

Impact of ashtanga yoga on PCOD in adolescents

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Abstract

Polycystic Ovarian Disease (PCOD) is one of the most common endocrine and metabolic disorders affecting adolescent girls, particularly between the ages of 10 and 19 years. It is characterized by hormonal imbalance, irregular menstrual cycles, ovarian cyst formation, insulin resistance, obesity, infertility, and various metabolic complications. Along with physical symptoms, many adolescent girls with PCOD also experience psychological disturbances such as anxiety, stress, mood fluctuations, and reduced self-esteem, which indicates the psychosomatic nature of the disorder. In recent decades, the prevalence of PCOD has increased rapidly across the world due to sedentary lifestyles, unhealthy dietary habits, environmental changes, and rising stress levels. Studies indicate that approximately 10–13% of women globally are affected by PCOD, while in India, the prevalence ranges from around 8% to 20%, with higher incidence reported in urban populations compared to rural areas. (WHO 22 Jan to 2026)

Conventional medical management of PCOD mainly involves hormonal therapy, insulin-sensitising drugs, and symptomatic treatment. While these interventions may help in regulating menstrual cycles and reducing some symptoms, they often do not address the underlying lifestyle and psychosomatic factors associated with the disorder. Therefore, there is a growing need for holistic and non-pharmacological approaches that can support long-term management and overall well-being.

Yoga, as an ancient system of health and self-discipline, offers a holistic approach that integrates physical, mental, and emotional dimensions of health. Among various yogic systems, Ashtanga Yoga, described by Maharshi Patanjali, provides a comprehensive framework for lifestyle regulation through its eight limbs—Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi. These practices help reduce stress, regulate endocrine functions, improve metabolic balance, and enhance psychological stability.

The present study aims to explore the role of Ashtanga Yoga in the management of PCOD and its potential to promote holistic health. By addressing both physiological and psychological aspects, Ashtanga Yoga may serve as an effective complementary approach for improving

reproductive health, emotional balance, and overall quality of life in women suffering from PCOD.

Keywords : Polycystic Ovarian Disease (PCOD), Psychosomatic Disorder, Ashtanga Yoga, Adolescents

Introduction

Recent health reports indicate that approximately **10–13% of women globally** suffer from PCOD, although a large number of cases remain undiagnosed. This shows that the disorder has become a significant public health concern in modern society. In India, the situation is equally alarming. Various epidemiological studies suggest that the prevalence of PCOD among Indian women ranges from **3.7% to 22.5%**, depending on the population studied and the diagnostic criteria used. Some recent estimates even suggest that **nearly one out of five young women in India may experience symptoms of PCOD**, indicating a rapidly increasing trend of this disorder. (WHO 22 January 2026)

The prevalence of PCOD also varies between **urban and rural populations**. Research studies have shown that the condition is more common in urban areas due to sedentary lifestyle, unhealthy dietary habits, increased stress levels, and reduced physical activity. In many Indian studies, the prevalence in urban populations has been reported between **7% and 19%**, while comparatively lower rates are observed in rural areas, where traditional lifestyle patterns and physical activity levels are relatively higher. However, with changing lifestyle patterns, even rural populations are gradually becoming vulnerable to this disorder.

PCOD leads to several physical complications, such as irregular menstrual cycles, weight gain, acne, hirsutism, infertility, and increased levels of androgen hormones. Along with these physical symptoms, it also significantly affects the mental and emotional health of women. Many women suffering from PCOD experience anxiety, depression, mood swings, emotional instability, and reduced self-confidence. These psychological disturbances indicate that PCOD has a strong **psychosomatic component**, where mental and emotional stress influences physiological functioning.

Continuous mental stress, unhealthy lifestyle habits, and emotional imbalance can disturb the normal hormonal and metabolic processes of the body. When such disturbances persist for a long period, they may manifest as psychosomatic disorders such as PCOD. Modern medical science mainly focuses on symptomatic treatment through hormonal therapy, insulin-sensitizing drugs, and other medications. While these treatments may help in controlling certain symptoms, they often do not address the underlying lifestyle and psychosomatic causes responsible for the disorder.

Holistic health refers to a complete state of well-being in which the body, mind, emotions, and spirit function in harmony. Health is not only the absence of disease but a balanced condition of physical strength, mental stability, emotional harmony, social adjustment, and spiritual awareness. When all these dimensions are balanced, a person experiences true wellness and a better quality of life.

In the traditional Indian system of knowledge, especially in yoga philosophy, health has always been viewed from a holistic perspective. Yogic texts emphasise that disturbances in lifestyle, thoughts, emotions, and daily habits can disturb the natural balance of the body and mind, which may eventually lead to various disorders. Therefore, maintaining balance in physical activities, mental state, emotional expression, and spiritual awareness is considered essential for overall well-being.

The growing incidence of PCOD is closely associated with modern lifestyle factors such as sedentary behaviour, unhealthy dietary habits, increased psychological stress, lack of physical activity, and irregular daily routines. These factors disturb the normal hormonal balance and metabolic functioning of the body, which may lead to reproductive and endocrine disorders. In recent years, it has also been observed that the onset of menstrual irregularities and symptoms related to PCOD is appearing at a much earlier age, sometimes even during early adolescence, around 10 to 18 years.

PCOD not only affect the reproductive system but also influences several dimensions of health, including metabolic functions, mental stability, emotional balance, and overall quality of life. Women suffering from PCOD often experience problems such as irregular menstruation, obesity, infertility, acne, excessive hair growth, insulin resistance, and metabolic complications. Along with these physical symptoms, psychological issues such as anxiety, mood swings, depression, and low self-esteem are also commonly observed. These interconnected physical and psychological disturbances indicate that PCOD comprehensively affects health and should therefore be understood from a holistic perspective.

Although modern medical science provides several therapeutic approaches for managing PCOD, most of these treatments focus primarily on hormonal regulation and symptomatic relief. Such treatments may help in controlling certain symptoms, but they often fail to address the underlying lifestyle and psychosomatic factors associated with the disorder. Therefore, there is a growing need to explore complementary and holistic approaches that focus on improving lifestyle patterns, reducing stress, and restoring overall balance within the body.

Yoga, particularly **Ashtanga Yoga described by Maharshi Patanjali**, offers a holistic approach to health by integrating physical discipline, mental stability, and emotional balance.

Through the practice of Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi, yoga promotes a balanced lifestyle and improves the functioning of the endocrine and nervous systems. These practices help to reduce stress, regulate hormonal activity, improve metabolic balance, and enhance overall well-being. Therefore, the present research focuses on understanding PCOD as a psychosomatic disorder and exploring the role of **Ashtanga Yoga as a holistic approach for its effective and long-term management.**

Role of Ashtanga Yoga in PCOD for Holistic Health

Ashtanga Yoga, described by Maharshi Patanjali in the Yoga Sutras, presents a comprehensive system for achieving balance between body, mind, and emotions. Since PCOD is largely influenced by lifestyle disturbances, hormonal imbalance, stress, and psychological factors, the integrated practice of the eight limbs of Ashtanga Yoga can play a significant role in its holistic management. Each limb contributes in a unique way to restore physiological harmony and mental stability, which are essential for improving reproductive health and overall well-being.

Yama (Ethical Discipline) :- Yama represents moral restraints such as Ahimsa (non-violence), Satya (truthfulness), Asteya (non-stealing), Brahmacharya (moderation), and Aparigraha (non-possessiveness). Yama is social. Practising these principles promotes mental balance, emotional control, and disciplined living. In the context of PCOD management, Yama helps reduce stress, negative emotions, and unhealthy behavioural patterns that may contribute to hormonal imbalance.

Niyama (Personal Discipline) :- Niyama represents individual concern, including principles such as Shaucha (purity), Santosha (contentment), Tapas (self-discipline), Swadhyaya (self-study), and Ishvara Pranidhana (surrender to higher consciousness). These practices encourage self-care, positive thinking, and inner harmony. For adolescent girls with PCOD, cultivating these qualities helps in adopting healthier lifestyle habits, maintaining emotional stability, and improving overall mental health.

Asana (Yogic Postures) :- Asanas improve physical strength, flexibility, and circulation, particularly in the abdominal and pelvic regions. Regular practice of yogic postures stimulates endocrine glands, regulates metabolism, and supports the healthy functioning of the reproductive organs. In PCOD management, asanas help reduce obesity, improve insulin sensitivity, and promote hormonal balance.

Pranayama (Breath Regulation) :- Pranayama involves conscious control of breathing to regulate the flow of vital energy within the body. It helps calm the nervous system, reduce stress hormones, and enhance oxygen supply to body tissues. For individuals suffering from PCOD, pranayama practices are beneficial in managing anxiety, reducing stress-induced hormonal disturbances, and improving overall physiological functioning.

Pratyahara (Withdrawal of Senses) :- Pratyahara refers to the withdrawal of the senses from external distractions and directing attention inward. This practice helps in controlling sensory overload and mental agitation. In the management of PCOD, pratyahara assists in reducing emotional stress and promotes mental relaxation, which is essential for maintaining hormonal balance.

Dharana (Concentration) :- Dharana is the practice of focused concentration on a single point or object. It strengthens mental clarity, self-awareness, and emotional control. Women experiencing PCOD often face anxiety and mood disturbances; therefore, practising dharana helps stabilise the mind and enhances psychological resilience.

Dhyana (Meditation) :- Dhyana is the continuous flow of awareness toward a chosen object or thought, leading to deep mental calmness and clarity. Meditation reduces stress, lowers cortisol levels, and improves emotional well-being. For PCOD patients, regular meditation supports psychological health and contributes to improved hormonal regulation.

Samadhi (State of Integration and Inner Harmony) :- Samadhi represents the highest state of yogic consciousness where complete harmony between body, mind, and inner awareness is achieved. Although it is an advanced stage of practice, the gradual progression toward this state cultivates deep mental peace and balanced living. Such inner harmony supports overall health and encourages a holistic lifestyle that can positively influence the management of PCOD.

Objectives of the Study

The present study aims to understand the growing prevalence of Polycystic Ovarian Disease (PCOD) as an important health concern among females, particularly between the ages of 10 to 18 years. In recent decades, PCOD has emerged as a major global health issue affecting a large number of women and adolescent girls. It influences not only reproductive health but also metabolic, hormonal, and psychological well-being. The increasing incidence of PCOD has become a matter of concern for health professionals, families, and society because it affects women during the most active and productive phase of their lives. In India, the problem is becoming more visible due to rapid lifestyle changes, urbanisation, irregular dietary habits, lack of physical activity, and increasing mental stress. These factors have significantly contributed to the rising number of PCOD cases, making it an important area for study and awareness.

In this context, another important objective of the study is to explore the relevance of yogic philosophy and practices, particularly the principles of Ashtanga Yoga, in promoting holistic health and well-being. Ashtanga Yoga presents a systematic and disciplined path consisting of

eight limbs—Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi. These components collectively guide an individual towards balanced living by encouraging ethical conduct, disciplined lifestyle, physical activity, breath regulation, mental control, and inner awareness. Such practices help in maintaining harmony between body and mind and support the proper functioning of physiological and psychological processes.

Review of Literature

Kandan S. (2022). Effect of Yoga on Management of Polycystic Ovarian Syndrome: A Systematic Review. The review evaluated various studies related to yoga and PCOS management. It concluded that yoga practices help reduce stress, regulate hormonal activity, and improve reproductive health among women suffering from PCOS.

Kumari D. (2025) Unveiling Therapeutic Potential of Yoga in Mitigating Oxidative Stress and Hormonal Imbalance in Women with PCOS. The study explored the role of yoga practices in reducing oxidative stress and improving hormonal balance in women suffering from PCOS. The findings indicated that regular yogic interventions can positively influence endocrine functioning and metabolic health, thereby contributing to better management of PCOS symptoms.

Maan P. (2025) Pharmacological and Non-Pharmacological Interventions Including Yoga for Management of PCOS: A Systematic Review. The review analyzed various treatment methods for PCOS and highlighted the importance of non-pharmacological interventions such as yoga and lifestyle modification. The study concluded that yoga can be an effective complementary therapy in regulating hormonal imbalance and improving metabolic parameters.

Mohseni M. (2021) Yoga Exercises and Their Effects on Anthropometric Parameters and Clinical Signs of PCOS. The research focused on the impact of yoga exercises on anthropometric measurements and clinical symptoms of PCOS. Results indicated improvements in body weight, waist circumference, and hormonal balance among participants.

Patil A. (2023) Yoga Intervention Improves Metabolic Parameters and Quality of Life among Infertile Women with PCOS. This study examined the impact of yoga-based intervention on metabolic parameters and quality of life among infertile women with PCOS. The results revealed significant improvement in body mass index, insulin sensitivity, and psychological health after consistent yoga practice.

Ranjani N. (2020) Impact of Yoga Practice on Metabolic and Hormonal Parameters in Women with PCOS. This study analysed the effect of regular yoga practice on metabolic and

hormonal parameters in women suffering from PCOS. The results suggested that yoga practices may help regulate endocrine function and improve metabolic health.

Rao V. (2025) Establishing Key Components of Ayurvedic Diet and Yoga Program for PCOS Management. This research emphasized the role of a holistic lifestyle approach including Ayurvedic diet and yoga practices in the management of PCOS. Yoga is a way of life and an integral part of Ayurveda practice [7, 23]. This mind-body therapy encompasses many aspects of healthy living, such as Asana (physical postures)

Rao V.S. (2025) Yoga Therapy Program for Weight Management in Women with Polycystic Ovary Syndrome: A Focus Group Study. This study focused on the role of yoga therapy in managing body weight among women with PCOS. The results suggested that structured yoga programs help improve weight management, lifestyle habits, and psychological well-being in affected individuals.

Shetty B. (2024) Integrated Yoga and Naturopathy Intervention in the Management of Polycystic Ovarian Syndrome. The study investigated the effect of integrated yoga and naturopathy interventions on women suffering from PCOS. Results demonstrated improvements in menstrual regularity, metabolic health, and overall well-being following regular yogic practice.

Shrivastava R. (2022) Effect of Integrated Yoga and Naturopathy on Polycystic Ovarian Syndrome: A Case Study. The study examined the effectiveness of integrated yoga and naturopathy therapy in women with PCOS. The findings indicated improvement in menstrual regularity and reduction in symptoms associated with hormonal imbalance.

Singh D. (2020) Yoga Therapy as Complementary Treatment in Polycystic Ovarian Syndrome. The research explored yoga therapy as a complementary treatment for PCOS management. The findings indicated that yoga practices help reduce psychological stress and improve reproductive health.

Singh D. (2022) Effect of Yoga on Management of Polycystic Ovarian Syndrome. This study investigated the role of yoga in managing PCOS symptoms. The results suggested that yoga practices contribute to improved endocrine functioning, reduction in obesity, and enhancement of reproductive health.

Thakur D. (2021) Effect of Yoga on Polycystic Ovarian Syndrome: A Systematic Review. The review analyzed various research studies on yoga and PCOS. It reported that yoga-based interventions help regulate hormonal balance, improve insulin sensitivity, and reduce stress-related complications in women with PCOS.

Verma A. (2020) Yoga Therapy and Lifestyle Intervention for Management of PCOS in Women. This study examined the effect of yoga therapy and lifestyle intervention on women suffering from PCOS. The research concluded that yoga-based lifestyle modifications significantly improve hormonal balance and overall well-being.

Verma A. (2021) Effect of Yoga Therapy on Health Outcomes in Women with Polycystic Ovary Syndrome. This study examined the impact of yoga therapy on physical and psychological health outcomes among women with PCOS. The findings suggested significant improvements in anxiety levels, metabolic parameters, and overall quality of life.

Polycystic Ovarian Disease (PCOD) is a complex and multifactorial endocrine disorder that increasingly affects adolescent girls between the ages of 10 and 18 years. It is not only a disorder of the reproductive system but also a condition that influences the physiological, psychological, and metabolic health of adolescents. The understanding presented in the present study indicates that PCOD should not be viewed merely as an ovarian disorder, but rather as a condition that develops due to the interaction of multiple factors such as hormonal imbalance, lifestyle disturbances, emotional stress, and metabolic irregularities. Disturbances in the hypothalamic–pituitary–ovarian (HPO) axis, along with unhealthy lifestyle habits and continuous mental stress, may disrupt normal hormonal regulation during adolescence and lead to irregular menstrual cycles and the formation of multiple immature follicles in the ovaries.

Conclusion

The increasing prevalence of PCOD among adolescents in the present era reflects the impact of modern lifestyle patterns. Irregular daily routines, sedentary habits, unhealthy dietary practices, lack of physical activity, and persistent psychological stress contribute significantly to the development of this disorder. In addition to physical symptoms such as irregular or delayed menstrual cycles, weight gain, acne, and excessive hair growth, adolescent girls with PCOD may also experience emotional and psychological difficulties including anxiety, stress, mood swings, low self-confidence, and emotional imbalance. These interconnected physical and psychological disturbances can influence the overall development and quality of life of adolescents.

The psychosomatic nature of PCOD highlights the important role played by mental and emotional factors in regulating endocrine functions during adolescence. Continuous psychological stress and emotional disturbances can affect the functioning of the neuroendocrine system and disturb hormonal balance. This imbalance may further aggravate metabolic and reproductive health disturbances, creating a cycle that affects both physical and

mental well-being. Therefore, it becomes essential to adopt a holistic approach in understanding and managing this condition during the early stages of life.

In this context, the principles and practices of Ashtanga Yoga provide a comprehensive and integrative approach for restoring balance within the body and mind. Ashtanga Yoga emphasizes disciplined living through the eightfold path consisting of Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi. These practices collectively help in improving physical fitness, regulating breath, calming the mind, and promoting emotional stability. Regular practice of yogic techniques such as Asana, Pranayama, and meditation may support hormonal balance, improve metabolic functioning, reduce stress, and enhance psychological well-being among adolescents.

Moreover, yoga encourages a balanced lifestyle, self-awareness, and mental discipline, which are essential for maintaining healthy growth and development during adolescence. By promoting harmony between body and mind, yogic practices help in addressing the root causes of many lifestyle-related disorders. In the context of PCOD, yoga may serve as a preventive and supportive approach that improves overall health and contributes to better management of the condition from an early age.

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