



## Knowledge and Attitudes of Nurses Toward Polycystic Ovary Syndrome (PCOS) in the Hospitals of District Bahawalpur

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### ABSTRACT

**Introduction:** Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder impacting women's reproductive, metabolic, and psychological health, yet awareness and management among healthcare professionals, especially nurses, remains inadequate. **Study Purpose:** The aim of the present study to determine the Level of Knowledge and attitude related to PCOS among nurses of District Bahawalpur. **Methodology:** Cross sectional descriptive study. The study was conducted on 150 staff nurses from different hospitals of district Bahawalpur in the Punjab province of Pakistan in 2025. The data was collected by using tested questionnaire to analyze nurses knowledge and attitude in the form of figure, tables, percentage and frequencies. **Results:** There were 122 female nurses (81.3%) and 28 male nurses (18.7%) among the valid responses. The majority of responders 138(92%) had heard about PCOS and hence have excellent knowledge about PCOS. From 138 nurses, 18(13%) have heard from their friends, 28(20.43%) have heard from mass media and majority 92(66.66%) have heard from health educators. Menstrual troubles 54(47.3%), obesity 12(10.52%), excess hair 5(4.38%) and delayed pregnancy 43(37.7%) were among the most prevalent issues mentioned by the respondents who were aware of PCOS-related problems. **Conclusion:** This study shows that nursing personnel in the hospitals of district Bahawalpur have a usually high degree of awareness of PCOS. Significant understanding of PCOS-related problems, treatment options, and linked systemic disorders was shown by the nurses. Despite this knowledge, the study found that there is a considerable stigma attached to the illness, which affects individual's readiness to share their diagnosis.

### INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders among women of reproductive age. It is characterized by hyperandrogenism, ovulatory dysfunction, and polycystic ovarian morphology. This syndrome has far-reaching implications for reproductive, metabolic, and psychological health. However, despite its prevalence, there remains a gap in the knowledge and attitudes of healthcare professionals, particularly nursing staff, regarding its management and patient care. This literature review explores the extent of knowledge and attitudes toward PCOS among nursing staff, drawing on studies conducted globally and regionally.

Significant gaps in healthcare practitioners' awareness and comprehension of PCOS have been found through research. (Chauhan, Rilta et al. 2023) for example, discovered that Shimla nursing students had differing opinions about PCOS, underscoring the necessity of focused instruction. Similarly, (Eswi, Baqatada et al.

2024) highlighted the need for curricular improvements after reporting that nursing students at Princess Nourah Bint Abdulrahman University lacked sufficient knowledge of PCOS.

Research on nurses' attitudes and understanding on PCOS is still lacking in Pakistan, where cultural obstacles frequently obstruct conversations about reproductive health. This is the fact that female all around the world have affliction with PCOS but each region has its own risk analysis. It is observed that south Asian, filpino and chinese females have eclectic susceptibility for this disease. South Asian have greater exposure of PCOS in contrast to chinese and filipio. This is occurring because the underlying cause of PCOS not yet well informed. However, most medical experts are outlook that women undergo with PCOS due to union of genetic and environmental components. (Tariq, Mahmood et al. 2024)

It is clear that specific training in PCOS management is required. Patient need health awareness to recognize



clearly their state and control their manifestation. The latest study discovers that over 25% obstetricians and fertility specialist are unaware of clinical criteria for PCOS. This recommend that many clinician may fail to discover the gains of lifestyle changes and complexities of PCOS including associated challenges and comorbidities (Srouf, Salhab et al. 2024). In order to identify possible areas for training and practice improvement, this study intends to evaluate the attitudes and knowledge of nursing staff in the hospitals in Lodhran and Bahawalpur.

### Problem Statement

A common endocrine condition that affects women of reproductive age, polycystic ovary syndrome (PCOS) has a substantial negative influence on metabolic, psychosocial, and reproductive health. There is still a significant knowledge and awareness gap among healthcare professionals, especially nursing staff, despite its high incidence and related dangers, which include obesity, insulin resistance, cardiovascular disease, and mental health issues. According to studies, nurses frequently lack a thorough awareness of the psychological and long-term consequences of PCOS, which hinders their capacity to offer implementation treatment and prompt intervention.

### Significance of study

Investigating the knowledge and attitude related to PCOS, research can improve the lives of women affected by PCOS. To decrease the more cases of PCOS in coming year sufficient knowledge and proper understanding is compulsory (Ghosh. T at el 2024). By the understanding of PCOS, women can take control of their health, make informed decisions and improve their overall wellbeing.

This study is helpful for early detection and treatment of disease. Understanding about PCOS enables women to make informed lifestyle Choices such as diet, exercise to manage symptoms. Good knowledge can reduce the future anxiety of infertility among adolescents (Ghosh. T at el 2024). It also improves mental health by reducing stress, anxiety or depression associated with PCOS. The Good knowledge enhances or develops a positive body image and self-esteem of women.

Having knowledge about PCOS can enable women to make an informed decision about reproductive health and fertility. Accurate information can dispel myths and stigma surrounding PCOS. All the misconceptions are reduced by giving knowledge to women or society. Previously there are studies on clinical features and treatment but the study on knowledge is very rare and least discussed (Adhikari and Bhattarai 2023).

This research reveals areas where knowledge and attitudes need improvement, guiding education and intervention efforts. This study helps to understand the knowledge of PCOS in nurses who provide health

services and care to the community. Research raises awareness about PCOS, promotes patient-provider communication, and develops effective interventions (Adhikari and Bhattarai 2023).

### Study Purpose

The aim of the present study to determine the Level of Knowledge and attitude related PCOS among nurses of District Bahawalpur.

### Objective

- To assess the current level of knowledge among nurses towards PCOS in hospitals of district Bahawalpur.
- To evaluate the attitudes of nurses regarding PCOS in hospitals of district Bahawalpur.

### Conceptual Definitions

**Polycystic Ovary Syndrome (PCOS):** A common hormonal disorder in women, characterized by irregular periods, high androgen levels, and ovarian cysts. It can lead to infertility, obesity, and insulin resistance (Escobar-Morreale 2018, Teede, Misso et al. 2018).

**Knowledge in Healthcare:** Healthcare knowledge is impactful and has a great potential. Proper use of nursing care knowledge can transform practices assuring safe, high quality, and cost-effective patient care (Abidi 2007).

**Attitudes in Healthcare:** An attitude is an intuition of like or dislike directed to something or someone (Doherty, Mitchell et al. 2011).

**Nursing Staff:** Trained healthcare providers responsible for patient care, including managing PCOS, administering treatments, and educating patients (Adhikari and Bhattarai 2023).

### Indicators to Evaluate the Knowledge

The following indicators are used to evaluate the Nurses' knowledge about PCOS.

- Excellent: >80%
- Good: 65-80%
- Average: 50-65%
- Poor: <50%

### LITERATURE REVIEW

Around the world, 8–13% of women of reproductive age suffer from PCOS, a complex endocrine condition. One of the most researched gynecological and metabolic syndromes due to its incidence and effect, it is characterized by polycystic ovarian morphology, hyperandrogenism, and irregular menstruation. In addition to impairing reproductive health, PCOS has a substantial impact on metabolic disorders such obesity, insulin resistance, and cardiovascular disease (Teede, Misso et al. 2018) (Escobar-Morreale 2018). In light of the syndrome's intricacy and long-term health consequences, nurses in particular are essential to patient education, management, and early discovery.

Numerous studies have identified significant gaps in the understanding of PCOS among healthcare providers, particularly nurses. A study by (Chauhan, Rilta et al. 2023) revealed that nursing students in Shimla, India, had limited awareness of PCOS, despite their exposure to theoretical knowledge. The study highlighted the need for enhanced educational interventions to bridge these gaps. Similarly, (Eswi, Baqatada et al. 2024) assessed the knowledge of nursing and midwifery students in Saudi Arabia and found that while students were aware of the clinical manifestations of PCOS, they lacked understanding of its long-term health risks, such as cardiovascular complications and diabetes.

In South Asia, cultural taboos surrounding reproductive health compound the issue of inadequate knowledge about PCOS. (Zaib, Rana et al. 2023) echoed these concerns, pointing out that many healthcare providers in Pakistan lack the resources and training necessary to manage PCOS comprehensively. Health care providers should play a vital role as basic source of knowledge about PCOS for females. Specific awareness campaign bridge the educational gap and promote educational directing to upgrade understanding, early diagnosis and control of PCOS (Rafique, Salma et al. 2023).

(Adhikari and Bhattarai 2023) explored the knowledge, attitudes, and practices regarding PCOS among medical students and interns in Nepal. They discovered significant gaps, particularly in addressing the psychosocial dimensions of PCOS, such as its impact on mental health and quality of life. This gap is critical in regions where mental health support is already limited, further complicating PCOS management. There were 117 participant who included in study with median age of 23 years. 98% population had already known about ovarian cyst and 74% had given knowledge through friends and 76.92% think that patient with PCOS does not reveal their diagnosis.

(Teede, Misso et al. 2018) emphasized the need for a multidisciplinary approach to PCOS management, where nurses are integral to patient education, counseling, and lifestyle intervention. International evidenced based include 37 societies and organization covering 71 countries. It involves 20 face to face meetings over 15 months. The evidence based recommendations provide 31 guidelines.

Similarly, the findings of (Ding, Hardiman et al. 2017) underscore the importance of effective patient communication in managing PCOS. Their meta-analysis revealed that women with PCOS often feel misunderstood by healthcare providers, leading to reduced treatment adherence and poorer health outcomes.

The literature underscores the urgent need for structured educational programs targeting nursing staff. (Chauhan, Rilta et al. 2023) and (Eswi, Baqatada et al. 2024) both recommended incorporating PCOS-focused modules

into nursing curricula to enhance theoretical and practical knowledge. The result of this study by (Eswi, Baqatada et al. 2024) explore that 75% nursing and 25% midwifery students with age range from 18 to 20 years were involved in this study. 34.72% got information of PCOS from websites, 24.53% from health care provider, 18% from family friends and 2% from newspaper and workshop.

This review highlights significant gaps in the knowledge and attitudes of nursing staff regarding PCOS, emphasizing the need for targeted interventions. By improving education and training, nursing staff can be better equipped to manage the multifaceted challenges of PCOS, ultimately improving patient outcomes. Addressing these gaps is particularly critical in resource-limited settings, such as Lodhran and Bahawalpur, where the burden of PCOS is compounded by socio-cultural and systemic barriers.

## MATERIALS AND METHODS

### Study Design

This is a cross-sectional descriptive study, which aims to provide a snapshot of the knowledge and attitudes of nursing staff toward Polycystic Ovary Syndrome (PCOS) in hospitals of district Bahawalpur.

### Study setting

The study conducted in different hospitals of district Bahawalpur.

### Data Collection Process

A consent was obtained from the participants to assure them of anonymity and confidentiality in relation to the study. The was collected by using tested questionnaire.

### Study Duration

This study took approximately 2 and half month following the approval of synopsis from January 1<sup>st</sup>, 2025 to March 14, 2025.

### Sampling Technique

We used non-probability, convenient sampling technique.

### Sample size

Sample size calculated was 150.

### Inclusion criteria

Charge Nurses (Generic Bscn, Post RN)

### Exclusion criteria

Nurses on internship, unregistered nurses.

### Data Analysis Process

Descriptive statistics (including demographics) were present, and data analysis was perform using SPSS Version 30.0.

### Research population

Target population of the present study was Staff Nurses



of Bahawalpur.

### Research tool

In this research a tested questionnaire was used to collect data.

### Ethical Considerations

All participants were provided a written informed consent (attached). All information and data gathered was kept private. Throughout the study, participants remained anonymous. The volunteers were informed that there are no dangers or drawbacks to the research method. Participants were notified that they can withdraw from the study at any moment during the research procedure. There were no known dangers linked with this study. Participation in this study was entirely optional. Participants have the option of not participating or withdrawing their agreement to participate at any moment. The participants were not kept in the dark about the study in any way.

### RESULTS

The results and interpretation of the data pertaining to the current investigation are explained in this chapter. The chapter also concentrates on two fundamental areas: knowledge and attitude towards PCOS. A tested questionnaire was used to gather information from 150 staff nurses of different hospitals in district Bahawalpur.

### Demographics

There were total 150 nurses who were sampled including 122 female nurses (81.9%) and 28 male nurses (18.7%) among the valid responses. The majority of responders (92%) have heard about PCOS. (Table 1)

**Table 1**

	Frequency	Percent
Valid Male	28	18.7
Valid Female	122	81.3
Total	150	100.0

### Nurses' Knowledge Regarding PCOS

From 138 nurses, 18(13%) have heard from their friends, 28(20.43%) have heard from mass media and majority 92(66.66%) have heard from health educators. Menstrual troubles 54(47.3%), obesity 12(10.52%), excess hair 5(4.38%) and delayed pregnancy 43(37.7%) were among the most prevalent issues mentioned by the respondents who were aware of PCOS-related problems. (Table 2)

**Table 2**

	Frequency	Percent
Valid Yes	138	92.0
Valid No	12	8.0
Total	150	100.0

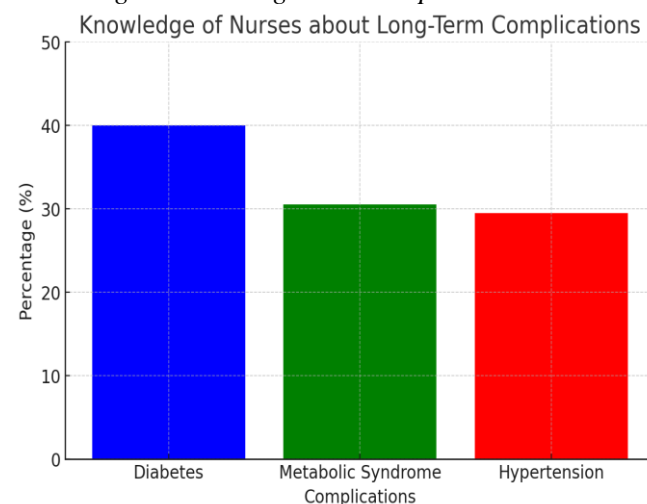
### Nurses' Knowledge Regarding awareness of complications

68.84% of nurses were aware of long-term consequences and have good knowledge about complications, with

diabetes (40%), metabolic syndrome (30.52%), and hypertension (29.47%) being the main issues. Additionally, 68.11% were aware of treatment options and have good knowledge about treatment options for PCOS, including (50%) of weight reduction opinion, (25.53%) of ovarian surgery opinion and (24.46%) of others. (Table.4.3)

**Figure 1**

*Knowledge About Long Term Complications*



**Table 3**

*Respondents' Knowledge of PCOS*

Knowledge	Frequency	Percentage
Gender	Male-28	18.7%
	Female-122	81.3%
Have you heard about PCOS?	Yes-138	92%
	No- 12	8%
From whom? (source of knowledge)	Friends-18	13%
	Mass media-28	20.2%
	Health educators-92	66.66%
Do you know the problems of PCOS?	Yes-114	82.6%
	No-24	17.3%
What are the problems of PCOS?	Delay in pregnancy-43	37.7%
	Menstrual problems-54	47.3%
	Excess hairs-5	4.38%
	Obesity-12	10.52%
Do you know the long- term complications?	Yes-95	68.84%
	No-43	31.15%
what are the systematic diseases associated?	Diabetes-38	40%
	Hypertension-28	29.47%
	Metabolic syndrome-29	30.52%
Do you know about treatment modalities?	Yes-94	68.11%
	No-44	31.88%
Methods of treatment?	Weight reduction-47	50%
	Ovarian surgery-24	25.53%
	Others-23	24.46%

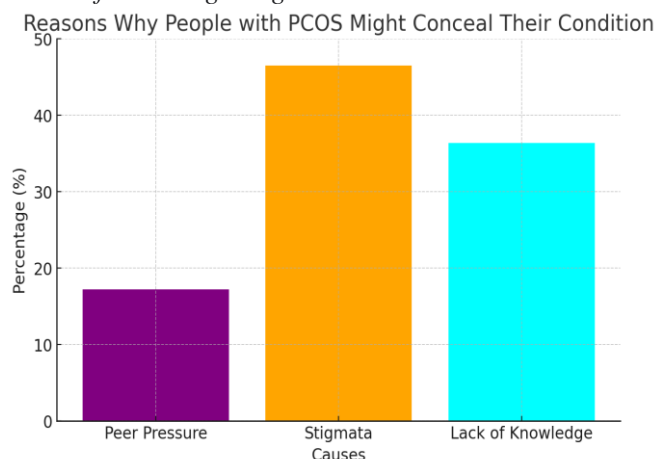
### Attitude of family and friends

Regarding attitudes, 71.73% of respondents said people with PCOS might conceal their condition. Peer pressure (17.2%), stigmata (46.5%), and lack of knowledge (36.4%) were the most often mentioned causes (Table 4.5) Majority 83.96% of respondents said they would offer comfort if a friend disclosed, they had PCOS. In terms of social attitudes, 84.44% of respondents thought

their coworkers would be supportive, and 91.11% thought their family would be supportive.

**Figure 2**

*Reason for Hiding Diagnosis*



**Table 4**

*Respondent Attitude Towards PCOS*

Attitude	Frequency	Percentage
Do you think person with PCOS hide their diagnosis?	Yes-99	71.7%
	No-39	28.26%
Reason for hiding diagnosis?	Peer pressure-17	17.17%
	Stigmata-46	46.46%
	Lack of knowledge-36	36.36%
Your action when your friend reveals PCOS?	Comfort her-110	83.96%
	Shy away from her-21	16.03%
What would be attitude of your family on revealing diagnosis?	Supportive-123	91.11%
	Non-supportive-12	8.88%
What would be the attitude of your colleagues?	Supportive-114	84.44%
	Non-supportive-21	15.55%

## DISCUSSION

In our study, there were 122 female nurses (81.9%) and 28 male nurses (18.7%) among the valid responses. The majority of responders (92%) have heard about PCOS and lies in excellent category. From 138 nurses, 18(13%) have heard from their friends, 28(20.43%) have heard from mass media and majority 92(66.66%) have heard from health educators. Menstrual troubles 54(47.3%), obesity 12(10.52%), excess hair 5(4.38%) and delayed pregnancy 43(37.7%) were among the most prevalent issues mentioned by the respondents who were aware of PCOS-related problems.

Regarding attitudes, 71.73% of respondents said people with PCOS might conceal their condition. Peer pressure (17.2%), stigmata (46.5%), and lack of knowledge (36.4%) were the most often mentioned causes. Majority 83.96% of respondents said they would offer comfort if a friend disclosed, they had PCOS. In terms of social attitudes, 84.44% of respondents thought their coworkers would be supportive, and 91.11% thought their family would be supportive.

Compared to the study conducted among medical students and interns (Adhikari and Bhattarai 2023) our study among nursing staff also showed a high level of awareness about PCOS, though slightly lower (92% vs. 98%). A key difference lies in the sources of information—while most nurses (66.66%) learned about PCOS from health educators, medical students, and interns primarily relied on friends (74.4%). Both groups recognized menstrual irregularities, obesity, and delayed pregnancy as common concerns, though specific prevalence rates varied. Regarding attitudes, medical students and interns were more willing to support a friend with PCOS (100% vs. 83.96%), and a slightly higher percentage believed that stigma led to concealment (76.92% vs. 71.73%). Both studies highlight the need for improved PCOS education and stigma reduction, though the reliance on informal sources in the medical student group suggests a gap in structured learning that nursing staff may have received more effectively.

Compared to the study conducted at Princess Nourah Bint Abdulrahman University by..{Eswi, 2024 #27}, our study among nursing staff showed a higher level of PCOS awareness (92% vs. moderate knowledge levels of 12.32/24.45). While both studies identified common symptoms, there were differences in the most frequently mentioned ones. In our study, menstrual troubles (47.3%), delayed pregnancy (37.7%), and obesity (10.52%) were among the most prevalent concerns, whereas the university study highlighted acne (58.44%), excessive hair growth (54.55%), and heavy periods (52.6%). Additionally, the primary sources of information differed; our participants relied more on health educators (66.66%), whereas university students primarily used the internet (34.72%) and healthcare providers (24.53%). This suggests that practicing nurses may have better access to formal education on PCOS compared to students, who may still rely on self-directed learning. Both studies emphasize the need for enhanced education, as gaps in symptom recognition and detailed knowledge persist in both groups.

The health-related quality of life (HRQoL) of 15 teenage girls with PCOS in Yorkshire, England, was investigated in this qualitative study {Jones, 2011 #28}. The results showed that although PCOS had some beneficial impacts, such better relationships, it mostly had a detrimental influence on HRQoL. The main problems were problems with weight management, problems with body image, problems with menstruation, concerns about fertility, and hirsutism, which affected emotional well-being, self-esteem, social functioning, and sexual behavior. Numerous participants reported bad experiences with diagnosis and treatment, as well as inadequate information from healthcare professionals (HCPs). PCOS has a significant impact on emotional and social functioning, according to the study's findings. It

highlights the need for better (Adhikari and Bhattarai 2023) comes to diagnosis and fertility concerns, as well as increased awareness of PCOS's emotional impact and possible connection to risk-taking behaviors. {Jones, 2011 #28}

### Limitations

A very small sample size and possible response bias are two of the study's drawbacks that could limit how far the results can be applied. To confirm these findings and create more comprehensive plans to address information gaps and societal perceptions of PCOS, future studies should include a bigger and more varied sample from other health care settings.

### CONCLUSION

This study shows that nursing personnel in the hospitals of district Bahawalpur have a usually high degree of awareness of PCOS. Significant understanding of PCOS-related problems, treatment options, and linked systemic disorders was shown by the nurses. Despite this knowledge, the study found that there is a considerable stigma attached to the illness, which affects patients' readiness to share their diagnosis.

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### Recommendations

- Nurses should know about the updated guidelines and knowledge about PCOS to fill the gap
- Improved educational initiatives to increase understanding of PCOS, with an emphasis on treatment approaches and consequences.
- Public awareness initiatives to lessen the stigma associated with PCOS in society.
- More chances for nursing professionals to receive training so they can provide PCOS patients with clinical and emotional assistance.
- Better inter-professional cooperation to guarantee all-encompassing patient care.
- Conduct seminar and campaigns on World PCOS Day (01 September) to provide awareness at community level.

### Dedication

This work is dedicated to our parents whose unwavering support, prayers, and love have been my greatest strength throughout this work.

And also dedicated to our Respected teachers whose guidance and encouragement have shaped our path and fueled our determination.

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