

Symptom manifestation and diagnosis timing of PCOS among KSMU female students from India, the Maldives, and Nigeria

Mallika Rana¹, Ghassan Salibi², Nikolaos Tzenios³

¹ Kursk State Medical. University

¹²³ Charisma University

Abstract

Background: Polycystic ovary syndrome (PCOS) is a prevalent yet frequently underdiagnosed endocrine disorder among women of reproductive age, characterized by symptoms such as irregular menstruation, hirsutism, acne, and weight gain. Delayed diagnosis often results from lack of awareness, stigma, and variable symptom presentation. This study aimed to examine symptom onset, diagnosis timelines, and health-seeking behavior among female students from India, the Maldives, and Nigeria studying at Kursk State Medical University (KSMU).

Materials and Methods: A cross-sectional survey was conducted using a standardized self-administered questionnaire among 141 female students aged 17–26. Participants were divided into two groups: those with a formal PCOS diagnosis and those with symptoms but no diagnosis. Data collected included symptom profiles, age of onset, diagnostic status, family history, and healthcare behavior.

Results: Of the 141 participants, 33 (23.4%) had been formally diagnosed with PCOS, with the highest diagnosis rate among Indian students (31.91%), followed by those from the Maldives (21.28%) and Nigeria (17.02%). The most commonly reported symptoms were hair loss (17.51%), acne and excessive hair growth (14.42% each), and weight gain (11.33%). Symptom onset typically began in adolescence, with irregular menstruation appearing as early as age 14. Diagnostic timelines varied, with Nigeria showing the longest delays. Among the undiagnosed group, 36 participants reported PCOS-like symptoms, but 77.77% had not sought medical care due to stigma, fear, or normalization of symptoms.

Conclusion: The findings reveal significant underdiagnosis of PCOS despite high symptom prevalence, particularly among Nigerian students. Early-onset symptoms and long delays in seeking care emphasize the need for institutional awareness campaigns, routine gynecological screenings, and psychosocial support. Addressing stigma and promoting menstrual health literacy are essential steps toward improving reproductive health outcomes in this population.

Keywords: *Polycystic Ovary Syndrome, Menstrual health, Diagnosis delay, Reproductive health, Medical student population*

Introduction

One of the most common gynecological and endocrine conditions affecting women of reproductive age, polycystic ovarian syndrome (PCOS) is causing an increasing amount of health problems worldwide. Numerous clinical symptoms, such as irregular menstruation, hirsutism, acne, obesity, and metabolic disorders, are among its manifestations. Because of its varied appearance, lack of knowledge, and delayed health-seeking behavior among young women, PCOS is frequently misdiagnosed or underdiagnosed despite its prevalence [1]. Long-term issues, including infertility, type 2 diabetes, and cardiovascular diseases, can be avoided with early identification and care [2].

The purpose of this research is to investigate the lived experiences of female students from Nigeria, the Maldives, and India who are enrolled at Kursk State Medical University (KSMU) and who have symptoms associated with PCOS, whether they have been diagnosed or not. It focuses on understanding how symptoms develop and how long it takes for a clinical diagnosis to be made, as well as the challenges to receiving medical attention.

Materials and Methods

A standardized, self-administered questionnaire was used to conduct a cross-sectional study among female KSMU students aged 17-26. Demographic information, reported symptoms, age at symptom onset, family history of PCOS, diagnostic status, and healthcare-seeking behavior were all recorded in the questionnaire. The study had 141 people in total, divided into two groups: those with a formal PCOS diagnosis and those with symptoms but no diagnosis.

Results

Among the 141 participants, thirty-three (23.4%) had a clinical diagnosis of PCOS. Within this group, 10 (21.28%) were from the Maldives, 8 (17.02%) from Nigeria, and 15 (31.91%) from India.

The most commonly reported symptoms among those diagnosed were as follows:

Loss of hair (17.51%)

Acne and excessive hair growth (14.42% each)

Gaining weight (11.33%).

4.12% hyperpigmentation

Examining the timeline of symptom onset, excessive hair growth and hyperpigmentation began around age 17, hair loss at about age 20, and irregular menstruation typically started at age 14.

Timelines for diagnosis differed greatly by nation:

India: Within two to five years of the start of symptoms, a diagnosis was made.

Maldives: Diagnosis typically occurred within 1 to 3 years.

Nigeria: Diagnosis timing ranged from within one year to over five years, highlighting pronounced delays and possible gaps in awareness or access to healthcare.

Although genetics may play a role, the finding that only 9 diagnosed individuals (27.27%) reported a family history of PCOS suggests that awareness and environmental factors are also influential.

For the 108 participants without a formal diagnosis, irregular menstrual periods were reported by 19 (17.59%).

Additionally, 36 individuals (33.33%) in this undiagnosed group displayed symptom profiles similar to those of diagnosed patients.

Of these 36, a substantial majority—28 (77.77%)—had neither consulted a doctor nor planned to do so soon.

Reasons for not seeking care included fear of diagnosis, stigma, symptom normalization, or negative past medical experiences.

Conclusion

In summary, this study demonstrates the high prevalence of PCOS-related symptoms among female college students, with a significant portion remaining undiagnosed despite clear clinical indicators. While diagnosis delays were seen across all countries, India recorded the highest diagnostic rate, followed by the Maldives and Nigeria.

Irregular menstruation emerged as the most prevalent symptom, often beginning in early adolescence, followed by metabolic and cosmetic complications. Notably, many symptomatic individuals, especially the undiagnosed, cited misinformation or negative perceptions as reasons for not seeking medical help.

These results highlight the critical necessity for:

Educational efforts to increase PCOS awareness at the institutional and community levels.

Programs for routine gynaecological screening in school settings.

Psychosocial support services to address reproductive health stigma.

Early diagnosis and effective treatment can greatly improve young women's reproductive health and quality of life. Normalizing discussions about menstrual health and empowering students to seek support is essential.

References

1. Karkera, S. (2023, January). The clinical manifestations of polycystic ovary syndrome (PCOS) and the treatment options. *European Journal of Biology and Medical Science Research*. Retrieved from https://www.researchgate.net/publication/367476076_The_Clinical_Manifestations_of_Polycystic_Ovary_Syndrome_PCOS_and_The_Treatment_Options
2. Fernandez, R. C., Moore, V. M., Rumbold, A. R., & Davies, M. J. (2021). Diagnosis delayed: Health profile differences between women with undiagnosed polycystic ovary syndrome and those with a clinical diagnosis by age 35 years. *BMJ Open*, 11(7), e045960. <https://doi.org/10.1136/bmjopen-2020-045960>