

GETA Young Scientist

Samsya Khoj Contest 2025

31.05.2025

<i>Result</i>	Consolation 01
<i>Problem Title</i>	Lack of Early Diagnosis and Effective Management of PCOS and PCOD
<i>Problem Description</i>	<p>Polycystic Ovary Syndrome (PCOS) and Polycystic Ovarian Disease (PCOD) are prevalent endocrine disorders that impact women of reproductive age, causing a range of symptoms including irregular menstrual cycles, infertility, excessive hair growth, and metabolic complications such as insulin resistance. These conditions are commonly associated with hormonal imbalances, but diagnosing them remains challenging due to overlapping symptoms with other disorders and the variability in hormonal markers.</p> <p>Current diagnostic practices, such as ultrasound imaging and hormonal tests (FSH, LH, AMH, testosterone levels), are often insufficient, especially in young adolescents or prepubertal girls. For instance, hormonal tests like Follicle-Stimulating Hormone (FSH) and Anti-Müllerian Hormone (AMH) may be influenced by age, making early diagnosis difficult. Moreover, insulin resistance and metabolic factors, critical in PCOS and PCOD, are not routinely evaluated in young individuals, further complicating the diagnosis.</p> <p>This leads to delays in detection, which can result in prolonged suffering, unresolved health issues, and delayed intervention, impacting fertility and overall well-being. There is an urgent need for a comprehensive, multi-parameter diagnostic approach that integrates hormonal and metabolic profiling. This system should focus on age-specific variations in hormonal levels, particularly during the menstrual cycle or early stages of puberty, to provide an accurate and early diagnosis of PCOS and PCOD.</p> <p>A reliable, early diagnostic tool can significantly improve the management of PCOS and PCOD, offering timely interventions, personalized treatment plans, and better fertility outcomes. It would also help in preventing long-term complications such as diabetes, cardiovascular diseases, and emotional distress, ensuring better quality of life for women affected by these conditions.</p>
<i>Affected Audiences</i>	<ol style="list-style-type: none"> 1. Adolescent Girls: Early puberty and undiagnosed symptoms like irregular periods and acne. 2. Reproductive-Age Women: Struggling with infertility, irregular cycles, and metabolic issues. 3. Women with Metabolic Disorders: At higher risk for insulin resistance and heart disease. 4. Healthcare Providers: Challenged by current diagnostic limitations. 5. Families: Impacted by emotional and social consequences of untreated conditions.
<i>Impact Size</i>	Hundreds and more
<i>Location</i>	Universal
<i>Scope</i>	National
<i>Place</i>	Universal

<i>Result</i>	Consolation 01
<i>Occurrence</i>	Frequently
<i>Life risk involved?</i>	Yes
<i>Financial loss or Saving potential</i>	Lakhs or more
<i>Student</i>	SWASTI SHARMA , 11th Class
<i>School</i>	DARBARI LAL DAV MODEL SCHOOL , New Delhi District, Delhi
<i>Guide Teacher</i>	CHARU DHODI

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