

# The Efficacy of Yoga Nidra on Stress, Anxiety, and Aggression Levels in School-Going Children

Chanchal Vijay, Rameswar Pal\*

Morarji Desai National Institute of Yoga, Ministry of Ayush, Government of India, 68, Ashok Road, New Delhi, INDIA.

## ABSTRACT

**Background and Aim:** Stress, anxiety, and aggression are very common in school-going children. It is manageable through lifestyle modifications. This trial evaluated the efficacy of Yoga Nidra on stress, anxiety, and aggression levels in school-going children. **Methods:** 40 students participated in this trial. They were divided into two groups viz. control group (n=20) and the experimental group (n = 20). For four weeks, the experimental group engaged in daily Yoga Nidra practice for 25 min. The Control group didn't change their lifestyle. Questionnaire methods were used to assess stress, anxiety, and aggression. One-way ANOVA made all intergroup comparisons. A comparison of data before and after Yogic practice in each group was made using a t-test. **Results:** Stress, anxiety, and aggression levels decreased significantly in the experimental or Yoga Nidra group. The Control group showed no significant difference. **Conclusion:** Results obtained from the data analysis of the 30-day Yoga Nidra intervention show that the intervention helps reduce Stress, Anxiety, and Aggression Levels in School-Going Children.

**Keywords:** Yoga Nidra, Stress, Anxiety, Aggression, School Children.

## \*Correspondence:

**Dr. Rameswar Pal, Ph.D.**

Assistant Professor, Human physiology,  
Morarji Desai National Institute of Yoga,  
Ministry of Ayush, Government of  
India, 68, Ashok Road, New Delhi-110001,  
INDIA.

Email: physioramupal@gmail.com

**Received:** 20-04-2023;

**Revised:** 04-06-2023;

**Accepted:** 29-06-2023.

## INTRODUCTION

People usually engage in various activities in the modern age of urbanization and globalization. They try to synchronize themselves with their jobs, families, and society. Stressful situations occur when individuals are unable to fulfill the intended criteria. Due to the increased stress level, individuals cannot perform their tasks effectively, creating a vicious loop that raises the amount of stress even more. Stress must be appropriately addressed, as it can weaken the immune system and lead to various diseases.<sup>[1]</sup>

Academic stress permeates students' lives and frequently negatively influences their mental and physical well-being as well as their capacity to complete their school work effectively.<sup>[2]</sup> One response to stress is anxiety. The signs could be environmental, psychological, or physical. Anxiety is a physiological reaction that sets off the fight-or-flight response as a sensible fear reaction. In order to protect themselves against terror, a person experiences anxiousness.<sup>[3]</sup> Students who suffer from anxiety may feel nervous before class, panic, lose focus during an exam, feel helpless when working on projects, or show little interest in challenging material. Physiological signs of anxiety include sweaty palms, an accelerated heartbeat, and others.<sup>[3]</sup>

Behavior intended to cause hurt or damage to someone or something, acting as a stand-in for that personal target, is considered aggressive. Aggression is the behavior meant to inflict injury or damage to someone or something that is serving as a substitute for the personal target. Intention and harm are important characteristics in defining aggressive behavior, which can take physical, verbal, or symbolic forms. Aggression is a learned behavior. Individual differences in aggression, however, emerge during infancy and early childhood, as evidenced by temperament and rough-and-tumble play.<sup>[4]</sup> Adolescents grow more aggressive/violent when their lifestyle changes, and they confront new challenges. This can be attributed to increased competitiveness, worry, anxiety, and inadequate parenting techniques.<sup>[5]</sup> Stress and anxiety have become significant killers in both the developed and developing worlds, threatening teenagers' health and well-being. Good health is one of the best resources for vitality, creativity, and wealth, whereas poor health significantly depletes all of the above. As a result, the students must practice a thorough relaxation method to avoid a well-known problem.<sup>[6]</sup> Adolescence is a critical stage of life, a time of maturation, adaptability to life's reality, dramatic changes, and a unique era full of challenges.<sup>[3]</sup> Yoga is a primary discipline that primarily concentrates on the individual's physical and mental well-being. Yoga integrates all aspects necessary for self-realization and achieving a healthier lifestyle.

Yoga Nidra is based on the theory of Pratyahara.<sup>[7]</sup> Yoga Nidra evolved from the tantric practice of Nyasa. Nyasa means directing



DOI: 10.5530/ijcep.2023.10.2.10

## Copyright Information :

Copyright Author (s) 2023 Distributed under  
Creative Commons CC-BY 4.0

Publishing Partner : EManuscript Tech. [www.emanuscript.in]

one's mind to a certain point.<sup>[1]</sup> According to Nyasa, yoga nidra is the most well-known method for inducing total physical and mental relaxation. Yoga Nidra is a state of awareness, not included in the sleep of awakening; neither is it concentration nor hypnotism. Yoga Nidra is a magnetized state.<sup>[6,8]</sup> The researcher points out that Yoga means concentration; Nidra means sleep, resulting from complete concentration.<sup>[8]</sup> Yoga Nidra, in another sense, is a paradoxical state of mind-body, indicating the need to make it understandable for the ordinary person. It may be resting the physical body in a supine position, but at the same time, it is a fully awakened state, and thus, it is a resting state with awareness.<sup>[8]</sup> Yoga Nidra appears to function by altering neurohormonal response to stress, resulting in bodily states opposed to those caused by sympathetic overactivity. The body's organ system enters profound, physiological rest during Yoga Nidra, and the body's powerful, inherent regeneration process is activated.<sup>[2,9]</sup> Contact with the subconscious and unconscious components of the state occurs spontaneously in this transitional stage between sleep and wakefulness.<sup>[10,11]</sup> Scholars in several countries already prescribe Yoga Nidra because of its potential to trigger the parasympathetic nervous system and positively impact stress-related parameters such as cortisol level and skin conductivity.<sup>[3,12]</sup> Yoga Nidra was limited to a few cognitive parts, like attention, concentration, and memory. However, now a day, it is being used frequently in the general population (children, adolescents, and adults), psychiatry population (stress, anxiety, depression, psychosomatic diseases, etc.,) and in the field of education too.<sup>[7]</sup> Techniques of Yoga Nidra have preventive, promotive, and creative values. Sleeping with a trace of profound and long-term effects shows more self-confidence and courage in children.<sup>[3]</sup> It is claimed that the mind gradually relaxes by sending a signal from the body to the brain in the same sequence as this neural map. Emotional release is induced by systematically arousing feelings, sensations, and experiences. A guided visualization technique that follows achieves even more mental calmness.<sup>[10]</sup> Several research has been carried out to find the effect of Yoga Nidra on yogic research. Many researchers have concluded that Yoga Nidra may be used as a preventative strategy by healthy, active persons to release accumulated tensions, boost stress resistance, and reduce overall psychosomatic illness.<sup>[8]</sup> Various research has also been conducted to determine the impact of Yogic practices, mainly focusing on the physiological dimensions of stress, anxiety, and aggression. Yoga effectively manages stress, anxiety, and aggression levels in all individuals by activating the parasympathetic nervous system and positively managing stress hormones like cortisol and dopamine.

Adolescent well-being is a high priority for healthcare interventions in the twenty-first century. Yoga Nidra is an ancient Indian technique that promotes deep physical and mental relaxation. Many studies have already been conducted to find out the effects of many Yoga protocols of mental health, behavior and performances of children. But a study on the effects of Yoga Nidra

on stress, anxiety, and aggression levels in school-going children are rare. The aim of this study was to find out the effects of Yoga Nidra on stress, anxiety, and aggression levels in school-going children.

## MATERIALS AND METHODS

### Participants

Total number of participants was 40. The subjects were randomly selected from Blooming Dales Public School, Rajendra Park, Nangloi. Participants were randomly divided into two groups—a total of 20 participants. The random allocation of the participants to Study and Control group was done using lottery method. Pre and Post-test Research Design was used for the present study for one month, from 4 April 2022 to 3 May 2022. The research design and participants allocation is described in Figure 1. Participants selected for this study were of age: 11-16 years; male and female students were included, and only school-going students were to be included. Students more than 16 years of age are to be excluded. Students having any illness are to be excluded. Students who were taking any drugs/medications are to be excluded.

### Ethical Clearance and Student and Parent Consent

The research proposal was presented in front of the Institutional Research Board (IRB), Morarji Desai National Institute of Yoga, New Delhi on 25/02/2022 and the Board approved the study. The procedure, risk involved (if any), and other related information regarding the study was explained clearly to all the participants and parent. The participant had the right to leave the study at any time during the study. The participants were given assurance regarding the confidentiality of their given information. Written consent was taken from students and parents.

### Intervention

The experimental group practiced one month of Yoga Nidra daily for 25 min. Yoga Nidra was practiced in a lie-down position. Yoga Nidra was practiced in 03 segments (i) Relaxation of the whole body, (ii) breathing awareness, and (iii) visualization. Yoga Nidra instruction was given to the students by a certified Yoga Instructor.

### Assessment

Stress Scale (Published by Agra Psychological Research Cell-Belanganj, Agra) assesses the students' stress levels. The split-half method determined the reliability of the scale. It was found to be 90 and the validity was 97.<sup>[13]</sup>

GAD-7 determines the degree of generalized anxiety disorder in children and adolescents. It was shown to be reliable and clinically valuable for DSM-5 field studies. The raw score is divided by the number of items in the measure to get the average total score.<sup>[14]</sup>

Aggression Scale (Published by Agra Psychological Research Cell- Belanganj, Agra) assess the students' aggression level. The test-retest method determined the reliability. It was found to be 78 and the validity was 74.<sup>[15]</sup>

## Statistical Analysis of Data

Data shown in the Table 1 are mean  $\pm$  standard deviation. A significant level was set at a P value of  $<0.05$ . One-way ANOVA made all intergroup comparisons. A comparison of data before and after Yogic practice in each group was made using a *t*-test. GraphpadInstat, the windows-based software, was used for statistical analysis.

## RESULTS

The result of this study is depicted in Table 1. In the study group, the initial mean stress score was  $84.5 \pm 10.17$ , which decreased to  $78.1 \pm 9.10$  after the intervention, and this change in the mean was highly statistically significant ( $P < 0.001$ ). In the control group, the initial mean stress score was  $80.05 \pm 13.3$  and  $79.3 \pm 12.15$  after the intervention. In the study group, the initial mean anxiety score was reduced to  $12.1 \pm 3.57$ , which decreased to  $9.05 \pm 2.95$  after the intervention, and this change of the mean was highly statistically significant ( $P < 0.001$ ). In the control group, the initial mean anxiety score was  $10.4 \pm 3.78$  and  $10.2 \pm 3.19$  after the intervention. In the study group, the initial mean aggression score was  $100.5 \pm 11.28$ , which was reduced to  $90.9 \pm 8.16$  after the intervention, and this change in the mean was highly statistically significant ( $P < 0.001$ ). In the control group, the initial mean aggression score was  $97.6 \pm 11.9$  and  $97.7 \pm 11.6$  after the period.

## DISCUSSION

This study aims at the efficacy of Yoga Nidra in assessing the stress, anxiety, and aggression levels in school-going children. Yoga Nidra methods include profound physical relaxation, regulated breathing, and experiencing opposite emotions. Results indicate a significant change in pre and post-scores of overall psychological well-being, which points out that Yoga Nidra improved psychological well-being among school-going adolescents. A substantial decrease in stress, anxiety, and aggression levels was seen in the Yoga group compared to the

control group. Yoga Nidra represents a distinct limb of Yoga called pratyahara, or sense withdrawal, and is a scripted (and therefore reproducible) group of activities. With practice, these mental activities may produce the unique state of Yoga Nidra, wherein an individual is physiologically asleep (producing all sleep stages) yet maintains a subtle internal and external awareness.<sup>[8]</sup>

Earlier studies to support this fact show that Yoga Nidra reduces stress and anxiety. It may be due to the modulation of the hypothalamic-pituitary-adrenal axis. It may decrease the level of cortisol, Adreno-corticotrophic hormone, and corticotrophin-releasing hormone, which subsequently reduces stress.<sup>[12]</sup>

Yoga Nidra reduced aggression levels. It may be due to psycho-social modulation on improvement in mental health. Some studies have already been published that Yoga elevates mood, increases relaxation, and improves mental health. This study may be in the same line.<sup>[12]</sup> The brain serves as a bridge between the mind, body, and emotions. Nidra particularly increases bodily awareness and activates the brain during Yoga. Mental tension is relieved during Yoga Nidra by rotating consciousness throughout the body following the mapping of the motor homunculus. It is proposed that the mind gradually relaxes by sending a signal from the body to the brain in the same manner as this neural map. Emotional release is induced by systematically arousing feelings, sensations, and experiences. A guided visualization technique that follows achieves even more mental calmness.

Yoga Nidra may be beneficial to medical patients. Two studies indicated that Yoga Nidra had a substantial favorable effect on psychological and physiological symptoms linked with menstruation problems. A study examined the effects of Yoga Nidra on perceived stress levels in cancer and multiple sclerosis patients and discovered that perceived stress was considerably decreased in the 12 participants following the 6-week program.

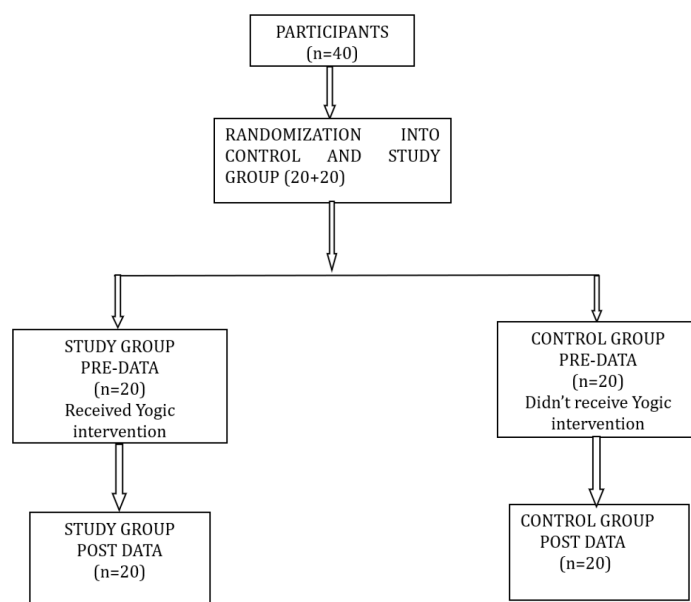
A study also evaluated the long-term effect of Yoga Nidra that students had better night's sleep, self-confidence, and more courage to do what they wanted. Yoga Nidra impacted students' mental performance, noticeable in more efficient learning and concentration.

Insomniacs have persistently high RR and SNS activity, which may contribute to their troublesleeping. Yoga Nidra may reduce

**Table 1: Effects of Yoga Nidra on School Children.**

Parameters	Experimental group		Control group	
	Pre	Post	Pre	Post
Stress	$84.5 \pm 10.17$	$78.1 \pm 9.10^{***}$	$80.05 \pm 13.3$	$79.3 \pm 12.15$
Anxiety	$12.1 \pm 3.57$	$9.05 \pm 2.95^{***}$	$10.4 \pm 3.78$	$10.2 \pm 3.19$
Aggression	$100.5 \pm 11.28$	$90.9 \pm 8.16^{***}$	$97.6 \pm 11.9$	$97.7 \pm 11.6$

Data expressed as Mean  $\pm$  SD. \*\*\* indicates  $P < 0.001$ .



**Figure 1:** Schematic representation of randomization and data collection.

SOL by decreasing both RR and SNS activity while easing the transition into the alpha brainwave state immediately before sleep. One study showed that Yoga Nidra increases HRV when practiced after Hatha Yoga and without Hatha yoga movements beforehand. During Yoga Nidra, the individual primarily attempts to stimulate specific brain sections by focusing awareness on the associated body parts. Awareness is the “attitude of the witness” towards bodily movements, whether physical or mental. This stimulation eventually leads to relaxation and a reduction in Psycho-physiological tension in Yoga Nidra practitioners. Yoga Nidra can be a beneficial non-pharmacological technique for lowering stress, anxiety, and aggression. It shows quick results as it relieves the children’s stress, anxiety, and aggression after only one month of practice.

## CONCLUSION

Yoga Nidra is a relaxing method in Yoga that is a technique of sleeping with awareness. During the practice of Yoga Nidra, one should relax but not sleep. The results obtained from the data analysis of the 30-day, 25 min Yoga Nidra intervention show that the intervention helps reduce Stress, Anxiety, and Aggression Levels in School-Going Children.

## ACKNOWLEDGEMENT

The authors would like to express their deepest gratitude to the Director of Morarji Desai National Institute of Yoga, New Delhi, for his continuous support and encouragement. The authors are also acknowledging the support of the course coordinator for his immense support and encouragement. The authors are grateful to all the study participants who actively participated in the intervention during the project.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## ABBREVIATIONS

Nil

## REFERENCES

1. Kumari Priyanka JST. A pilot study on effect of yoga nidra in the management of stress. *Int J Sci Res.* 2020;9:1101-3.
2. Rani R, Kumar A, Sharma P. Effect of yoga nidra on stress level among b.sc nursing first year students. *Nurs Midwif Res J.* 2013;9(2):47-55. doi: 10.1177/0974150X20130201.
3. Joshi R. Anxiety and depression related to Yog nidra among professional students. *Yoga Mimamsa.* 2020;52:29-33.
4. Ahad R, Ara S, Shah S. Self-concept and aggression among institutionalized orphans of Kashmir. *Int J Indian Psychol.* 2016;2(2):104-16. doi: 10.25215/0302.029.
5. Govindaraja SAG, Pailoor S, Mahadevan B. Effect of yoga on adolescents beliefs about aggression and alternatives. *Int J Med Public Health.* 2017;7(3):166-71. doi: 10.5530/ijmedph.2017.3.34.
6. Kumar K. Yoga nidra and its Impact on students’ well-being. *Yoga-Mimamsa.* 2004;XXVI(1):31-5.
7. Pundeer A, Singh PK, Singh AR. Application of yoga nidra and Vedic mantras on psychological well-being among school going adolescents. *Indian J Clin Psychol.* 2013;40:130-6.
8. Vaishnav BS, Vaishnav SB, Vaishnav VS, Varma JR. Effect of yoga-nidra on adolescents well-being: A mixed method study. *Int J Yoga.* 2018;11(3):245-8. doi: 10.4103/ijoy. IJOY\_39\_17, PMID 30233120.
9. Rani K, Tiwari S, Singh U, Agrawal G, Ghildiyal A, Srivastava N. Impact of Yoga nidra on psychological general well-being in patients with menstrual irregularities: A randomized controlled trial. *Int J Yoga.* 2011;4(1):20-5. doi: 10.4103/0973-6131.78176, PMID 21654971.
10. Moszeik EN, von Oertzen T, Renner KH. Effectiveness of a short Yoga nidra meditation on stress, sleep, and well-being in a large and diverse sample. *Curr Psychol.* 2022;41(8):5272-86. doi: 10.1007/s12144-020-01042-2.
11. Lerner M. Yoga concentration and psychotherapy. *Acta Psiquiatr Psicol Am Latina.* 1971;17(6):410-7.
12. Pal R, Singh SN, Halder K, Tomer OS, Mishra AB, Saha M. Effects of yogic practice on metabolism and antioxidant-antioxidant status of physically active males. *J Phys Activ Health.* 2014;12(4):579-87. doi: 10.1123/jpah.2013-0059.
13. Puri P, Kaur T, Mehta M. Stress scale for Students. *Agra psychological research cell-Belanganj.* Agra; 2011.
14. Spitzer RL, Kroenke K, Williams JBW, Löwe B. Generalized anxiety disorder 7 (GAD-7). *Apa PsycTests.* 2006. doi: 10.1037/t02591-000.
15. Pal R, Naqvi T. Aggression scale (A-scale). *Agra psychological research cell-Belanganj.* Agra; 1983.

**Cite this article:** Vijay C, Pal R. The Efficacy of Yoga Nidra on Stress, Anxiety, and Aggression Levels in School-Going Children. *Int J Clin Exp Physiol.* 2023;10(2):36-9.