

Knowledge and Misconceptions about Polycystic Ovary Syndrome among Female College Students and Hospital Staff: A Questionnaire-Based Cross-Sectional Study from India

Sneha¹, Simrat Kaur², Jai Jaiswal³, Supriya Gupta⁴, Sneha Sharma⁵, Dr. Hemant Kumar Garg^{6*}, Dr. Col. Brij Mohan⁷

¹MBBS student, National Institute of Medical Sciences, NIMS University, Rajasthan, Jaipur, 303121, India

²MBBS student, National Institute of Medical Sciences, NIMS University, Rajasthan, Jaipur, 303121, India

³MBBS student, National Institute of Medical Sciences, NIMS University, Rajasthan, Jaipur, 303121, India

⁴MBBS student, National Institute of Medical Sciences, NIMS University, Rajasthan, Jaipur, 303121, India

⁵MBBS student, National Institute of Medical Sciences, NIMS University, Rajasthan, Jaipur, 303121, India

^{6*}Professor & HOD, Dept. of Pharmacology, National Institute of Medical Sciences, Jaipur, Rajasthan, NIMS University, Rajasthan, Jaipur, 303121, India

⁷Medical Superintendent, Government Institute of Medical Sciences, Gautam Buddha Nagar, Greater Noida, Uttar Pradesh – 201310, India

Corresponding author: Dr. Hemant Kumar Garg

Email ID: drhkgarg6@gmail.com

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ABSTRACT

Background: Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age, associated with menstrual irregularities, infertility, metabolic complications, and psychological distress. Global prevalence among reproductive-age women is estimated at 4–12%, but awareness remains limited, especially among young women.

Objective: To assess the knowledge, awareness, and misconceptions regarding PCOS among female college students and female hospital staff.

Methods: A questionnaire-based cross-sectional study was conducted among **200 female participants** from **two medical colleges, two dental colleges, and two teaching hospitals in India**. Participants included **50 MBBS medical girl students and interns, 50 BDS dental students, 50 nursing students, and 50 female nurses and technicians**. A structured 20-item questionnaire assessing awareness, risk factors, symptoms, complications, and misconceptions about PCOS was administered. Data were analyzed using descriptive statistics and Chi-square tests.

Results:

Overall, **63% of participants had heard about PCOS**, but only **38% demonstrated adequate knowledge**. Medical students showed significantly better knowledge scores compared to dental and nursing students ($p < 0.05$). Common misconceptions included the belief that PCOS affects only overweight women (42%) and that it always leads to infertility (36%). Only **29% correctly identified insulin resistance as a contributing factor**. Hospital staff had moderate awareness but limited knowledge of complications such as metabolic syndrome.

Conclusion: Although awareness of PCOS exists among health-related students and staff, significant misconceptions remain. Structured educational programs and reproductive health awareness campaigns are necessary to improve knowledge and promote early diagnosis.

Keywords: Polycystic ovary syndrome, awareness, reproductive health, college students, hospital staff, questionnaire study.

1. INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is a common endocrine and metabolic disorder affecting women of reproductive age. It is characterized by hyperandrogenism, ovulatory dysfunction, and polycystic ovarian morphology. The condition is associated with menstrual irregularities, infertility, obesity, insulin resistance, type-2 diabetes, and cardiovascular risk. Globally, PCOS affects approximately 5–10% of women in reproductive age groups, though some studies report prevalence as high as 12%. Early detection and lifestyle modification are essential to prevent long-term complications. Despite its high prevalence, awareness and accurate knowledge about PCOS remain inadequate among young women. Studies among college populations have reported low levels of awareness, with many students unfamiliar with the symptoms, risk factors, and treatment options. Lack of knowledge often leads to delayed diagnosis and poor health-seeking behavior. Healthcare students and hospital staff are expected to possess better knowledge regarding common reproductive health disorders. However, misconceptions about PCOS still persist even among medical and paramedical students. Understanding their knowledge gaps is important because these individuals often act as health educators for the community. Therefore, the present study aimed to assess the knowledge and misconceptions regarding PCOS among female college students and hospital staff in India.

2. SPECIFIC OBJECTIVES

Primary Objective

To assess the level of knowledge regarding PCOS among female college students and hospital staff.

Secondary Objectives

1. To evaluate misconceptions related to PCOS.
2. To compare knowledge levels among medical, dental, nursing students, and hospital staff.
3. To identify common sources of information about PCOS.
4. To assess awareness of complications and preventive measures.

3. METHODOLOGY

Study Design

Cross-sectional questionnaire-based study.

Study Setting

The study was conducted in:

- Two medical colleges
- Two dental colleges
- Two medical college hospitals, all located in India.

Study Population

Total participants = 200 female subjects

Group	Number
MBBS students & interns	50
BDS students	50
Nursing students	50
Female nurses & technicians	50

Inclusion Criteria

- Female participants aged 18–35 years
- Students or staff working in participating institutions
- Willing to provide informed consent

Exclusion Criteria

- Male participants
- Individuals unwilling to participate

Study Tool

A structured self-administered questionnaire containing three sections:

Section A: Demographic Data

- Age
- Education
- Occupation
- Source of health information

Section B: Knowledge of PCOS

Items assessing knowledge regarding:

- Causes
- Symptoms
- Risk factors
- Diagnosis
- Treatment

Section C: Misconceptions

Questions assessing common myths such as:

- PCOS occurs only in obese women
- PCOS always causes infertility
- PCOS is a rare disease
- PCOS cannot be treated

Each correct answer = 1 point.

Knowledge Score Classification

Score	Knowledge Level																				
0–6	Poor knowledge																				
7–12	Moderate knowledge																				
13–18	Good knowledge																				
<p>15-Item Likert Scale Questionnaire</p> <p>Study: Knowledge and Misconceptions about Polycystic Ovary Syndrome (PCOS)</p> <p>Response options</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;">1</td> <td style="width: 30%; text-align: center;">–</td> <td style="width: 30%; text-align: right;">Strongly</td> <td style="width: 30%; text-align: left;">Disagree</td> </tr> <tr> <td>2</td> <td style="text-align: center;">–</td> <td></td> <td style="text-align: left;">Disagree</td> </tr> <tr> <td>3</td> <td style="text-align: center;">–</td> <td></td> <td style="text-align: left;">Neutral</td> </tr> <tr> <td>4</td> <td style="text-align: center;">–</td> <td></td> <td style="text-align: left;">Agree</td> </tr> <tr> <td>5</td> <td></td> <td style="text-align: right;">Strongly Agree</td> <td></td> </tr> </table> <p>Section A – General Awareness</p> <p>I am familiar with the term Polycystic Ovary Syndrome (PCOS).</p> <p>PCOS is a common hormonal disorder among women of reproductive age.</p> <p>PCOS can affect menstrual cycles and fertility.</p> <p>Section B – Knowledge of Causes and Risk Factors</p> <p>Hormonal imbalance is an important cause of PCOS.</p> <p>Insulin resistance plays a role in the development of PCOS.</p> <p>Obesity and sedentary lifestyle increase the risk of PCOS.</p> <p>Section C – Symptoms and Diagnosis</p> <p>Irregular menstrual cycles are a common symptom of PCOS.</p> <p>Excess facial or body hair may occur in women with PCOS.</p> <p>Acne and weight gain may be associated with PCOS.</p> <p>Ultrasound and hormonal tests are used for diagnosing PCOS.</p> <p>Section D – Complications</p> <p>PCOS can lead to infertility if untreated.</p> <p>Women with PCOS have a higher risk of developing diabetes.</p> <p>PCOS may increase the risk of cardiovascular diseases.</p> <p>Section E – Misconceptions</p> <p>PCOS occurs only in overweight women.</p> <p>PCOS cannot be treated or managed effectively.</p> <p><i>(Items 14 and 15 assess misconceptions and are reverse-scored.)</i></p>		1	–	Strongly	Disagree	2	–		Disagree	3	–		Neutral	4	–		Agree	5		Strongly Agree	
1	–	Strongly	Disagree																		
2	–		Disagree																		
3	–		Neutral																		
4	–		Agree																		
5		Strongly Agree																			

Score	Knowledge Level

Statistical Analysis

Data were analyzed using **SPSS version 26**.

Statistical methods included:

- Frequency and percentage
- Mean ± standard deviation
- Chi-square test for group comparison

Significance level: **p < 0.05**

4. RESULTS

Participant Characteristics

Variable	Number (%)
Age 18–22	120 (60%)
Age 23–26	58 (29%)
Age >26	22 (11%)

Awareness of PCOS

Group	Heard about PCOS
MBBS students	44 (88%)
BDS students	36 (72%)
Nursing students	32 (64%)
Hospital staff	14 (28%)

Overall awareness: **126 (63%)**

Knowledge Level

Knowledge Level	Participants
Poor	52 (26%)
Moderate	72 (36%)
Good	76 (38%)

Medical students showed the highest knowledge scores.

Knowledge of Symptoms

Symptom Identified	Correct Responses
Irregular menstruation	142 (71%)
Weight gain	118 (59%)
Excess hair growth	96 (48%)
Acne	86 (43%)

Knowledge of Complications

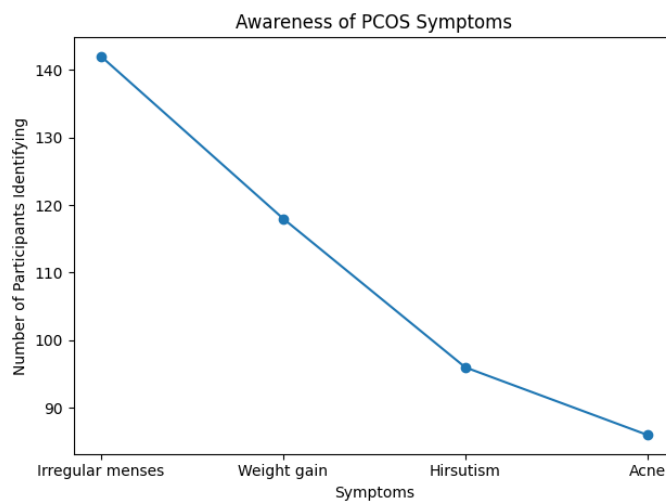
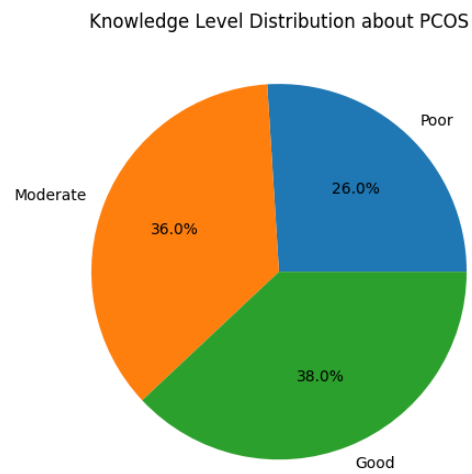
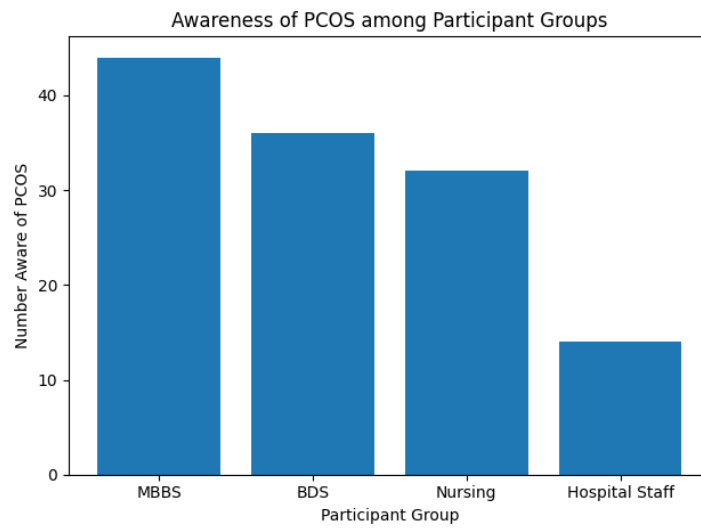
Complication	Correct Responses
Infertility	134 (67%)
Diabetes	78 (39%)
Metabolic syndrome	42 (21%)
Cardiovascular risk	28 (14%)

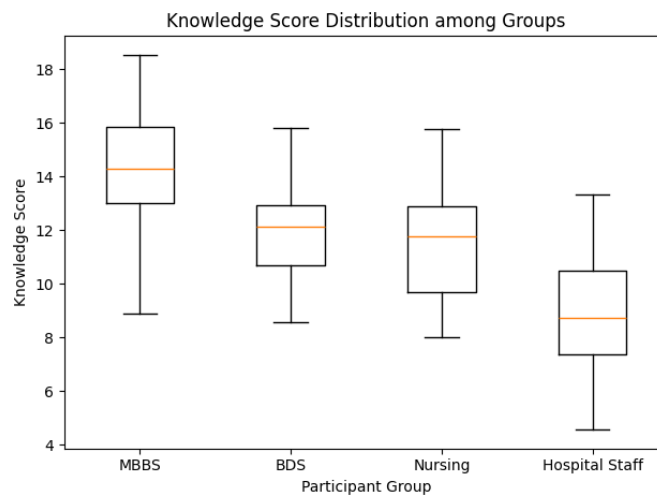
Misconceptions about PCOS

Misconception	Participants believing
PCOS occurs only in obese women	84 (42%)
PCOS always causes infertility	72 (36%)
PCOS cannot be cured	44 (22%)
PCOS is very rare	38 (19%)

Source of Information

Source	Percentage
Internet/social media	36%
Medical education	32%
Doctors	18%
Friends/family	14%





5. DISCUSSION

The present study evaluated awareness and misconceptions regarding PCOS among female college students and hospital staff. In this study, 63% participants were aware of PCOS, while 38% demonstrated good knowledge. Medical students had significantly higher knowledge compared with nursing students and hospital staff. These findings are consistent with previous research showing that knowledge about PCOS among young women is often inadequate. For example, studies among nursing students have reported that 87.4% had inadequate knowledge regarding PCOS, indicating a need for targeted educational programs. Another study among college-going females found that awareness levels were extremely low, with many participants unfamiliar with the condition and its symptoms. Common misconceptions identified in our study included the belief that PCOS occurs only in overweight women and that it always leads to infertility. Such misconceptions may contribute to stigma and delayed medical consultation. Healthcare students and staff are potential sources of health education for the community; therefore improving their knowledge regarding PCOS is essential. Educational interventions such as workshops, seminars, and awareness campaigns could significantly enhance reproductive health knowledge.

6. STRENGTHS OF THE STUDY

- Included multiple healthcare disciplines
- Covered six institutions
- Focused on both students and hospital staff

- Identified misconceptions as well as knowledge gaps

7. LIMITATIONS

- Self-reported questionnaire may introduce response bias
- Limited sample size
- Study conducted only in selected institutions

8. CONCLUSION

The study demonstrated that although awareness of PCOS exists among healthcare students and hospital staff, substantial misconceptions and knowledge gaps persist. Medical students had better knowledge compared with nursing students and hospital staff. Educational initiatives and reproductive health awareness programs are necessary to improve understanding of PCOS, encourage early diagnosis, and reduce long-term complications among women.

9. RECOMMENDATIONS

1. Introduce PCOS awareness sessions in colleges.
2. Conduct periodic reproductive health education programs.
3. Encourage screening camps and counseling for young women.
4. Use social media and digital platforms for awareness campaigns.

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