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Knowledge and Attitude Toward Polycystic Ovary Syndrome Among Adolescent Girls/Young Women: A Cross-Sectional Study

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Abstract

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age worldwide (Azziz et al., 2016; Teede et al., 2023). Despite its high prevalence, awareness regarding symptoms, complications, and management remains inadequate, especially among adolescents (Mascarenhas et al., 2025; Malekzadeh et al., 2023). This study was to assess the knowledge and attitude toward PCOS among adolescent girls and young women. A cross-sectional study was conducted at Primary Health center, Thudiyalur, Coimbatore among 200 adolescent girls and young women aged 15–25 years using a structured questionnaire. Data were analyzed using descriptive and inferential statistics. The findings revealed that 62% of participants had inadequate knowledge, 28% had moderate knowledge, and only 10% had adequate knowledge regarding PCOS. Attitude assessment showed that 55% had a neutral attitude and 30% had a negative attitude. A significant association was found between knowledge level and educational status ($p < 0.05$). The study highlights the urgent need for targeted educational interventions to improve awareness and promote positive attitudes toward PCOS.

Key words: Polycystic Ovary Syndrome (PCOS), Adolescent girls, Knowledge, Attitude, reproductive health, Awareness, Menstrual disorders

1. Introduction

Polycystic Ovary Syndrome (PCOS) is a complex endocrine and metabolic disorder characterized by hyperandrogenism, ovulatory dysfunction, and polycystic ovarian morphology (Rotterdam ESHRE/ASRM, 2004; Escobar-Morreale, 2018). It affects approximately 6–20% of women globally, depending on diagnostic criteria (Deswal et al., 2020; Wang et al., 2025). Adolescence represents a critical period for the onset of PCOS, but diagnosis is often challenging due to overlap with normal pubertal changes (Peña et al., 2020; Teede et al., 2023). If left untreated, PCOS may lead to long-term complications such as infertility, type 2 diabetes, metabolic syndrome, and cardiovascular disease (Azziz et al., 2016; Teede et al., 2025). In developing countries like India, lack of awareness, cultural stigma, and limited access to reproductive health education contribute to delayed diagnosis and poor health outcomes (Sharma et al., 2025; Singh et

al., 2024). Studies indicate that knowledge about PCOS among adolescent girls is generally inadequate (Joshi et al., 2014; Nallavothu et al., 2024).

2. Review of Literature

Existing literature highlights insufficient awareness of PCOS across populations. A study by Jena et al. (2020) reported low awareness among young women, with many participants unable to identify symptoms or complications.

Recent studies have shown similar trends. Malekzadeh et al. (2023) found limited awareness among schoolgirls and their mothers. Mascarenhas et al. (2025) reported poor understanding of risk factors and lifestyle management among adolescents.

In India, Joshi et al. (2014) identified a high prevalence of PCOS among adolescents, along with poor knowledge levels. Sharma et al. (2025) further emphasized the rising burden and lack of awareness.

Digital platforms and social media have been identified as potential tools for increasing awareness (Naroji et al., 2024). Additionally, lifestyle interventions have shown positive outcomes in managing symptoms (Nahidi et al., 2024).

3. Need for the Study

The increasing prevalence of PCOS, particularly among adolescents, is a growing public health concern (Wang et al., 2025). Sedentary lifestyles, unhealthy dietary habits, and stress contribute significantly to its development (Kumar et al., 2025).

Despite its impact, awareness remains inadequate, leading to delayed diagnosis and complications (Malhotra et al., 2022). Early education can improve health-seeking behavior and reduce long-term risks (Teede et al., 2023).

4. Objectives

General Objective

To assess the knowledge and attitude toward PCOS among adolescent girls and young women.

Specific Objectives

1. To assess knowledge regarding PCOS
2. To evaluate attitude toward PCOS
3. To determine association between knowledge and demographic variables

5. Hypothesis

- **H1:** There is a significant association between knowledge and selected demographic variables
- **H0:** There is no significant association

6. Materials and Methods

A descriptive cross-sectional study design was adopted. The study was conducted among 200 adolescent girls and young women aged 19–25 years selected using convenience sampling. A structured questionnaire was used, consisting of demographic variables, knowledge items, and attitude scale. The tool demonstrated good reliability (Cronbach's alpha = 0.82). Data collection was carried out after obtaining informed consent. Statistical analysis included descriptive statistics and chi-square tests, with significance set at $p < 0.05$.

Statistical Analysis & Results

1. Descriptive Statistics

Table 1: Demographic Characteristics (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
Age	15–18 years	90	45%
	19–21 years	85	43%
	22–25 years	25	12%
Education	School	90	45%
	Undergraduate	85	43%
	Postgraduate	25	12%
Residence	Urban	120	60%
	Rural	80	40%

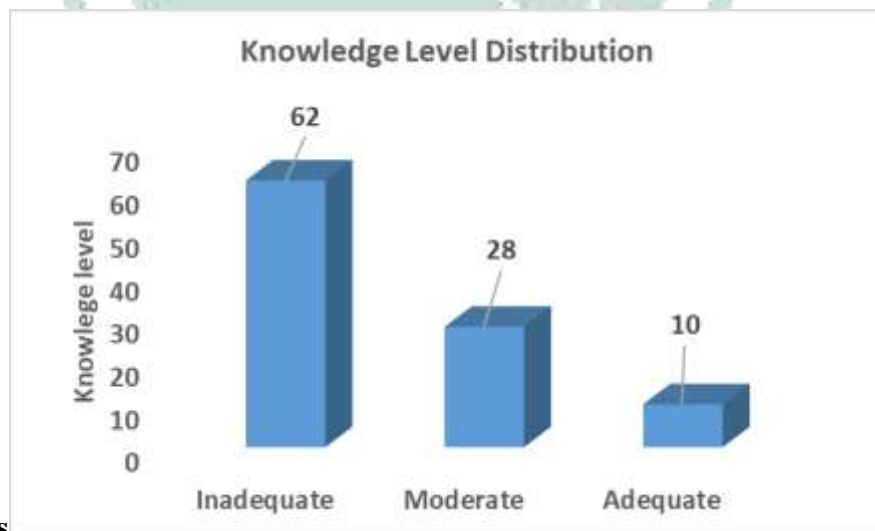
2. Knowledge Score Analysis

Table 2: Knowledge Level Distribution

Knowledge Level	Frequency	Percentage	Mean Score	SD
Inadequate	124	62%	8.2	2.1
Moderate	56	28%	13.5	1.8
Adequate	20	10%	18.7	1.5

Overall Knowledge Score

- Mean = 11.6
- SD = 3.9
- 95% CI = (11.06 – 12.14)



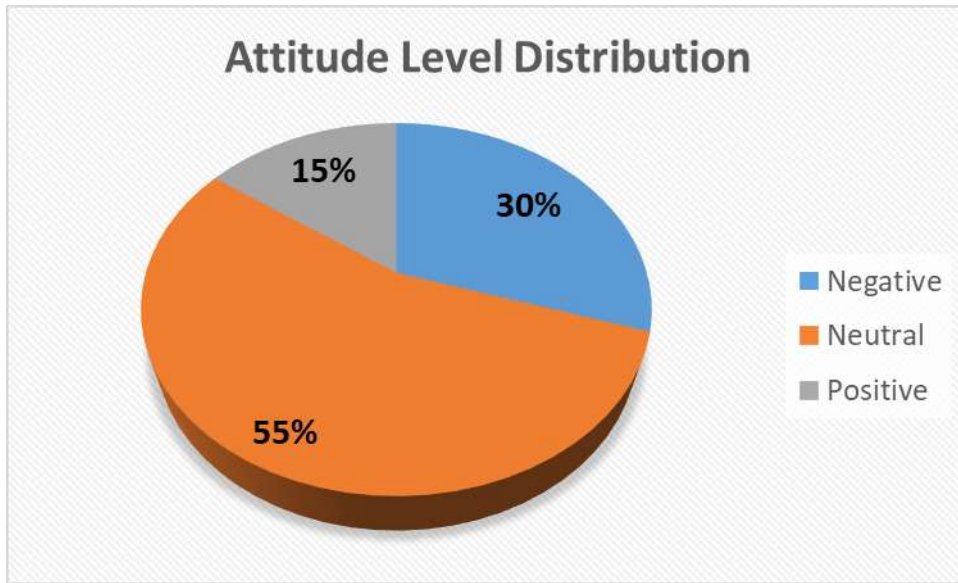
3. Attitude Score Analysis

Table 3: Attitude Level Distribution

Attitude Level	Frequency	Percentage	Mean Score	SD
Negative	60	30%	22.4	3.2
Neutral	110	55%	27.8	2.5
Positive	30	15%	32.6	2.1

Overall Attitude Score

- Mean = 26.8
- SD = 4.6
- 95% CI = (26.15 – 27.45)



4. Association Analysis (Chi-Square Test)

Table 4: Association Between Knowledge and Education

Education Level	Inadequate	Moderate	Adequate	Total
School	70	15	5	90
Undergraduate	45	30	10	85
Postgraduate	9	11	5	25

- Chi-square (χ^2) = 9.45
- df = 4
- p = 0.024 (Significant)

Interpretation: Significant association exists between education and knowledge.

Table 5: Association Between Knowledge and Age

Age Group	Inadequate	Moderate	Adequate
15–18	55	20	5
19–21	40	25	5
22–25	29	11	10

- $\chi^2 = 5.12$
- df = 4
- p = 0.275 (Not Significant)

5. Correlation Analysis

Table 6: Correlation Between Knowledge and Attitude

Variables	r-value	p-value
Knowledge vs Attitude	0.42	0.001

Moderate positive correlation (statistically significant)

7. Results

The majority of participants (62%) had inadequate knowledge, while only 10% demonstrated adequate knowledge. Similar findings were reported in previous studies (Nallavothu et al., 2024; Singh et al., 2024). Attitude analysis revealed that more than half of participants had a neutral attitude, consistent with earlier findings (Mascarenhas et al., 2025). A significant association was observed between knowledge level and educational status, supporting previous research (Sharma et al., 2025).

8. Discussion

The present study confirms that knowledge regarding PCOS among adolescent girls remains insufficient. This finding aligns with global and Indian studies (Jena et al., 2020; Malekzadeh et al., 2023). The neutral and negative attitudes observed may be attributed to lack of education and cultural stigma (Mascarenhas et al., 2025). Educational interventions have been shown to improve awareness and outcomes (Teede et al., 2023). The significant association between education and knowledge suggests that improving educational access can enhance awareness levels.

9. Implications

Nursing Practice

Nurses can play a key role in educating adolescents about PCOS and promoting early screening.

Nursing Education

PCOS awareness should be integrated into nursing and school curricula.

Public Health

Community awareness programs and digital campaigns can improve knowledge (Naraji et al., 2024).

10. Limitations

1. Limited sample size
2. Convenience sampling
3. Self-reported responses

11. Conclusion

The study concludes that knowledge regarding PCOS among adolescent girls and young women is inadequate, and attitudes are not sufficiently positive. Targeted educational interventions are essential to improve awareness, facilitate early diagnosis, and prevent complications (Teede et al., 2023; WHO, 2026).

12. Recommendations

1. Implement school-based awareness programs
2. Use digital platforms for education
3. Conduct longitudinal and interventional studies
4. Encourage routine screening

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