



ISSN Print: 2664-7559
ISSN Online: 2664-7567
IJSHPE 2024; 6(1): 208-211
www.physicaleducationjournal.in
Received: 20-01-2024
Accepted: 26-03-2024

Chaudhary Ajay Kumar
Professor and Head,
Department of Psychology,
Government Meera Girls'
College, Udaipur, Rajasthan,
India

Kumar Alok
Research Scholar, University
Yog Centre, Mohanlal
Sukhadia University,
Rajasthan, India

Corresponding Author:
Chaudhary Ajay Kumar
Professor and Head,
Department of Psychology,
Government Meera Girls'
College, Udaipur, Rajasthan,
India

International Journal of Sports, Health and Physical Education

Effect of Surya Namaskar on academic stress of class XII students

Chaudhary Ajay Kumar and Kumar Alok

DOI: <https://doi.org/10.33545/26647559.2024.v6.i1c.127>

Abstract

The study aimed to investigate the effect of Surya Namaskar on academic stress among class XII 30 students using the Academic Stress Scale (ASS) developed by Poorva Jain and Neelam Dixit (2016). The ASS consists of 28 items related to academic failure, with responses rated on a Likert-type scale. Pre-test and post-test assessments were conducted, revealing a significant reduction in academic stress scores post-Surya Namaskar intervention. Statistical analysis demonstrated a substantial decrease in academic stress levels. Additionally, a comparison of academic stress percentages showed a decrease from 69.40% to 57.36% post-Surya Namaskar session, affirming the intervention's effectiveness in reducing academic stress among class XII students. The findings offer insights into the efficacy of incorporating Surya Namaskar into educational practices to promote student well-being and academic success.

Keywords: Surya Namaskar, academic stress

Introduction

Academic stress is a prevalent issue among students worldwide, characterized by the pressure to excel academically, meet deadlines, and perform well in exams. This stress can have detrimental effects on students' mental and physical well-being, leading to anxiety, depression, and burnout. In recent years, there has been growing interest in exploring holistic approaches to managing academic stress, with yoga emerging as a promising intervention.

Surya Namaskar is a traditional yoga practice that comprises a sequence of postures synchronized with breath. This ancient practice has gained significant attention for its potential to alleviate stress and enhance overall well-being. Surya Namaskar is often practiced in the morning as a form of moving meditation, combining physical movement with conscious breathing to create a harmonious flow.

Despite extensive research on the benefits of yoga for health, including stress reduction, there exists a notable gap in the literature regarding the specific effects of Surya Namaskar on academic stress among students. While numerous studies have explored the therapeutic effects of yoga on various aspects of mental and physical health, such as anxiety, depression, and cardiovascular health, fewer studies have focused specifically on the impact of Surya Namaskar on academic stress.

Given the unique demands and pressures faced by students, particularly in academic settings, understanding the potential benefits of Surya Namaskar for managing academic stress is of utmost importance. Academic stress can have detrimental effects on students' mental well-being, leading to anxiety, burnout, and impaired academic performance. By exploring the specific effects of Surya Namaskar on academic stress, researchers can provide valuable insights into the development of targeted interventions to support student well-being and academic success.

Surya Namaskar, with its blend of physical movement and breath awareness, holds promise as a holistic approach to alleviating stress and promoting overall well-being. However, further research is needed to elucidate its specific effects on academic stress among students and to inform the development of evidence-based interventions in educational settings. This research paper aims to address this gap by examining the effect of Surya Namaskar on academic stress. By conducting a systematic study, we seek to explore the potential of Surya Namaskar as a preventive and therapeutic tool for managing academic stress among students. The findings of this study have the potential to inform educational policies and practices aimed at supporting student well-being and enhancing academic performance.

Through a comprehensive investigation, we aim to contribute to the growing body of evidence on the efficacy of yoga-based interventions for stress management in academic settings. By shedding light on the role of Surya Namaskar in alleviating academic stress, this research endeavor strives to promote the integration of holistic approaches to student wellness in educational institutions.

Review of Literature

Agre *et al.*, (2021) ^[1] conducted a study among 120 adolescents preparing for the SSC board exam in Pune revealed higher stress levels, prompting the investigation into non-pharmacological stress management techniques, particularly yogasana practice. Out of the identified high-stress students, 50 participated in a two-week Suryanamaskar program comprising 13 cycles. Pre and post-intervention assessments using the Smith Relaxation Dispositional Inventory demonstrated a highly significant improvement in mental quiet, ease/peace, love and thankfulness, somatic stress, and worry, alongside a significant reduction in sleepiness, mystery, disengagement, and negative emotions. The study concludes that Suryanamaskar intervention effectively reduces stress levels among SSC students.

Godse *et al.*, (2015) ^[2] study aimed to investigate the effects of Suryanamaskar on relaxation dispositions (R-dispositions) among college students experiencing high stress in Pune, India. Utilizing a randomized control group design, 124 out of 419 identified high-stress students were randomly assigned to either an experimental or control group. After completing the Suryanamaskar program, consisting of 40 participants each in both groups, assessments were conducted on R-dispositions and stress dispositions before and after the intervention. Statistical analysis using analysis of covariance (ANCOVA) revealed that the experimental group exhibited higher levels of R-dispositions such as physical relaxation, mental quiet, at ease/peace, rested and refreshed, strength and awareness, and joy, while demonstrating lower levels of sleepiness and stress dispositions including somatic stress, worry, and negative emotion compared to the control group. The study concluded that Suryanamaskar effectively promotes positive relaxation dispositions and reduces stress-related dispositions among college students.

Stec *et al.*, (2023) ^[3] study aimed to evaluate the impact of an intensive yoga-based intervention, Dynamic Suryanamaskar, on perceived stress levels and emotional intelligence among Indian male school students. A total of 105 students, with a median age of 17.15 ± 1.42 years, participated in the 12-week program ($n = 70$ sessions). Stress and emotional levels were assessed using the Perceived Stress Scale (PSS) and the emotional intelligence (EQ) questionnaire tailored for the Indian populace, both administered at the study's onset and conclusion. Employing the Solomon four-group design ensured statistical robustness. Post-intervention analysis revealed a significant reduction in stress levels ($p < 0.001$) and a noteworthy increase in emotional intelligence ($p < 0.01$) among participants following the Dynamic Suryanamaskar regimen, reinforcing the benefits associated with this practice.

Sharma (2014) ^[4] study aimed to evaluate the impact of Suryanamaskar on stress levels among students and patients from Ganguly Hospital and Research Centre & Yoga Anusandhan Parisad Kotra, Bhopal, M.P., employing simple accidental sampling to select 30 participants. A single-group pre-test-post-test experiment was conducted over 30 days,

with participants performing Suryanamaskar regularly in the morning. After one month of yogic intervention, statistical analysis revealed a significant reduction in stress levels. This underscores Suryanamaskar's effectiveness as a stress management tool, particularly for students. The findings suggest that yogic practices, such as Suryanamaskar, offer refreshing experiences and mitigate the need for psychiatric and mood-altering medications.

Objective

To study the effect of Surya Namaskar on academic stress of class XII students.

Sample

The sample consist of 30 class XII students from of Amroha district of Uttar Pradesh selected through convenient sampling.

Tool Description

Academic Stress Scale (ASS) by Poorva Jain and Neelam Dixit (2016) is used. It consist of 28 items pertaining to the issues related to academic failure. The responses has to be given on Likert type five point continuum scale from Strongly Agree to Strongly Disagree. The 5 score is given to strongly agree, 4 is given to agree, 3 is given to undecided, 2 is given to disagree and a score of 1 is given to strongly disagree. High score shows high academic stress. The test-retest reliability coefficient is 0.86 and split half reliability coefficient is 0.79 and reliability index is 0.89. The test contains face validity.

Procedure of Data Collection

The students were contacted at their respective place of study and the purpose of the research is communicated to them after their agreement in participation in 6 days training programme for academic stress reduction through Surya Namaskar. They were given the ASS before and after the six days of intervention. The proper rapport was established before the training and data collection.

Training Procedure

Day 1: Introduction to Surya Namaskar

- Began with a brief introduction to Surya Namaskar, explaining its significance and benefits for stress reduction.
- Practiced 3 rounds of Surya Namaskar slowly, focusing on correct posture and alignment.
- Ended with a relaxation pose such as Savasana to promote calmness and relaxation.

Day 2: Increasing Awareness and Breath Control

- Reviewed the basics of Surya Namaskar and emphasized the importance of breath awareness.
- Practiced 5 rounds of Surya Namaskar, coordinating each movement with the breath.
- Introduced Pranayama (breath control) techniques such as Deep Breathing and Nadi Shodhana (Alternate Nostril Breathing) to further enhance relaxation.

Day 3: Deepening the Practice

- Built on previous sessions by increasing the intensity and duration of Surya Namaskar practice.

- Practiced 7 rounds of Surya Namaskar, focusing on smooth transitions between poses and conscious breathing.
- Incorporated a brief guided meditation or visualization exercise to encourage mental relaxation and stress relief.

Day 4: Exploring Variations and Modifications

- Introduced variations and modifications of Surya Namaskar to accommodate different fitness levels and body types.
- Practiced 5 rounds of Surya Namaskar, exploring variations such as Chair Surya Namaskar or using props for support.
- Emphasized the importance of listening to the body and making adjustments as needed to prevent strain or injury.

Day 5: Mindfulness and Meditation

- Began with a short mindfulness meditation to cultivate present moment awareness.
- Practiced 5 rounds of Surya Namaskar with a focus on mindful movement and breath awareness.
- Concluded with a longer guided meditation or Yoga Nidra (yogic sleep) to promote deep relaxation and stress release.

Day 6: Integration and Reflection

- Reviewed key concepts and techniques learned throughout the week.
- Practiced 3 rounds of Surya Namaskar, incorporating variations and modifications as desired.
- Took time for personal reflection and journaling to explore any changes or insights gained from the practice.

Throughout the program, participants were encouraged to listen to their bodies, honor their limitations, and practice self-compassion. The importance of consistency and regular practice for long-term stress reduction benefits was emphasized.

Results and Discussion

Table 1: Comparison of mean scores of pre testing and post testing for academic stress

	Pre	Post
Mean	97.167	80.300
S.D.	15.232	13.303
Standard Error	2.781	2.429
Mean Diff	16.687	
't'	7.384	
p value	0.000	

The above table shows that the mean scores of pre-test for academic stress is 97.167 and for post-test it is 80.300. The mean difference is found to be 16.687 and 't' score is 7.384 which is significant at 0.01 level. It infers that there is significant difference between pre-test and post-test scores for academic stress. Furthermore, the mean score shows that there is strongly reduction of academic stress from pre testing to post testing. It clearly indicates that there is significant effect of Surya Namaskar on reducing academic stress of class XII students.

The mean score is divided by total possible academic stress score and then after multiplication by 100 the mean score is

converted into academic stress score which is presented in Table 2.

Table 2: Comparison of Academic Stress (in percentage)

	Pre Test	Post Test
Academic Stress Percent	69.40	57.36

The academic stress of college students is 69.40 percent during pre-test of Surya Namaskar Session while it is reduced to 57.36 percent after Surya Namaskar Session. It clearly indicates that there is effect of Surya Namaskar on reducing academic stress of class XII students.

Surya Namaskar, a dynamic series of yoga postures combined with controlled breathing, serves as a multifaceted tool for reducing academic stress among students. Firstly, its physical component acts as a form of exercise, engaging various muscle groups and releasing endorphins, thereby promoting physical fitness and counteracting the physiological effects of stress. Moreover, the rhythmic breathing patterns inherent in Surya Namaskar activate the parasympathetic nervous system, inducing a state of relaxation and reducing physiological arousal associated with stress. Additionally, the mindfulness practice cultivated during Surya Namaskar fosters present-moment awareness, allowing students to temporarily shift their focus away from academic pressures and intrusive thoughts. This heightened awareness enables better emotional regulation, empowering students to recognize and manage their emotional responses to stressors effectively. Furthermore, the sense of accomplishment derived from mastering the sequence of postures enhances confidence and self-esteem, diminishing feelings of inadequacy and anxiety related to academic performance. Finally, integrating Surya Namaskar into a daily routine provides students with structure and predictability, contributing to a healthier and more balanced approach to academic life. In essence, Surya Namaskar offers a holistic approach to stress reduction, addressing physical, emotional, and psychological aspects of well-being, and equipping students with valuable tools to navigate academic challenges with resilience and ease.

Conclusion

In conclusion, Surya Namaskar offers a myriad of potential benefits for reducing academic stress among students. Firstly, its well-documented ability to reduce stress levels through relaxation techniques, controlled breathing, and meditation can provide practitioners with a sense of mental clarity and calmness, counteracting the physiological effects of stress. Moreover, regular practice of Surya Namaskar has been associated with improved focus and concentration, enhancing cognitive function and attention span, which can be particularly beneficial during academic activities and studying. Additionally, the physical health benefits of Surya Namaskar, including improved overall fitness and the release of endorphins, contribute to a positive impact on academic performance. Better sleep quality, facilitated by the relaxation techniques of yoga, ensures that students are well-rested and rejuvenated for their academic tasks, thereby mitigating the negative effects of sleep disturbances caused by academic stress. Furthermore, the mindfulness and coping skills cultivated through Surya Namaskar practice equip students with valuable tools to manage academic pressure effectively and approach challenges with resilience and a positive mindset. Participating in group Surya Namaskar

classes also fosters a sense of community and social support, providing students with a supportive environment to share their academic stress and learn from others' experiences. While Surya Namaskar may not be a sole solution for everyone, integrating it with other stress management strategies can yield even more significant results in promoting student well-being and academic success.

References

1. Agre S, Agrawal R, Asgar SIF. Effect of Suryanamaskar on Stress Levels in SSC Students. *Indian Journal of Public Health Research & Development*. 2021;12(3):218-223.
2. Godse AS, Shejwal BR, Godse AA. Effects of Suryanamaskar on relaxation among college students with high stress in Pune, India. *International Journal of Yoga*. 2015;8(1):15-21.
3. Stec K, Kruszewski M, Ciechanowski L. Effects of Suryanamaskar, an Intensive Yoga Exercise Routine, on the Stress Levels and Emotional Intelligence of Indian Students. *International Journal of Environmental Research and Public Health*. 2023;20(4):2845.
4. Sharma MK. Effect of Suryanamaskar on stress level. *International Journal of Creative Research Thoughts*. 2014;2(1):1-5.