



**EFFECT OF PRANAYAMA AND MEDITATION IN REDUCING STRESS IN FINAL
YEAR MBBS EXAM GOING STUDENTS**

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ABSTRACT

Introduction: Stress is a trash of modern life-we all generate it but if you don't dispose it properly it will pile up and overtakes your life –Terri Guillemets. **Aim:** To assess the effect of pranayama and meditation in reducing the stress level in final year exam going MBBS students. This is a cohort study. **Methodology:** 20 healthy volunteers from final year MBBS exam going students were randomly selected. Medical and psychological disorders were excluded in the selected students. DAS scale (Depression, Anxiety, Stress) questionnaire given and scoring done to assess their stress level. Galvanic skin response (GSR) was recorded using polygraph in sitting posture with eyes closed, every 5 minutes for 20 minutes. Along with GSR, blood pressure, pulse rate and respiratory rate were also recorded. Students were taught pranayama and meditation and were asked to practice the same for 45 days, 20 minutes each in morning and evening. At the end of 45 days, the same parameters –stress questionnaire, Galvanic skin response, blood pressure, pulse rate and respiratory rate were recorded and compared with the previous results. **Results:** The results were analyzed using students't test. Galvanic skin response at the end of 20 minutes before practicing pranayama and meditation was 4.85 whereas after it was 14.65. DAS scale scoring before pranayama and meditation was as follows: depression-10, anxiety-8.5, stress-17.1 whereas after practicing it was 6.15, 4.1 and 8.9 respectively. **Conclusion:** From this study it is clearly evident that Pranayama and Meditation has a significant role in reducing the stress level. "Sound mind keeps a sound body".

KEYWORDS: Stress, Pranayama, Meditation, GSR, DAS Scale.

INTRODUCTION

"It's not the stress that kills us, it is our reaction to it"
– Famous saying of Hense selye, the pioneer in the field of stress medicine. In this modern world of growing technologies, novel inventions and mechanical life, it is an impossible expectation for us to be out of stress, As per WHO data, every 40 seconds a life is lost through suicide in India, due to depression and anxiety caused by stress. It becomes an important social risk indicator which urges us to beat out stress, for which pranayama and meditation can be the best tools. Several recent studies on pranayama and meditation suggests that deep relaxation can slow the harmful physical effects of stress and can guide us in leading a productive and fruitful life. So, the aim of the present study is to study the effects of Pranayama & meditation in reducing the stress levels and further reinforcing the benefits of the same.

METHODS OF MATERIALS

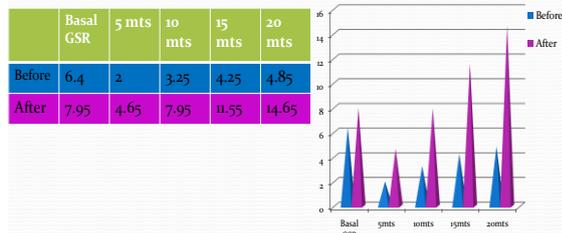
The study group consists of 20 healthy volunteers from final year M.B.B.S., exam going students. The exclusion criteria includes hypertension, diabetes, stress related psychiatric disorder and any other chronic disorder for which medications are taken. They were subjected to

DAS scale scoring and galvanic skin response was recorded using the polygraph. Blood pressure, pulse rate and respiratory rate recorded simultaneously. 20 students were taught pranayama and transcendental meditation for 4 days in our college premises itself by Mr.Rajendran, our transcendental meditation guru, and were allowed to practice the same for 45 days. At the end of 45 days DAS scale scoring, Galvanic skin response recording, Blood Pressure, Pulse Rate & Respiratory rate recording were done. The recordings before and after practicing Pranayama and transcendental meditation were compared and the results tabulated

RESULTS

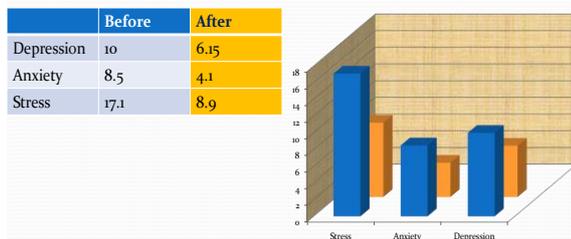
STATISTICAL ANALYSIS-PAIRED 't' TEST

GSR Values before and after learning
Pranayama & Meditation



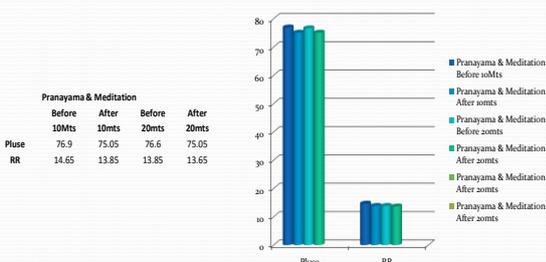
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DAS Scale scoring before & after learning
Pranayama & Meditation



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Pulse rate & Respiratory rate



DISCUSSION

Results of the present study reveals that there is a significant difference in the GSR values, good improvement in DAS Scale scoring and well controlled PR & RR compared between before and after practicing Pranayama and transcendental meditation. [As per the article int. J.Prev med. 2012 July3 (7): 444 – 458, on

healthy impacts of Yoga & Pranayama – A state –of – the Art review, it is stated that Pranayama and meditation causes a shift toward parasympathetic nervous system dominance, possibly via direct vagal stimulation.] Therefore Pranayama increases the parasympathetic tone or outflow and blunts the sympathetic tone of the body. The benefits identified by McCall (2013) and the study by Michalsen et al. (2005) involving stabilising hormone production and reducing cortisol levels, could explain why the participants felt more relaxed and at ease after practicing pranayama and meditation. Pranayama uplift the parasympathetic nervous system, quiets the mind and helps to bring about a state of more focused attention. As the practice is continued over time, we can start realising that we are unintentionally holding our breath or breathing shallowly. We may also begin to associate patterns of the breath with our moods or states of mind. This self awareness is the first step toward using the practices of pranayama to help shift our patterns and, through regular practice, create positive change in our life by beating against stress. Practising transcendental meditation has been proven as one of the best ways to reduce stress and anxiety. In addition to promoting a state of relaxation, regular sessions of transcendental meditation can increase the resilience to stress, lower the blood pressure and improve brain function. Transcendental meditation can also treat serious illnesses such as hypertension and stroke while reducing the effects of metabolic syndrome and pre-diabetes. The participants felt that the pranayama and meditation would be of use for all students and they could foresee future applications as a college-based program for the students. The participants in the current study indicated that they would continue with their yoga practice.

CONCLUSION

As per the study done by schreiner and malcolm (2008) it has been proved that meditation reduces anxiety, depression and stress along with improving cognitive function supported by the studies of stonin, van gorden & Griffiths,2013.Our present study also showing a positive response on doing pranayama and meditation in reducing the stress levels revealed by increase in galvanic skin response and a balanced pulse rate respiratory rate and blood pressure with a significant improvement in DAS scale scoring. The limitations in this study, it was a short span study. Whatever observations made cannot be implied on larger population. Further studies on a large scale including more number of subjects for a longer duration are required to confirm the findings.

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