

## ASSESSING KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME AMONG ADOLESCENT GIRLS

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### ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is a common endocrine disorder that significantly affects women of reproductive age, including adolescents. It presents with a wide range of symptoms such as irregular menstruation, hirsutism, acne, and obesity, and can lead to long-term complications like infertility, type 2 diabetes, and cardiovascular disorders. Despite its increasing prevalence, awareness among adolescent girls remains limited. The aim of the study is to assess the level of knowledge regarding PCOS among adolescent girls in a selected university and the examine associations between their knowledge and selected Socio-demographic variables. This study adopted a quantitative research design. In this study total 150 adolescent girls aged 12-19 years were selected using a non-probability purposive sampling technique. Data were collected using structured questionnaire that included demographic variables and knowledge-based questions related to PCOS. Descriptive and inferential statistics were used for data analysis. Findings revealed that 70% of participants had heard of PCOS; however, only 38% demonstrated excellent knowledge, 17.3% good knowledge, 13.3% average knowledge, and 31.3% poor knowledge. A statistically significant association was observed between family monthly income and knowledge levels ( $p = 0.026$ ), indicating that higher income was linked with better awareness. Other variables, such as age, education, family type, and menstrual history, showed no significant association. The study concludes that although basic awareness about PCOS exists, a substantial knowledge gap remains. The findings highlight the need for structured, school-based health education programs focusing on reproductive health and PCOS awareness. Strengthening such interventions can empower adolescent girls to seek timely medical attention and adopt preventive strategies.

## INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is one of the most prevalent endocrine disorders affecting women of reproductive age, often manifesting during adolescence and persisting into adulthood<sup>10</sup>. Globally, PCOS impacts an estimated 5–10% of women, yet up to 70% remain

undiagnosed<sup>1</sup>. The condition is commonly marked by symptoms such as menstrual irregularities, excessive hair growth, acne, and weight gain<sup>5</sup>. As a leading cause of anovulatory infertility, metabolic syndrome, and cardiovascular risks in women, PCOS poses significant long-term health implications<sup>7</sup>. Certain ethnic groups

also exhibit higher prevalence rates and may experience greater metabolic complications<sup>8</sup>. Adolescent girls are particularly susceptible to the impacts of PCOS, as its effects extend beyond physical health to include emotional and psychological well-being<sup>4</sup>.

In India, PCOS is emerging as a considerable public health issue, with a reported prevalence of approximately 9.13% among adolescent girls.<sup>11</sup> Despite its growing significance, awareness and understanding of PCOS remain limited among young females<sup>3</sup>.

PCOS is increasingly recognized as a significant endocrine disorder among adolescent and reproductive-age females<sup>1</sup>. With global prevalence ranging from 6% to 20% depending on diagnostic criteria<sup>4</sup>, India too is witnessing a rise in cases, especially in urban areas where sedentary lifestyles, unhealthy diets, and elevated stress levels are prevalent<sup>9</sup>. However, awareness and understanding of PCOS among adolescents remain insufficient, despite them being at a critical age for early symptom detection<sup>6</sup>.

According to the PCOS Society of India, one in every 10 women has PCOS, and out of every 10 diagnosed women, six are teenage girls.<sup>12</sup> A community-based study in Trivandrum among 3,443 adolescent

girls found that around 10% showed PCOS symptoms, with lack of awareness and poor lifestyle habits cited as major contributing factors.<sup>11</sup> A retrospective study also highlighted that girls with early risk factors may develop PCOS at a younger age.<sup>8</sup>

Studies indicate that early education about PCOS can significantly improve health outcomes and quality of life.<sup>4</sup> A well-informed adolescent is more likely to break the cycle of stigma and misinformation, encouraging not only self-care but also peer awareness. Therefore, this study aims to evaluate the awareness levels of PCOS among adolescent girls in a university setting, providing valuable insights for developing targeted health education programs.<sup>15</sup>

## OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding polycystic ovarian syndrome among adolescent girls.
2. To find out association between level of knowledge with their selected socio demographic variable.

## MATERIALS AND METHODS

A quantitative research approach incorporating a descriptive research design was adopted to assess the level of

knowledge regarding polycystic ovarian syndrome (PCOS) among adolescent girls studying in a selected university. This research design was considered appropriate as it facilitates a comprehensive understanding of the current awareness levels among the target population and allows for the identification of knowledge gaps. The study was conducted among 150 adolescent girls aged between 12 and 19 years, who were selected using a non-probability purposive sampling technique. This method was chosen to ensure the selection of participants who met specific inclusion criteria relevant to the objectives of the study, such as age, enrolment in the university, and willingness to participate. The data collection instrument consisted of two structured sections. Section A focused on gathering demographic and background information, including variables such as age, academic year, place of residence, dietary habits, physical activity, menstrual history, and any known family history of PCOS. Section B was a structured knowledge questionnaire specifically developed by the researcher to assess the participants' understanding of PCOS, covering key domains such as causes, risk factors, signs and symptoms, possible complications, preventive strategies, diagnostic methods, and management or treatment options. The tool was developed

after an extensive review of relevant literature and was validated by subject matter experts to ensure content accuracy, clarity, and relevance. Ethical approval was obtained from the Institutional Ethical Committee with the approval no. PUIECHR/PIMSR/00/081734/82346, and informed consent was collected from all participants prior to data collection, ensuring adherence to ethical research practices. The data collection was conducted in a systematic and confidential manner. Collected data were then organized and coded. Descriptive statistics, including frequency and percentage were used to summarize the demographic characteristics and levels of knowledge among the participants. Inferential statistical techniques, such as the chi-square test were applied to examine associations between the knowledge scores and selected demographic variables. The findings of the study provided insight into the current knowledge status of adolescent girls regarding PCOS and highlighted areas requiring targeted educational interventions.

## RESULTS

The finding of the study revealed that the majority of participants (64.7%) were aged 17–18 years, while 35.3% were above 18. Regarding family income, 34.0% reported a

monthly income between ₹10,001–₹40,000, followed by 31.3% in the ₹40,001–₹80,000 range, 24.0% earning ₹80,001 or more, and 10.7% earning ₹10,000 or less. In terms of education, a significant number (75.3%) had completed higher secondary education, 18.7% had secondary education, and 6.0% had only primary education. Family type was nearly evenly distributed, with 52.0% belonging to nuclear families, 47.3% to joint families, and 0.7% to extended families. Most participants (56.7%) reported experiencing their first menstruation between the ages of 13–15, while others began at 10–12 years (18.7%), 16–18 years (19.3%), below 10

years (4.0%), or 19–20 years (1.3%). A majority (82.7%) had regular menstrual cycles, and 65.3% reported an average cycle length of 21–28 days. Menstrual problems were reported by 24% of respondents, while 76% did not experience any issues. Family history of PCOS was present in 14% of participants. Only 10% were currently taking medications or supplements for PCOS. Notably, 70% of respondents had knowledge about PCOS, with school or college being the primary source of information (44.7%), followed by family/friends (18.0%), internet/social media (18.0%), healthcare providers (16.0%), and others (3.3%).

Fig: 1: Pie Diagram showing Percentage distribution according to Level of Knowledge

N = 150

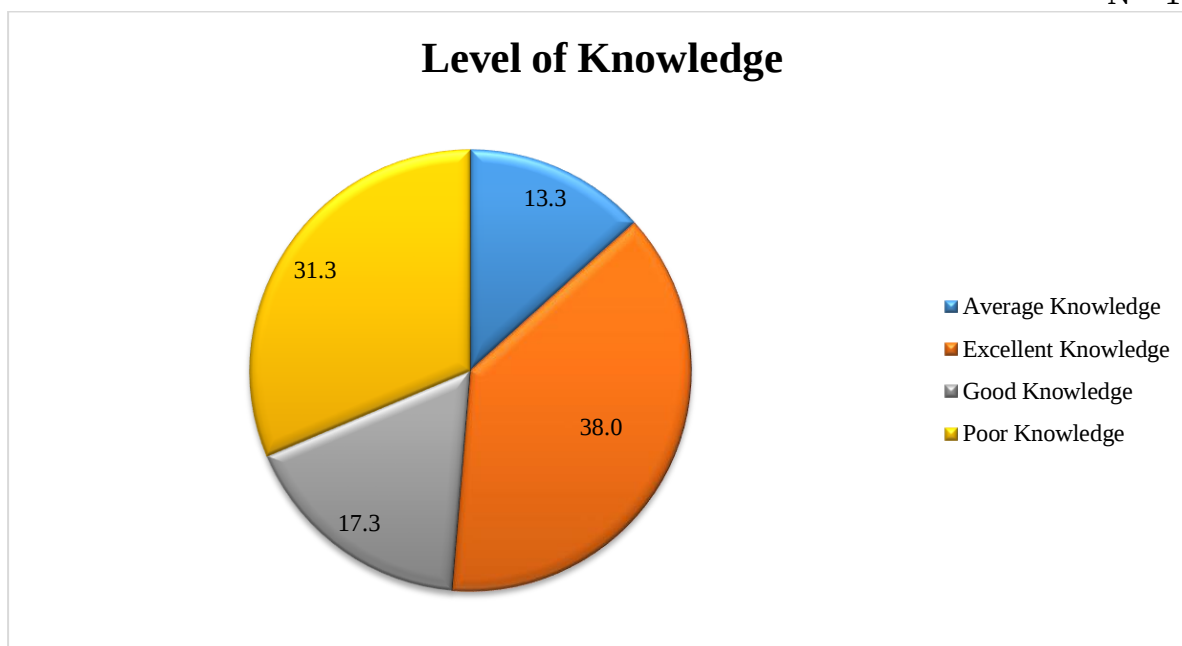


Fig: 1 indicates that majority participants had excellent knowledge, 38% followed by 31.3% had poor knowledge, 17.3% had good knowledge and only 13.3% had average knowledge.

Statistical analysis revealed a significant association between family monthly income and the level of knowledge. However no significant association was found between the level of knowledge and other variables such as age group, education level, family type, age at menarche, menstrual cycle pattern, family history of PCOS, or source of information.

## DISCUSSION

In this study revealed that among the 150 adolescent girls 70% had heard of PCOS, indicating basic awareness, 38% demonstrated excellent knowledge, showing familiarity with symptoms, causes, and management, 31.3% had poor knowledge, reflecting limited understanding of the condition and study also revealed that a significant association between family monthly income and the level of knowledge, suggesting that higher family income positively influences awareness about PCOS. These results highlight a significant knowledge gap among adolescents. While many were aware of PCOS, a smaller proportion had a comprehensive understanding of its symptoms, risk factors, or preventive strategies such as lifestyle modifications.<sup>3</sup>

These findings are consistent with Chainani (2019), who found that while 38% of women aged 18–30 years in Navi Mumbai were aware of PCOS, only 17% could accurately identify common symptoms such as irregular menstruation, acne, or weight gain<sup>3</sup>. Similarly, a study by Khushboo Brar, Kanur, and Ramanadin (2016) revealed that although a majority of adolescent girls in Mohali had heard of PCOS, their depth of knowledge was limited, with only a small proportion demonstrating excellent understanding<sup>2</sup>. The persistent gap between basic awareness and comprehensive understanding is concerning, as inadequate knowledge may hinder early diagnosis and timely health-seeking behaviour, thereby exacerbating the long-term health risks associated with PCOS.

The study revealed a statistically significant association between family monthly income and the level of knowledge about PCOS ( $p = 0.026$ ). Girls from higher-income families were more likely to demonstrate good or excellent knowledge. This may be attributed to greater access to healthcare services, internet-based information, and parental support (Alessa et al., 2017).

Effective educational sessions should be interactive and engaging, including visuals, group discussions, role plays, and personal stories. Schools and colleges can serve as platforms for such interventions, particularly if reproductive health is formally integrated into their academic curricula<sup>15</sup>. Nurses, midwives, and health educators are well-positioned to lead these sessions, bridging the gap between health systems and youth populations.

## CONCLUSION

This study highlights that while many adolescent girls are aware of PCOS, their depth of understanding remains limited. Strengthening school-based health education can play a vital role in bridging this knowledge gap, empowering young girls to recognize symptoms early and take proactive steps toward their reproductive health.

## Conflict of interest and funding

The research study has no any conflict of Interest and the research study was entirely self-funded.

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