for 3 weeks on depression in freshly inducted first-year Yoga and Naturopathy naïve medical college students.
Methods: One-Group Pretest-Posttest Design in which a pretest measure is done followed by a treatment and a posttest for a single group. The intervention of chanting "*OM*" 108 times per day for 21 days was practiced by the 92 newly joined medical students. An 18-item self-administered Goldberg depression scale was used as the assessment tool for measuring the severity of the depression pre and post-intervention.
Results: The average age of the participants was (18.21 ±0.47 years) among which 73.9% had depression ranging from possibly minor depression to severe depression. There was a significant difference in the scores before intervention (M=24.23, SD=13.25) and after intervention (M=15.42, SD=11.96) of *OM* chanting; t (67)= 6.93, p=0.001 showing chanting of "*OM*" had a significant reduction on Depression scores among medical students.
Conclusion: The study showed that chanting *OM* 108 times for 21 days has a significant impact on Depression scores among medical students. *Om* chanting can be a cost-effective intervention and might prevent depression in students. The findings warrant further large-scale studies for strengthening the findings.
Keywords: Yoga, Depression, *Om* Chanting, Meditation, College students

INTRODUCTION

Depression is a common illness worldwide, affecting more than 264 million people. At its worst, depression can lead to suicide, around 800 000 people die due to suicide every year and it is the second leading cause of death among age 15-29-year-old.[1,2] A report on National Mental health survey, found that the prevalence of depression amongst adolescents aged 13-17 years was 0.8%.[3] Most mental disorders have their initial onset during young adulthood and depression is one of the most common health problems for university.[4] There is considerable evidence that rates of depression and suicide are higher in medical students, and

studies from other parts of world have shown a high prevalence of depression among medical students.[5,6] Studies in India found that around 50% to 60% of the 1st year medical students had depressive symptoms.[7,8] Depression in this early life stage can lead to negative consequences in adult life through its impact on career prospects and social relationships. Hence, treatment resources should target the young adult sector of the population.[9] There are effective treatments available for moderate and severe depression such as behavioral activation, cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT), or antidepressant medication.[10] Neuro-physiological studies showed that the experience of vibration sensation around the ears during '*Om*' chanting is transmitted through the auricular branch of the vagus nerve and stimulates the vagal nerve and deactivates the limbic system, and it is speculated that the internalized attention produced with the chanting of *Om* may be responsible for the EEG alpha rhythm, reduced blood pressure, heart rate and Galvanic skin conductivity indicating parasympathetic nervous system predominance(10). Chanting meditation is a method of practice, to keep the mind focused on one point by repeating a simple phrase or Sutra. "*Om*" or "Aum" is one of the sacred mono-syllable, it is the combination of three letters, namely, A, U, and M. "A" represents the physical plane. "U" represents the mental and astral plane, the world of intelligent spirits, and all heavens. "M" represents the whole deep-sleep state, which is unknown even in our wakeful state.[11] Classical Yoga texts recommend contemplation on the sound *Om* reduces mental activity. Studies shown that *OM* meditation can be a useful method to reduce psychological stress and to maintain psychological wellbeing.[12-14] Studies on effect of chanting *OM* among medical students impacting there their depression status is lacking in India. The present study is an attempt to assess the effect of *Om* chanting 108 times per day for 3 weeks on depression in freshly inducted first year Yoga and Naturopathy naïve medical college students.

METHODOLOGY

Study Design: One-Group Pretest-Posttest Design in which a pretest measure is done followed by a treatment and a posttest for a single group.[15]

Participants: First year students studying Bachelor of Naturopathy and Yogic Sciences (BNYS), not yet practiced "OM" chanting, were included for the study. Ninety-nine students volunteered for the study of which, seven students were considered not eligible due to their previous medical illness for yoga practices. Sufficient information about the study was provided through information sheet and their written informed consent were taken.

Intervention: The participants were assembled in a common yoga room between 5:00pm to 5:30pm and seated in *padmasana* or *vajrasana* for chanting *Om* simultaneously for 108 times for 21 days. On an average each round of *Om* chanting lasted for 10 seconds. An attendance of 70 percentage was considered eligible for inclusion of data for analysis. Throughout the practice, the subjects were instructed to be constantly be aware of the reverberations of the *Om* chanting.

Assessment: An 18-item self-administered Goldberg depression scale with each item rated on a 0–5 point Likert scale was used for assessment. The total score can therefore range from 0 (complete absence of depressive symptoms) to 90 (most severe depression). The scores are as follows 0 to 9-Depression unlikely, 10 to 17- Possibly minor depression, 18 to 21- On the verge of depression, 22 to 35- Minor to moderate depression, 36 to 53- Moderate to severe depression, 54 & above- Severe depression. We administered this scale for screening and assessing the severity of depression at the start and end of the 21-day intervention.[16,17]

Ethics: The study was reviewed and approved by the Institutional Ethical Committee, Ref No: JSS/INYS-IEC/CBE/009/2017-18.

Analysis: Paired t test was computed using IBM SPSS-18.

RESULTS

The data obtained from ninety-two participants at baseline and all have successfully completed the 21 sessions. The subjects were between 18 to 19 years of age (average 18.21±0.47 years), 71 were female. The baseline data showed that 68 subjects (73.9%) had depression scores ranging from (10 to 53) i.e., from *possibly minor depression* and *moderate to severe depression* as assessed using Standard Goldberg's Score for Depression, and 26.1% of the participants showed scores that are in depression unlikely category. As hypothesized, following the twenty-one-day intervention, the percentage population under the criteria, possibly minor depression and severe depression decreased from 73.9% to 51%. Also, 75% of the subjects i.e. 3 out of 4 subjects in the severe depression category had showed reduction in depression scores after the intervention. Overall, the percentage of healthy population increased from 26.1% to 48.9% following the intervention duration (*Table 1*). Following the normal

distribution of data, paired sample t test was performed, whether there was a statistically significant mean difference between the depression scores before and after intervention was computed using SPSS-18 software. Among 68 subjects (73.9%) who having possible minor depression to severe depression there was a statistically significant difference in the scores before intervention (M=24.23, SD=13.25) and after intervention (M=15.42, SD=11.96) of OM chanting; t (67) = 6.93, p=0.001, CI-95%=6.27-11.34. (Table-2). Further, Cohen's effect size value (d = .69) suggested a moderate to high practical significance. These results suggest that *Om* chanting does have an impact on depression scores. Specifically, our results suggest that *Om* chanting for 108 times for 21 days is beneficial for the reduction of overall depression scores in young adolescents. (Table 1) (Table 2)

DISCUSSION

The prevalence of depression among 1st year Medical students were higher as in our finding 73.9% which are consistent with the higher prevalence (60%-65%) in studies among medical students in India.[8] Though we didn't explored the reasons for higher depression prevalence, it could be due to stress of new study environment and greater degree of work load with obligations to succeed, homesickness as most of them might live far from home for the first time, change in their sleeping and eating habits, financial indebtedness, lack of leisure time.[8] Neuro-physiological studies have demonstrated *Om* chanting promotes parasympathetic predominance through activation of auricular branches of the vagal nerves.[10] Studies have also demonstrated reduction in activation levels of the hyperactive amygdala, left hippocampus, left subgenual cingulate cortex, left and right ventral anterior cingulum, and right thalamus and brainstem regions in depressive patients.[19] Neuro imaging following *Om* chanting using fMRI suggest significantly reduced outputs from insula, anterior cingulate and orbitofrontal cortices that are involved in emotion processing and self- referential processing which are impaired in major depressive disorders.[20] We speculate that the anti-depressant effect of *Om* chanting might also be associated with subjective awareness along with vagal dominance. Further studies are warranted to study the implications of *Om* chanting on sleep quality because sleep has been an established indicator of better states of relaxation.[21]The present study has been conducted only on Yoga naïve subjects. These findings indicate a possibility of decreased prevalence of depression in long term practitioners of *OM* chanting. **Limitations:** The study participants were not assessed for the factors and cause associated with depression, and another limitation is lack of control arm in our study for strengthening the findings.

CONCLUSION

The study showed that chanting of *OM* 108 times for 21 days has a significant impact on Depression scores among medical students. The changes can be hypothesized has due to neurophysiological effects of *OM* chanting mediated through the auricular branches of the vagal nerves and relaxation effect of *OM* chanting as found in other studies. *Om* chanting can be a cost-effective intervention that can be practiced easily for prevention as well as management of depression. Future RCTs is warranted to strengthen the association, to assess the generalizability and feasibility of such intervention in academic settings.

ACKNOWLEDGEMENT: We would like to thank JSS Institute of Naturopathy and Yogic Sciences, and JSS Management for providing the required support to undertake this study. We thank Dr. S. Sivaraman for his technical guidance

CONFLICT OF INTEREST STATEMENT

We author of this study wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

The author(s) received no specific funding for this work

REFERENCES

1. WHO. Depression [Internet]. WHO. 2020 [cited 2020 Mar 29]. Available from: https://www.who.int/news-room/fact-sheets/detail/depression
2. James SL, Abate D, Abate KH, Abay SM, Abbafati C, Abbasi N, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet [Internet]. 2018 Nov 10 [cited 2020 Mar 29];392(10159):1789–858. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0140673618322797
3. NIMHANS. National Mental Health Survey of India, 2015-16 : Prevalence, Pattern and Outcomes. Vol. 129, National Institute of Mental Health and Neuro Sciences. Bengaluru; 2016.

4. Kessler RC, Berglund P, Demler O, Ma R, Jin MA, Merikangas KR, et al. Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry [Internet]. 2005 [cited 2019 Jun 13];62:593–602. Available from: www.archgenpsychiatry.com
5. Roh MS, Jeon HJ, Kim H, Han SK, Hahm BJ. The prevalence and impact of depression among medical students: A nationwide cross-sectional study in South Korea. Acad Med [Internet]. 2010 Aug [cited 2020 Mar 29];85(8):1384–90. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20453812
6. Khan MS, Mahmood S, Badshah A, Ali SU, Jamal Y. Prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. J Pak Med Assoc. 2006 Dec;56(12):583–6.
7. Sidana S, Kishore J, Ghosh V, Gulati D, Jiloha RC, Anand T. Prevalence of depression in students of a medical college in New Delhi: A cross-sectional study. Australas Med J. 2012;5(5):247–50.
8. Singh A, Lal A, Shekhar A. Prevalence of depression among medical students of a private medical college in India. Online J Heal Allied Sci. 2010;9(4):9–11.
9. Newman DL, Moffitt TE, Caspi A, Magdol L, Silva PA, Stanton WR. Psychiatric disorder in a birth cohort of young adults: prevalence, comorbidity, clinical significance, and new case incidence from ages 11 to 21. J Consult Clin Psychol [Internet]. 1996 Jun [cited 2019 Jun 13];64(3):552–62. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8698949
10. Kalyani BG, Venkatasubramanian G, Arasappa R, Rao NP, Kalmady S V, Behere R V, et al. Neurohemodynamic correlates of "OM" chanting: A pilot functional magnetic resonance imaging study. Int J Yoga [Internet]. 2011/06/10. 2011;4(1):3–6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21654968
11. Sivananda SS. Japa Yoga A Comprehensive Treatise On Mantra Sastra By Swami Sivananda. HImalayas, India: The Divine Life Society Publication; 2010.
12. Gangadhar P, Chougala B, Laxmeshwar B. How to chant Om mantra and its benefits. Int J Physiol Nutr Phys Educ. 2018;3(2):863–7.
13. Surlya BK, Jain M, Priyamvada R, Chandel MS, Chalak S. Effect of Om Mantra Chanting during Examination Stress in Students. Int J Med Biomed Stud. 2020;4(2):210–2.
14. Rao KD, Ramani S. Situation analysis of human resources for health in India: Current challenges and policy options. 2014;(July 2004):251–64. Available from: www.idfc.com/pdf/report/2013-2014/Chapter-20.pdf
15. Creswell JW. Research design : qualitative, quantitative, and mixed methods approaches. 4th ed. SAGE Publications India Pvt. Ltd. SAGE Publications Ltd; 2014.
16. Aminpoor H, Afshinfar J, Mostafaei A, Ostovar S. Validation of Goldberg ' s Depression Scale in academic and non-academic peoples. Ann Biol Res. 2012;3(9):4564–73.
17. Holm J, Holm L, Bech P. Monitoring improvement using a patient-rated depression scale during treatment with anti-depressants in general practice: A validation study on the Goldberg Depression Scale. Scand J Prim Health Care. 2001;19(4):263–6.
18. Zobel A, Joe A, Freymann N, Clusmann H, Schramm J, Reinhardt M, et al. Changes in regional cerebral blood flow by therapeutic vagus nerve stimulation in depression: An exploratory approach. Psychiatry Res Neuroimaging [Internet]. 2005 Aug 30 [cited 2019 Jul 30];139(3):165–79. Available from: http://www.ncbi.nlm.nih.gov/pubmed/16043331
19. Malhi GS, Lagopoulos J, Ward PB, Kumari V, Mitchell PB, Parker GB, et al. Cognitive generation of affect in bipolar depression: an fMRI study. Eur J Neurosci [Internet]. 2004 Feb 1 [cited 2019 Jul 30];19(3):741–54. Available from: http://doi.wiley.com/10.1111/j.0953-816X.2003.03159.x
20. Rao NP, Deshpande G, Gangadhar KB, Arasappa R, Varambally S, Venkatasubramanian G, et al. Directional brain networks underlying OM chanting. Asian J Psychiatr [Internet]. 2018;37:20–5. Available from: https://doi.org/10.1016/j.ajp.2018.08.001
21. Lazar SW, Bush G, Gollub RL, Fricchione GL, Khalsa G, Benson H. Functional brain mapping of the relaxation response and meditation. Neuroreport [Internet]. 2000 May 15 [cited 2019 Jul 30];11(7):1581–5. Available from: http://www.ncbi.nlm.nih.gov/pubmed/10841380

How to cite this article: Kumar N, Srimathi V.S, Sundaran J, "Effect Of "Om" Chanting On Depression Among College Students - A Pilot Study"
IRJAY.[online]2022;5(3);158-162.
Available from: https://irjay.com
DOI: https://doi.org/10.47223/IRJAY.2022.53123

Table 1, Measure of Depression using Goldberg's Depression Scale before and After intervention			
Sl.No	**Goldberg's Depression Scale**	**At baseline (%)**	**After intervention (%)**
1.	Depression unlikely	24 (26.1%)	45 (48.9%)
2.	Possibly minor depression	28 (30.4%)	24 (26.1%)
3.	On the verge of depression	11 (12%)	5 (5.4%)
4.	Minor to moderate depression	14 (15.2%)	13 (14.1%)
5.	Moderate to severe depression	11 (12%)	4 (4.3%)
6.	Severe depression	4 (4.3%)	1 (1.1%)
7.	Total(n)	92 (100%)	92 (100%)

Table 2, Paired Samples Test. Participants with depression scores

N=68	Mean Goldberg Score	Standard Deviation	t	95% Confidence Interval of the Difference	Sig. (2-tailed)
Baseline	24.2353	13.25650	6.931	Lower 6.27214	.001
After intervention	15.4265	11.96302		Upper 11.34550	