

VOLUME 9 (SPECIAL ISSUE 1) 2023

ISSN 2454 – 3055

Guest Editor: Dr. S. Mohanasundaram
Assistant Guest Editor: Dr. S.S.Syed Abuthahir

**INTERNATIONAL
JOURNAL OF
ZOOLOGICAL
INVESTIGATIONS**

*Forum for Biological and
Environmental Sciences*

Published by Saran Publications, India



International Journal of Zoological Investigations

Contents available at Journals Home Page: www.ijzi.net

Editor-in-Chief: Prof. Ajai Kumar Srivastav

Published by: Saran Publications, Gorakhpur, India



ISSN: 2454-3055

Influence of Integrated Yoga Practice on Stress Among College Girls Suffering from Polycystic Ovarian Syndrome

Dhanalakshmi S. and Subbulakshmi V.*

Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research, West K. K. Nagar, Chennai 78, Tamil Nadu, India

*Corresponding Author

Received: 24th December, 2022; **Accepted:** 30th January, 2023; **Published online:** 23rd February, 2023

<https://doi.org/10.33745/ijzi.2023.v09ispl1.013>

Abstract: PCOS (Polycystic Ovarian Syndrome) is a common endocrine, reproductive and hormonal disorder, which affect psychological level throughout their life in college girls. Initial diagnosis and treatment will help women to overcome and manage PCOS for the rest of their life. Thus, integrated yoga practices may be beneficial as an alternative therapy along with medical management. A randomized controlled trial was conducted at the college to explore the impact of 12 weeks integrated yogic practices management program on measures of stress in 30 college girls aged between 18 to 25 years suffering from PCOS. They were randomly allocated to the intervention and control groups, respectively, each with 15 members. Five days a week, between 6 and 7 am, for a period of 12 weeks, the intervention group received treatment using chosen yogic techniques. Active rest was given to the control group. The intervention group and control group underwent pre- and post-tests before and after integrated yogic practices, during which the psychological variable stress levels were determined. To analyze the data paired t-test was used. Statistical analysis suggests that the mean differences were significant at the 0.05 level. According to the findings of this study, yogic practices considerably reduced stress levels in the yoga intervention group compared to the control group. It is concluded that the integrated yogic practices helped to reduce the stress level among college girls suffering from polycystic ovarian syndrome (PCOS).

Keywords: Polycystic ovarian syndrome, Stress, Integrated yoga practice, Endocrine, Hormonal disorder

Citation: Dhanalakshmi S. and Subbulakshmi V.: Influence of integrated yoga practice on stress among college girls suffering from polycystic ovarian syndrome. Intern. J. Zool. Invest. 9(Special Issue 1): 89-92, 2023.

<https://doi.org/10.33745/ijzi.2023.v09ispl1.013>



This is an Open Access Article licensed under a Creative Commons License: Attribution 4.0 International (CC-BY). It allows unrestricted use of articles in any medium, reproduction and distribution by providing adequate credit to the author (s) and the source of publication.

Introduction

An illness known as polycystic ovary syndrome (PCOS) may influence the hormone levels of females. Polycystic ovarian syndrome is characterised by an increase in levels of male hormones. This hormonal imbalance hinders

their ability to procreate and prevents them from menstruating. Polycystic ovarian syndrome symptoms include face and body hair growth and baldness. Furthermore, it may worsen preexisting illnesses such as diabetes and cardiovascular

disease. Contraceptives and medications for diabetes and hormonal imbalances may ease symptoms. The condition known as polycystic ovarian syndrome affects the ovaries and ovulation. This disorder is characterised by ovarian cysts, increased levels of male hormones, and menstruation irregularity or absence. Fluid-filled sacs multiply in polycystic ovarian syndrome patients' ovaries. Polycystic literally translates to "having many cysts." Inside each of these sacs, which are known as follicles, lies an egg in the process of development. Because the eggs never reach maturity, ovulation is never triggered. Changes in oestrogen, progesterone, follicle stimulating hormone, and luteinizing hormone are caused by ovulation suppression. Consequently, androgen levels rise while oestrogen and progesterone levels fall. Women with PCOS have fewer periods due to the disruption of the menstrual cycle by the excess male hormones (Shrivastava *et al.*, 2022).

PCOS is a disorder that affects reproductive-aged women (ages 15 to 44). In this age group, 2.2% to 26.7% of women have polycystic ovary syndrome. Unknown PCOS affects a significant proportion of women. Seventy per cent of women with PCOS are unidentified. The teenage years span the time between childhood and early adulthood. Menarche, as one of the indications of puberty, is an important juncture in the lives of young women, particularly those who are just beginning college. Higher education has the opportunity to educate students about healthy and environmentally responsible lifestyles. College women are in the initial stages of adulthood; thus, they are open to change and may be readily moulded by academics and parents. It is proved that college-aged women are attentive and willing to listen. College instructors may play a significant role in discovering potential, motivating students, and preparing them for the future (Ratnakumar *et al.*, 2018). Therefore, the institution is a fantastic opportunity to inform students that a few easy lifestyle changes may significantly reduce their risk of having PCOS (wileyonlinelibrary.com/journal/hsr2).

Yoga practise has been shown to improve physical health, mental health, and general quality of life (Ansari, 2016). The yoga therapy adjusts and fine-tunes the neuro-endocrine axis, resulting in beneficial changes. Primarily, it aids reproduction by reducing stress and restoring hormonal balance. Catecholamines and aldosterone are secreted less often in the urine, testosterone levels are decreased, and cortisol is excreted more frequently; all of these hormonal profile changes are beneficial. After yoga therapy, lower cortisol levels and altered brain waves (an increase in alpha waves) were identified, both of which are suggestive of reduced stress. The whole mind-body approach of yoga helps PCOS patients manage stress and anxiety. This randomised controlled trial was set out to investigate the impact of integrated yoga practises on stress levels in women who had been diagnosed with polycystic ovary syndrome while attending a university.

Materials and Methods

One hundred college-aged women with polycystic ovary syndrome (PCOS) participated in the research by completing clinical examination questionnaires on their Menstrual cycle and hirsutism. Thirty young women, ages 18 to 25, were chosen at random from the student body of New Prince Shri Bhavani College of Engineering and Technology (NPSBCET) in Tambaram east, Chennai, India and divided into two groups, I and II, with fifteen women in each. All participants in the study, including those in the intervention and control groups, took an initial stress test before beginning the training. Loosening the Joints, Surya Namaskar, Asanas, Pranayama, and Meditation were taught as part of an integrated yogic practise to the intervention groups for 60 min, five days a week, for a total of 12 weeks.

Those in the control group did not get any special instruction or direction throughout the intervention period and were instead allowed to go on with their daily lives as usual. Twelve weeks later, both groups were retested on stress using the Latha Sathiskar stress Questionnaire.

Table 1: Influence of integrated yoga practice on stress among college girls suffering from the polycystic ovarian syndrome

Stress	Mean	S. D.	Mean Difference	Paired "t" test and p-value
Pre test	29.33	3.39	3.13	t=12.253 p=0.0001, S*
Post Test	26.20	3.29		

*p<0.001, S – Significant

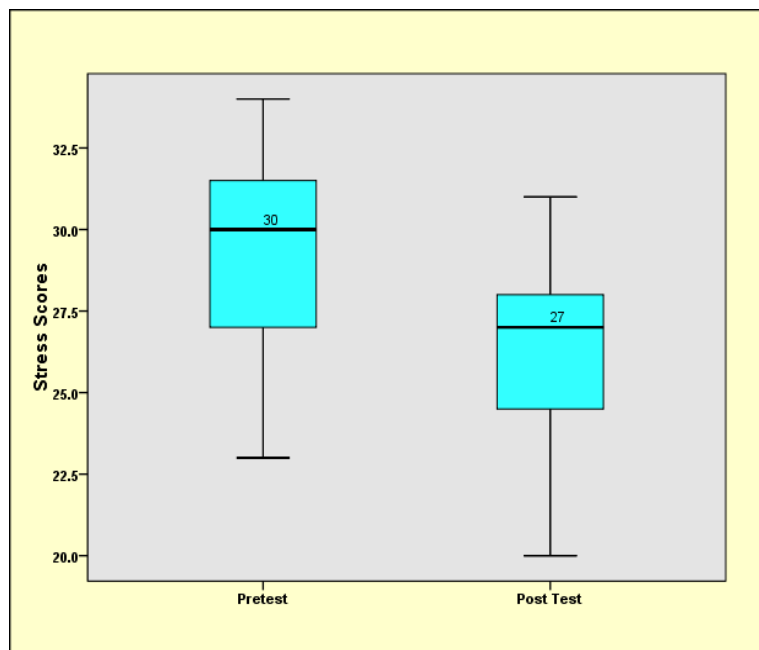


Fig. 1: influence of integrated yoga practice on stress among college girls suffering from polycystic ovarian syndrome.

The significant differences between the intervention and control groups were calculated using a paired t-test. The significance level was set at the 0.001 level of confidence.

Results and Discussion

Table 1 shows that the pre-test means score of stress is 29.33 ± 3.39 and the post-test mean score is 26.20 ± 3.29 . The mean difference stress score is 3.13. The calculated paired t-test value is 12.253 which is statistically significant at $p < 0.001$. This clearly shows that there was a significant reduction in the level of stress after the administration of Integrated Yoga Practice.

The effect of a variety of yoga-based stress management techniques on women with polycystic ovary syndrome was tested in this randomised controlled trial (Fig. 1). The current research aimed to determine whether or not 12 weeks of yoga practise would have any influence on stress levels in the non-experimental group. Stress levels were lower among those who participated in the yoga intervention for 12 weeks. Few studies have shown that yoga has a positive impact on mood-related diseases, making yoga an excellent intervention for stress management (Nidhi *et al.*, 2013). Therefore, yoga therapy might be an option for those who are

looking for a different way to deal with stress.

Conclusion

The results of this study suggested that women who have polycystic ovarian syndrome may find it useful to consider yoga as a viable therapy option because of the potential health benefits associated with the practise. Patients diagnosed with PCOS may find that making even little adjustments to their regular daily routine may have a positive impact on their physical as well as mental wellbeing.

References

- Ansari RM. (2016) Kapalabhati pranayama: An answer to modern day polycystic ovarian syndrome and coexisting metabolic syndrome? *Int J Yoga* 9: 163–167.
- Nidhi R, Padmalatha V, Nagarathna R and Amritanshu R. (2013) Effects of a holistic yoga program on endocrine parameters in adolescents with polycystic ovarian syndrome: a randomized controlled trial. *J Altern Complement Med*. 19(2):153-160.
- Ratnakumari ME, Manavalan N, Sathyanath D, Ayda YR and Reka K. (2018) Study to evaluate the changes in polycystic ovarian morphology after naturopathic and yogic interventions. *Int J Yoga* 11: 139-147.
- Shrivastava R, Mishra S, Singh R and Shrivastava P. (2022) Effect of integrated approach of yoga and naturopathy on polycystic ovarian syndrome: A case study. *J Family Med Prim Care* 11(4): 1525-1527.