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Interventional Study to Find Out Effect of Yoga on Anxiety and Stress among MBBS Students

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Abstract- Background: MBBS students are always under stress. Extremes of stress results in stress induced disorders and deteriorating performance. The present interventional study is conducted in III/I MBBS students to determine benefits of yoga on anxiety & stress. Such study among MBBS students of Terna Medical College was never done before.

Objectives: 1.To find out number of students suffering from Anxiety 2.To find out number of students suffering from Stress3.To find out effect of Yoga on Anxiety & Stress.

Methodology: Questionnaire DASS21 for anxiety, stress in form of a Pre-test was administered to the students. Out of 102,96 students responded. It was considered as a pre-test. Accordingly, students were divided into anxious and non-anxious groups.40% students came positive & were included in the study group. To the study group, intervention with 4 types of Pranayam namely, Bhastrika, Kapalbhati, Anulom- Vilom and Bhramari were given. Post- test was applied on the same group at the end of 8 weeks. Results were compared.

Keywords: pranayam, anxiety & stress, medical students.

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Effect of Yoga on Anxiety & Stress

Dr. Padmaja Kanchi

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Results: 71.1% students were suffering from mild level of anxiety, 26.3% had moderate and 2.6% students had severe type of anxiety. Post-test results show none of the student was suffering from anxiety after intervention. 73.7% students were suffering from mild level and 26.3% students were suffering from moderate level of stress. During post-test, all the students found to be within normal range of stress.

Conclusion: Yoga decreased stress & anxiety among study group. It is advised to continue to practice yoga regularly in future. Performing yogic exercises should be included as a part of a curriculum.

Keywords: pranayam, anxiety & stress, medical students.

I. INTRODUCTION

MBBS students are always under stress. A student under optimal stress does bring out his or her best, however extremes of stress can result in stress induced disorders and deteriorating performance.^[1] Can yoga be of benefit in stress induced effects in medical students? The present interventional study is conducted in III/I MBBS students to determine the benefits of yogic practices on anxiety & stress levels during their day to day life.

Such study of Yoga as an interventional measure to decrease stress and anxiety among IIIrd year MBBS students of Terna Medical College was never

done before. Hence the present study is conducted to find out the effect of Yogic practices on anxiety and stress.

a) **Aim:** To find out the effects of Yoga on Anxiety & Stress on IIIrd year MBBS students.

b) **Objective:**

1. To find out number of students suffering from Anxiety
2. To find out number of students suffering from Stress.

II. METHODOLOGY

a) **Study group:** Students of III/I batch **Inclusion criteria:** all Students of III/I batch

b) **Exclusion criteria:** Students who are not willing to participate

c) **Duration of the study:** 3 months

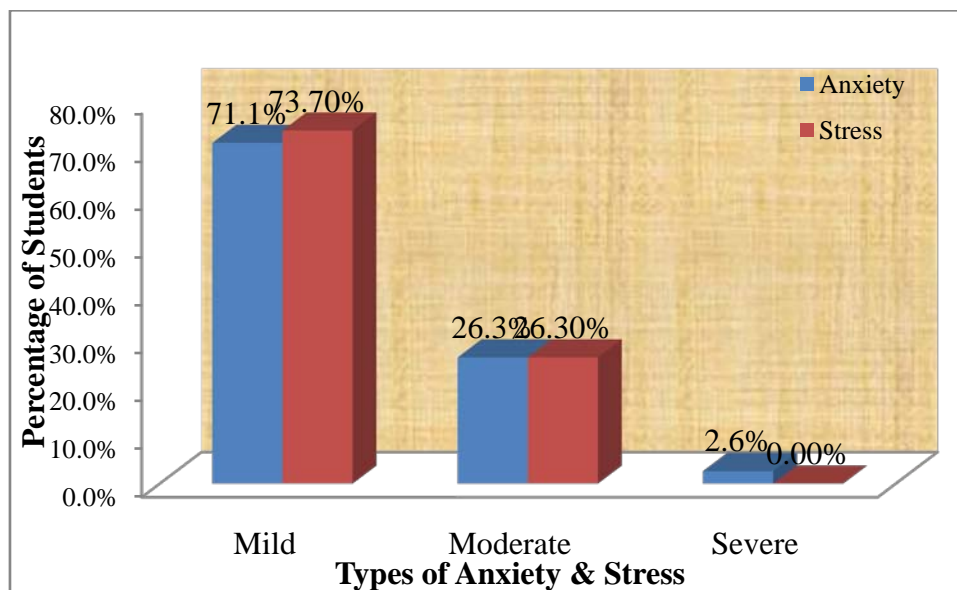
d) **Methodology:** A predesigned validated questionnaire [DASS 21-Depression Anxiety Stress Scale 21^[2]] was used to collect the information on, Anxiety, stress experienced by students of III/I batch. Identification data was collected separately.

- Scientific Research Society Approval & Ethics Committee Approval was taken.
- A pretested validated questionnaire DASS by Lovibond, S.H. & Lovibond P.F.^[2] containing the questions on anxiety, stress in form of a Pre- test was administered to the batch of IIIrd year MBBS students. There were 102 students in the III/I MBBS batch. There were 7 questions each on depression, anxiety & stress. Total 21 questions hence DASS 21 is the name of the scale. Questions on anxiety & stress were analysed.
- As per the scoring on the scale, students were divided into anxious and non- anxious groups.
- To the anxious group, intervention with 4 types of Pranayam namely, Bhastrika, Kapalbhathi, Anulom-Vilom and Bhramari was given by trained teacher.^[3] 6 avaratans of each were conducted in each session. It took around 30 minutes to conduct a session. 3 such sessions per week were conducted and continued for 8 weeks. Students were asked to practice them regularly at home.

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- Post- test was applied on the same group at the end of the session.
- Results of Pre-test & post-test were compared.

III. RESULTS



Graph 3.1 : Students with Anxiety & Stress

Graph 3.1 shows that 71.1% students chosen from pre-test had mild anxiety, 26.3% students had moderate anxiety & 2.6% students had severe anxiety.

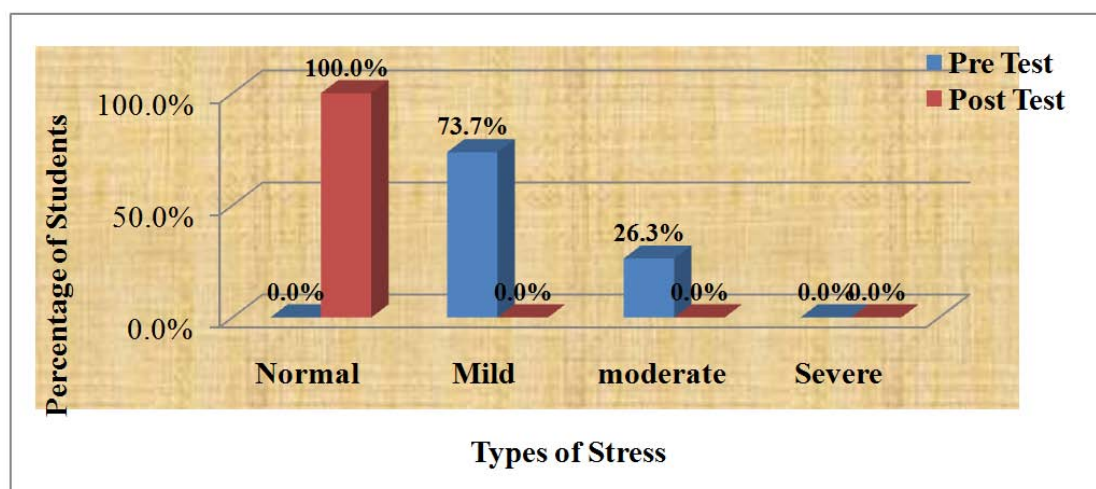
Also 73.7% students had mild stress, 26.3% students had moderate stress & none of them had severe level of stress.

Table 3.2 : Effect of Yoga on Anxiety

Types of Anxiety	Pre-Test		Post-Test	
	No.	%	No.	%
Normal	00	0.0	38	100
Mild	27	71.1	00	00
Moderate	10	26.3	00	00
Severe	01	2.6	00	00
Toal	38	100	38	100

$Z = -5.383$, $P = 0.000$ highly significant at 1% level as per Wilcoxon Signed Rank Test

Table 3.2 shows the results of pre-test which suggests that 71.1% (27) students who were suffering from mild level of anxiety, 26.3% (10) had moderate and 2.6% (1) students had severe type of anxiety as per the calculations of the scores. Post –test results show none of the student was suffering from any form of anxiety after yogic intervention. Since stress, anxiety cannot be measured the scale is non parametric. For non-parametric values, Wilcoxon Signed Rank Test is used. Windows Excel 2010 and SPSS version 21 is used for statistical analysis. It proved that Yoga played a significant role in decreasing anxiety. The results are statistically significant.



Graph 3.3 : Effect of Yoga on Stress

$Z = -5.280$, $P = 0.000$ highly significant at 1% level as per Wilcoxon Signed Rank Test

Graph 3.3 shows that 73.7% (28) students were suffering from mild level of stress and 26.3% (10) students had moderate level of stress. None of the student had severe form of stress during pre –test. During post-test, all the students found to be within normal range of stress showing the role of daily practice of Yoga in decreasing the stress among students. The results are highly significant as per the Wilcoxon Signed Rank Test.

IV. DISCUSSION

1. IIIrd MBBS students are under mental stress pertaining to their study and examinations.
2. Out of 96 students of IIIrd year MBBS, 39.58% (38) came to be positive for anxiety and stress as per DASS21. It was considered as a pre-test.
3. Yogic practices in form of Pranayama/ breathing exercises namely, Bhastrika, Kapalbhathi, Anulom-Vilom and Bhramari were given to the study group for 8 weeks.
4. At the end of the study, post –test was performed on the study group. The results of pre-test and post-test were compared.
5. results of pre-test suggests that 71.1% (27) students who were suffering from mild level of anxiety, 26.3% (10) had moderate and 2.6% (1) students had severe type of anxiety as per the calculations of the scores. Post–test results show none of the student was suffering from any form of anxiety after yogic intervention. Atezaz et al^[7] also found positive effect of pranayam on anxiety among medical students.
6. 73.7% (28) students were suffering from mild level of stress and 26.3% (10) students had moderate level of stress. None of the student had severe form of stress during pre –test. During post-test, all the students found to be within normal range of stress showing the role of daily practice of Yoga in

decreasing the stress among students. Jadhav et al^[4], Sharma et al^[5] & Li et al^[6] also found decrease of stress among medical students after yogic interventions in their respective studies. Malathi et al^[1] found the positive effects of Yoga in relieving the stress among medical students. Arvind et al^[9] also found significant difference after yogic practices in his study group of 1st year medical students. Chandla et al^[10] & Pal et al^[11] also found similar positive effects of Yoga in relieving stress among the participants.

V. CONCLUSION

III/I MBBS students were under stress & anxiety. Yoga in form of Pranayama or breathing exercises decreased stress & anxiety among them. It is advised to continue to practice the yoga regularly in future.

VI. RECOMMENDATIONS

- To implement it on all the batches of MBBS
- To make it a regular activity for all the batches every year.

VII. LIMITATIONS

1. Less time was available for the study.
2. Sample size was small.
3. Since students knew that the investigator is a faculty member & examiner, and the study was not anonymous, it may have created a bias.

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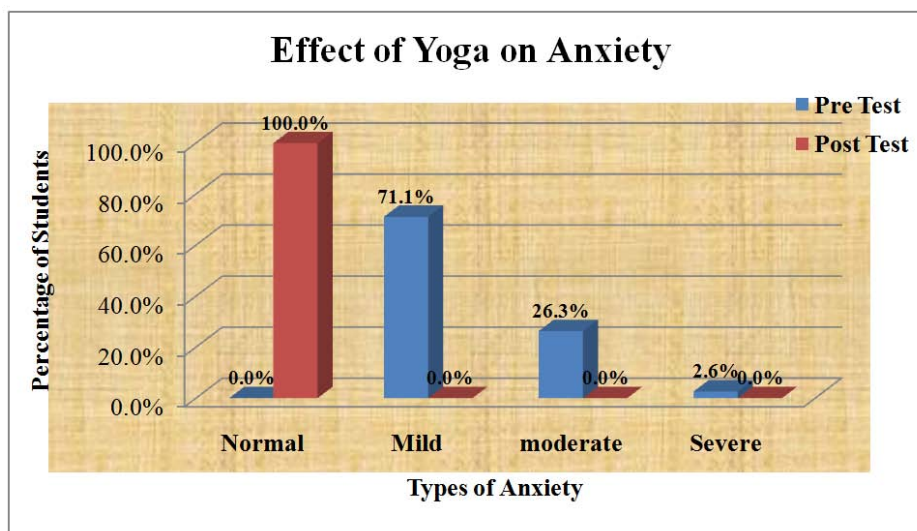
EXTRA

Table 3.1 : Students with Anxiety & Stress

No. of Students	Anxiety		Stress	
	No	Percentage	No	Percentage
Mild	27	71.1	28	73.7
Moderate	10	26.3	10	26.3
Severe	01	02.6	00	00.0
Total	38	100	38	100

IIIrd MBBS students are under mental stress pertaining to their study and examinations.

Table 3.1 shows that out of 96 students of 3rd year MBBS, 39.58% (38) came to be positive for anxiety and stress as per DASS21. It was considered as a pre-test.



Graph 3.4

Same set of questions were used for pre-test and post-test. Post test was given to the 38 students who were found to be anxious and under stress as per the DASS scale. According to the scoring of the scale²

the students were divided into mild, moderate & Severe state of Anxiety.

Table 3.3 shows that results of pre-test suggests that 71.1% (27) students who were suffering from mild level of anxiety, 26.3% (10) had moderate and 2.6% (1) students had severe type of anxiety as per the calculations of the scores. Post –test results show none of the student was suffering from any form of anxiety after yogic intervention. Since stress, anxiety cannot be measured the scale is non parametric. For non – parametric values, Wilcoxon Signed Rank Test is used. Windows Excel 2010 and SPSS version 21 is used for

statistical analysis. It proved that Yoga played a significant role in decreasing anxiety. It is also statistically significant.

Jadhav et al^[4], Vivek Sharma et al^[5] also found subjective wellbeing & decrease of stress among medical students after yogic interventions. Li et al^[6] also found similar result in his review on stress & yoga. S.Y.Atezaz et al^[7] also found that for anxiety disorders, exercise and yoga have shown positive effects.

However Bhupendra Singh et al^[8] did not find significant reduction in anxiety level of his study group of high school students.

Table 3.5 : Effect of Yoga on Stress

Types of Stress	Pre Test		Post Test	
	No.	%	No.	%
Normal	00	00.00	38	100
Mild	28	73.70	00	00
moderate	10	26.30	00	00
Severe	00	00.00	00	00
Total	38	100.00	38	100