Association of Yoga with Happiness and Self-Esteem among Undergraduate Students of Government Medical College – A Comparative Observational Study

Dr. Hiren J. Shekhda*, Dr. Makwana M N*, Dr. Trivedi A V**

*Resident Doctor, GMC Bhavnagar 364001 **Associate Professor, Department Of Community Medicine, BJMC Ahmedabad 380016.

Abstract: Background: Study showed only 60.8% of the medical students were happy. The prevalence of low self-esteem had been found to be 18% in medical students. There has been a recent spurt in deaths by suicide among medical professionals in India. An inverse association exists between suicide rates and happiness. Yoga has become popular as a way of promoting physical and mental well-being. To determine association of yoga with happiness and self-esteem and to estimate the proportion of happiness and self-esteem among medical students. Settings and Design: Government medical college, Comparative observational study. Material And Methods: Self-administered scales for happiness and self-esteem were provided to for base line data collection to assess their happiness and self-esteem using online Google forms. Students attending 10-day yoga session were selected as case group and students not attending yoga session were selected as control group. At the end of 10-day yoga follow up data collection was done. Statistical analysis used: simple proportions paired, unpaired t test, Pearson's correlation. Result: The prevalence of happiness among participants was 59.65% and the prevalence in male was 59.7% while in female it was 59.6% which is almost identical to male. There was significant increase in happiness level in post yoga score (p-0.014). The mean difference of happiness score between cases and controls was not significant. In case group, mean self-esteem score pre yoga was 24.7 ± 1.69 and post yoga was 25.10 ± 1.87 (p-0.07), whereas in control pre yoga score was 24.89 ± 2.02 and post yoga score was 24.9 ± 3.68 (p-0.44) the difference was not significant in both groups. Conclusion: Association was found between yoga and happiness but no association was observed between yoga and self-esteem. [Shekhda H Natl J Integr Res Med, 2023; 14(4):01-05, Published on Dated: 08/07/2023]

Key Words: Yoga, Medical Students; Happiness; Self-Esteem

Author for correspondence: Dr. Hiren J. Shekhda, Resident Doctor, Department Of Community Medicine, Government medical college, Bhavnagar 364001. E-Mail: shekhda.hiren491@gmail.com Mobile: 9737807179.

Introduction: Yoga is an age-old practice that has its roots in Indian philosophy. Although it started out as a spiritual practice, it has gained popularity as a way of strengthening both physical and mental wellbeing[1]. Yoga is designed to bring balance to an individual's physical, mental, emotional, and spiritual aspects[2]. Medical school is regarded as being exceedingly demanding, and students frequently feel overloaded by their academic obligations. Students experience general tension and anxiety due to the demanding medical courses and the pressure to perform well on evaluations[3]. Medical students experience significant stress from their academic workload, which has a negative impact on their mental health[4]. Mental health has both positive and negative traits. Positive traits include things like areas like life satisfaction, resilience, high self-esteem, and happiness, whereas negative traits include issues like problems with anxiety and depression[5].Happiness of the students has effects on their performance[3], not only happier students perform better academically but also possess greater confidence and a sense of worth. It is due to happiness, that a person always feels good about themselves and others, rejects the feeling of hopelessness, acknowledges their flaws, never stops learning, is always truthful, lives in the present, and is resilient to difficulties. Happiness is correlated with the subjective wellbeing and satisfaction in life[6]. There is significant and negative relationship between happiness and depression[7]. Happiness is correlated with increased self-care, self-awareness, endurance and honesty[8]. Self-esteem is one's sense of self-worth, acceptance, and confidence that individuals feel toward themselves[9]. A person with high self-esteem may handle stressful and anxiety-provoking situations better without any negative effects or impact on their mental health[10]. Students with higher self-esteem had a better academic achievement compared with those who had lower self-esteem[11]. Thus, happiness and high self-esteem directly affects mental health and has inverse relationship with suicide rates[12]. Low self-esteem

and low happiness levels are associated with medical student population is unhappy and has low self-esteem[14,15]. There has been a recent spurt in deaths by suicide among medical students in India[16]. Study showed yoga had a remarkable reduction in the anxiety scores within a period of 10 days. Thus, this study was conducted to determine current happiness and self-esteem among medical students with the objective to assess the association of 10-day yoga workshop with happiness and self-esteem among medical students.

Material & Methods: Approval from ethics committee was obtained for conducting this study. An observational study was conducted at government medical college. Under graduate students of government medical college were recruited on the first day of yoga workshop after taking their consent. Yoga workshop was of 1 hour daily for 10 days. Yoga for this study consisted of 15 minutes of pranayama, 30 minutes asana and 15 minutes of dhyana. All students who participated in yoga session were included as exposure group and all students not taking part in yoga workshop were included as control group. Participants on treatment for any illness were excluded from the study. Exposure group consisted of 140 medical students attending yoga session while control group consisted of 145 students not attending yoga lower academic performance[13] and a part of the session. Data collection was done using Google forms. Happiness and self-esteem were assessed by Oxford happiness questionnaire[17] and Rosenberg self-esteem scale[18] respectively.

Happiness and self-esteem were assessed based on the baseline data collected at start of study. Daily presence of participants was marked.

Follow up data collection using Google form was done at the end of the 10-day workshop for assessing the effect of yoga on happiness and self-esteem. Simple proportions were calculated for estimating happiness and self-esteem among participants while unpaired t-test was applied to mean difference of both exposure and control groups.

Results: Mean age of participants was 20.2 ± 0.7 years and out of total 285 undergraduate medical students 181 were male and 104 were female. 66 students not attending all 10 days of yoga workshop were excluded from exposure group. 12 students from exposure group and 16 students from control were lost to follow-up. Final participants considered for analysis for effect of yoga were 62 in exposure group and 129 in control group. Mean happiness score of total participants (285) was 4.18 ± 0.73.

Table 1: Happiness Score Distribution According To Gender

Scoring Interval *	Pattern	Male (N) (%)	Female (N) (%)	Total (N) (%)
Less Than 3	Unhappy	6 (3.3%)	7 (6.7 %)	13 (4.56%)
3 To 4	Not Particularly Happy Or Unhappy	67 (37%)	35 (33.7 %)	102 (35.8%)
More Than 4	Happy	10 (59.7%)	62 (59.6%)	170(59.65%)
Total	-	181 (63.5 %)	104(36.5%)	285 (100%)

Table 1 shows out of total 285 students 170 (59.65%) participants were happy while only 13 (4.56%) reported to be unhappy. There was no significant difference in happiness score between male and female (t-0.58 p-value: 0.56). Mean self-esteem score among 285 students was found to be 24.67 ± 1.92. Table 2 depicts self-esteem score according to gender. Mean self-esteem score of male and female student was 24.60 ± 1.91 and 24.29 ± 1.92 respectively and there was no significant difference in self-esteem score based on gender (t-0.80, p-value: 0.42). No association was found between gender and happiness, gender and self esteem. No significant correlation was found between happiness and self-esteem among study participants (r-0.0044 p-value: 0.94). Table 3 shows statistically significant increase was found in happiness score post yoga among students which attended the yoga workshop (p-0.014), while no significant change in happiness score was found among students not attending yoga. When the increase in happiness score was compared in students attending yoga and students not attending yoga the difference were not found to be statistically significant. Among both cases and controls neither the difference in self-esteem score post yoga workshop, nor the difference between mean difference of cases and control was not found to be statistically significant (Table 4).

Table 2: Self-Esteem Score Distribution According to Gender

Scoring Interval *	Pattern	Male (N) (%)	Female (N) (%)	Total (N) (%)
Less Than Or Equal To 25	Lower Self-Esteem	128(70.7%)	70 (67.3%)	198 (69.5%)
More Than 25	Higher Self-Esteem	53 (29.3%)	34 (32.7%)	87 (30.5%)
Total	-	181	104	285 (100)

Table 3: Comparison of Means of Happiness Score Among Cases and Controls

Group	Pre yoga Mean ± SD	Post yoga Mean ± SD	Paired t (p-value)	Mean Difference	Unpaired t
Case (62)	4.40 ± 0.65	4.55 ± 0.61	2.26 (p = 0.014)	0.15 ± 0.52	0.89 (p = 0.19)
Control (129)	4.11 ± 0.75	4.17 ± 0.80	1.07 (p = 0.15)	0.060 ± 0.67	

Table 4: Comparison of Means of Self-Esteem Score Among Cases and Controls

Group	Pre yoga Mean ± SD	Post yoga Mean ± SD	Paired t (p-value)	Mean Difference	Unpaired t
Case (62)	24.67 ± 1.69	25.10 ± 1.87	1.47 (p = 0.07)	0.40 ± 2.15	0.82(p = 0.21)
Control (129)	24.89 ± 2.02	24.95 ± 3.68	0.15 (p = 0.44)	0.054 ± 4.11	

Association was yoga with happiness was found to be statistically significant when happiness post yoga was compared among both the groups (t-3.28 p=0.001).

Discussion: Yoga had significant effect in elevating happiness among the exposure group (p = 0.014) while the change in happiness score was not significant among the control group when comparing pre and post data. When mean difference for happiness score between the exposure and control group was compared the difference was found to be insignificant and similar results were found for self-esteem.

Data collected post workshop showed that students who attended yoga workshop were happier than students not attending yoga workshop and the difference in happiness score was found to be statistically significant and hence, yoga was found to be associated with happiness among undergraduate medical students.

A study conducted by Gobec et al reported that a 4-week Maharishi Yoga Asanas course resulted in significant increase in happiness in which happiness was assessed by using Likert scale[19].Yoga was not found to be associated with self-esteem in this study which was opposite to various studies that found yoga improves self-esteem[20-25]. Sethi et al. 2013 found that 5-day yoga for 3 hours significantly improves mean self-esteem score of under privileged girls from 16.2 ± 2.66 to 17.68 ± 2.16 with p value <0.001[20]. Janjhua et al.2020 found that adolescents who are practicing yoga have a very high self-esteem compared to those not practicing yoga[24]. Tejvani et al 2016 found yoga to be effective in increasing self-esteem among orphans form mean score of 20.47 ± 3.36 to 24.41 ± 3.75 with p value <0.001[25]. The difference in the results of this study and other studies could be explained by the already high base line self-esteem among the participants of this study and a longer duration of yoga exposure.

In current study mean happiness score of participants was 4.18 ± 0.73 and 59.65% participants were happy. Difference in happiness among male and female was not found to be significant, these findings were similar to studies[3,14] conducted in other medical colleges.

Surendra Kulkarni et al. 2019 observed that happiness level of medical students was 70% and female students were slightly more happy than male students however this difference was not found statistically significant[3]. The study counted by kamthan et al. 2019 showed that 60.8% of the selected medical students were happy. It was found that male students were happier than females but no association was found between gender and happiness[14]. Mean value of happiness among dental and medical students of Saudi Arabia was 4.65 ± 0.95 which is much higher than current study[5]. This infers that students there might be happier than medial students in India. In current study mean self-esteem was 24.67 ± 1.92 and only 30.5% participants had high self-esteem which was much higher when compared to some studies[20,25]. This difference could be attributed to

age difference among participants and also educational qualification of participants. Medical students of Katmandu[10] (mean RES: 19.19 ± 4.18), Jimma university Ethiopia[26] (mean RES: 19.5 ± 4.8), kerala (mean RES: 18.41) had lower self-esteem compared to participants of current study. Limitation of this study was that follow up was done after a short period of 10 days as the yoga workshop was planned only for 10 days by the college. The findings of this study can be generalized to undergraduate medical students having similar demographics.

Conclusion: We conclude that there is significant association between yoga and happiness, whereas yoga and self-esteem are not significantly associated. Prevalence of happiness among medical students was 59.65% and medical students with high self-esteem were only 30.5%. Further exploration is needed on the subject by taking longer duration of yoga period.

Acknowledgement: We would like to acknowledge Department of Physiology, GMC Bhavnagar for conduction of yoga workshop and facilitating data collection. We also acknowledge Dean, Government medical college, Bhavnagar for support, guidance and facilitation of this study.

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Conflict of interest: None

Funding: None

Cite this Article as: Shekhda H, Makwana M N, Trivedi A V. Association of Yoga With Happiness And Self-Esteem Among Undergraduate Students Of Government Medical College – A Comparative Observational Study. Natl J Integr Res Med 2023; Vol.14(4): 01-05