

A Study to Assess the Knowledge Regarding Polyendocrine Metabolic Ovarian Syndrome (PMOS) among Nursing Students in a Selected Nursing College

Rajkanwar Tank¹, Ramesh Kumar¹, Tanish Panwar¹, Vedansh Tiwari¹, Vedansh Tiwari¹, Yogesh Kumar¹, Preeti Sinha²

¹UG Students, Medical & Technological Institute of Nursing, Jaipur

²Guide, Associate Professor, Medical & Technological Institute of Nursing, Jaipur

Corresponding Author:

Preeti Sinha, Medical & Technological Institute of Nursing, Jaipur

E-mail:

prishpreeti@gmail.com

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Abstract:

Background: Polyendocrine Metabolic Ovarian Syndrome (PMOS), previously known as Polycystic Ovary Syndrome (PCOS), is a complex hormonal and metabolic condition affecting reproductive health and general well-being. It may be associated with irregular menstrual cycles, excess androgen-related symptoms, ovulatory dysfunction, insulin resistance, and increased long-term metabolic risks. Appropriate knowledge among nursing students is important for health education, early recognition, referral, and patient counselling.

Materials & Methods: A descriptive cross-sectional research design is proposed. The proposed sample comprises 100 nursing students selected through convenience sampling. Data are collected using a structured sociodemographic questionnaire and a researcher-developed knowledge questionnaire. Descriptive statistics and suitable inferential tests are proposed for analysis.

Results: In the simulated dataset, 24% of students had good knowledge, 51% had average knowledge, and 25% had poor knowledge. Knowledge regarding risk factors and long-term complications was comparatively limited in the illustrative responses.

Conclusion: The proposed study may help identify areas in which nursing students require additional education about PMOS. The actual level of knowledge must be determined through data collection and statistical analysis.

Keywords: Polyendocrine Metabolic Ovarian Syndrome, PMOS, PCOS, nursing students, knowledge, reproductive health, OBG nursing.

INTRODUCTION

Reproductive health is an essential component of women's health and requires appropriate awareness, early recognition of health problems, and access to evidence-based care. Hormonal and metabolic conditions can affect menstrual health, fertility, physical well-being, and psychological health. One such condition is Polyendocrine Metabolic Ovarian Syndrome (PMOS), previously known as Polycystic Ovary Syndrome (PCOS).

In May 2026, an international consensus process introduced PMOS as the new name to better reflect the broad endocrine and metabolic features of the condition. The change was intended to address the limitations of the previous name,

which could incorrectly suggest that ovarian cysts are always present or define the condition.

PMOS may present with irregular or absent menstrual periods, clinical or biochemical evidence of androgen excess, and ovulatory dysfunction. Insulin resistance and metabolic risks may also be relevant. Not every affected individual experiences the same symptoms, and assessment must follow appropriate clinical guidance rather than relying on one symptom or an ultrasound finding alone.

The condition has implications beyond reproductive health. Individuals may experience concerns related to body image, acne, excess facial hair, fertility, anxiety, or quality of life. Evidence-based assessment and management therefore

require a comprehensive approach that considers clinical, metabolic, reproductive, and psychological needs.

Nursing students have an important role in promoting reproductive health awareness, communicating accurate information, recognizing when further clinical assessment is needed, and directing individuals toward appropriate healthcare services. Insufficient knowledge may contribute to misconceptions about menstruation, fertility, ovarian cysts, lifestyle measures, or the need for medical follow-up.

Assessing nursing students' knowledge can help identify educational gaps and guide the development of structured teaching activities. Therefore, the present proposed study focuses on assessing knowledge regarding PMOS among nursing students in a selected nursing college.

Objectives of the Study

1. To assess the level of knowledge regarding PMOS among nursing students.
2. To identify areas of knowledge related to definition, signs and symptoms, risk factors, complications, diagnosis, and management of PMOS.
3. To determine the association between knowledge levels and selected sociodemographic variables.
4. To identify educational needs related to PMOS among nursing students.

Research Hypotheses

H₁: There is a statistically significant association between knowledge regarding PMOS and selected sociodemographic variables among nursing students.

H₀: There is no statistically significant association between knowledge regarding PMOS and selected sociodemographic variables among nursing students.

MATERIALS & METHODS

Research approach

A quantitative research approach is proposed.

Research design

A descriptive cross-sectional research design will be used to assess knowledge at a single point in time.

Research setting

The proposed setting is a selected nursing college in Jaipur, Rajasthan, India. The institution name and study dates must be confirmed before data collection.

Population

- Target population: Nursing students.
- Accessible population: Eligible nursing students enrolled at the selected college during the data collection period.

Sample size

The proposed sample size is 100 nursing students. The final sample size should be supported by an appropriate calculation or a clearly stated feasibility rationale based on the study objectives and accessible population.

Sampling technique

Convenience sampling is proposed. Students who meet the eligibility criteria and voluntarily consent may be recruited. The limitations of non-probability sampling should be considered when interpreting the results.

Inclusion criteria

- Nursing students enrolled in the selected college.
- Students willing to participate and provide informed consent.
- Students able to understand the language of the questionnaire.

Exclusion criteria

- Students who do not provide informed consent.
- Students who are unavailable during the data collection period.
- Questionnaires that are substantially incomplete, according to predefined data-handling rules.

Variables of the study

- Primary outcome variable: Knowledge score regarding PMOS.
- Selected explanatory variables: Age group, gender, nursing programme, year of study, previous exposure to reproductive health education, and previous awareness of PMOS/PCOS.

Description of the research tool

The proposed instrument consists of two sections.

Section A: Sociodemographic questionnaire

This section collects information on age, gender, nursing programme, year of study, previous reproductive health education, and prior awareness of PMOS/PCOS.

Section B: Structured knowledge questionnaire

A proposed 30-item multiple-choice questionnaire will assess six domains:

Validity and reliability

The questionnaire should be assessed by subject experts for relevance, clarity, comprehensiveness, and alignment with current PMOS guidance. A pilot study involving students outside the final sample may be conducted to evaluate clarity and feasibility.

Reliability should be calculated using an appropriate method after pilot or study data are available. No reliability coefficient, validity index, or claim of validation should be reported until it has actually been calculated.

Data collection procedure

1. Obtain institutional permission and approval from the appropriate ethics committee.
2. Explain the purpose of the study to eligible students.
3. Obtain informed consent.
4. Administer the questionnaire in a suitable setting without influencing students' responses.
5. Maintain confidentiality and avoid collecting unnecessary identifying details.
6. Check questionnaires for completeness according to the predefined protocol.
7. Enter and clean the data before statistical analysis.

Plan for data analysis

- Frequency and percentage will describe categorical sociodemographic variables and knowledge categories.
- Mean and standard deviation, or median and interquartile

range as appropriate, will summarize total knowledge scores.

- The chi-square test or Fisher's exact test may be used to assess associations between categorical variables when assumptions are met.
- Suitable alternatives should be selected when expected cell counts or other assumptions are not satisfied.

- Statistical significance may be assessed at $(p < 0.05)$, specified in advance.

Effect sizes and confidence intervals should be reported where appropriate. The final statistical tests must be selected according to the actual data and study objectives.

Ethical considerations

- Ethical approval and institutional permission obtained

RESULTS

Table 1. Distribution of students according to sociodemographic characteristics (N = 100)

Variable	Category	Frequency (f)	Percentage (%)
Age	18–20 years	35	35
	21–23 years	50	50
	24 years and above	15	15
Gender	Female	75	75
	Male	25	25
Nursing programme	B.Sc. Nursing	80	80
	GNM	15	15
	Post Basic B.Sc. Nursing	5	5
Year of study	First year	25	25
	Second year	25	25
	Third year	25	25
	Fourth year / other eligible year	25	25
Previous PMOS/PCOS awareness	Yes	60	60
	No	40	40
Previous reproductive health education	Yes	45	45
	No	55	55

Table 2. Distribution of students according to overall knowledge level regarding PMOS (N = 100)

Knowledge level	Score range	Frequency (f)	Percentage (%)
Poor knowledge	0–10	25	25
Average knowledge	11–20	51	51
Good knowledge	21–30	24	24
Total		100	100

Table 3. Illustrative domain-wise knowledge performance

Knowledge domain	Maximum score	Simulated mean score	Percentage of maximum
Meaning and basic concepts	5	3.4	68%
Signs and symptoms	5	3.2	64%
Risk factors and associated features	5	2.8	56%
Complications and long-term health	5	2.6	52%
Assessment and diagnosis	5	2.9	58%
Management and health education	5	3.1	62%
Overall	30	18.0	60%

Table 4. Illustrative item-wise awareness responses

Knowledge statement	Correct responses (f)	Percentage (%)
PMOS may affect menstrual regularity	75	75
PMOS can involve endocrine and metabolic features	62	62
Every affected person must have ovarian cysts	28 correctly rejecting the statement	28
PMOS may be associated with insulin resistance	54	54
Clinical assessment is important for diagnosis	65	65
Management should be individualized	68	68
Health education and appropriate follow-up are important	72	72

DISCUSSION

The proposed study assesses nursing students' knowledge regarding PMOS, including basic concepts, signs and symptoms, risk factors, complications, diagnostic assessment, and management. The illustrative findings show how the results could be organized to identify strengths and gaps in knowledge.

The illustrative domain-wise results show comparatively lower scores for complications and long-term health. This domain is educationally important because PMOS involves more than menstrual irregularity or ovarian appearance. It may also be associated with metabolic risks and psychological concerns. The updated international terminology emphasizes the broader endocrine and metabolic nature of the condition.

NURSING IMPLICATIONS

Nursing education: PMOS content may be incorporated into OBG nursing teaching, health assessment, reproductive health education, and case-based learning.

Nursing practice: Nurses should provide accurate, respectful information about symptoms, assessment, follow-up, and individualized management, while avoiding assumptions based solely on body weight or ultrasound findings.

Nursing administration: Nursing colleges may consider structured teaching sessions, access to current learning resources, and periodic evaluation of reproductive health knowledge.

Nursing research: Further studies can assess knowledge in different nursing programmes and evaluate the effectiveness of structured teaching interventions using pre-test and post-test designs.

RECOMMENDATIONS

1. Conduct similar studies in multiple nursing colleges with appropriately justified sample sizes.
2. Use a validated or adequately developed and evaluated knowledge instrument.
3. Explore knowledge differences according to academic year and previous reproductive health education.
4. Develop structured teaching material based on identified knowledge gaps.
5. Evaluate teaching interventions using an appropriate quasi-experimental or experimental design.
6. Include accurate, updated terminology and evidence-based information about PMOS in nursing education.

CONCLUSION

PMOS is a relevant topic in obstetrics and gynaecological nursing because it involves endocrine, reproductive, and metabolic health. Nursing students need accurate knowledge to support reproductive health education, recognize potential concerns, and guide individuals toward appropriate assessment and care.

A descriptive cross-sectional study can identify knowledge levels and educational needs among nursing students. The tables in this article demonstrate a proposed way of presenting demographic characteristics, overall knowledge, domain-wise performance, and associations with selected variables. The simulated values must be replaced with actual data before

the article is submitted or represented as completed research.

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