



Risk Assessment Of Polycystic Ovarian Syndrome Among College-Going Girls

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ABSTRACT: Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine disorder affecting females of child-bearing age, often described by hormonal imbalances, irregular menstruation, obesity, and hyperandrogenism. It can lead to complications such as type 2 diabetes, infertility cardiovascular disease, and metabolic syndrome. The present study aimed to analyze and identify the risk of PCOS among third-year B.A. female students at Shri Khushiram Mahavidyalaya, Kher, Aligarh, Uttar Pradesh. A total of 100 girls were selected using a convenience sampling method. Data were collected using a self-assessment risk checklist based on the PCOS risk assessment tool developed by Elizabeth Lee Vliet (1995), which included 19 yes/no questions related to PCOS symptoms and risk factors.

Results revealed that 19% of the participants were at risk of developing PCOS, while 81% were not at risk. Common symptoms reported included hair on the thighs (53%), premenstrual syndrome (46%), thick pubic hair (33%), sugar cravings (31%), and acne (29%). The study emphasizes the need for early screening and awareness of PCOS in young women, recommending reproductive health education and lifestyle interventions in academic institutions to reduce risks and manage long-term health impacts effectively.

KEYWORDS: Cysts, Facial Hairs, Hormones, Irregular Menstrual, Polycystic Ovarian Syndrome, Risk.

INTRODUCTION:

Polycystic ovarian syndrome is a most common endocrine disorder that affects females of child-bearing age. (Lu, Di-Fei., & Guo, Xiao-Hui. 2016), (S, Mishra., & A, Shrestha. 2013). PCOS ovaries do not produce sufficient quantities of hormone required for follicles to mature. These follicles turn into the cysts. These cysts accumulate in the ovary. (S, Mishra., & A, Shrestha. 2013). PCOS is identified by the appearance of enlarged ovaries with multiple small cysts and androgen-secreting stroma, and a hypervascularized. (Yasin, Misbah., & Yasmeen, Fouzia. 2014).

Women with PCOS have an imbalance of FSH (follicle-stimulating hormone), which stimulates egg development in the ovaries, and LH (luteinizing hormone), which stimulates the ovaries to release the egg. (S, Mishra., & A, Shrestha. 2013), (Begum, Gulam, Saidunnisa., et.al. 2017).

A major contributing factor to the development of PCOS is obesity, especially central obesity. The majority of PCOS women have the abdominal phenotype, and about 50% of them are overweight or obese. (S, Akshaya., & Bhattacharya, Ratnaboli. 2016).

Symptoms of PCOS include menstruation irregularities, infertility, cysts in the ovaries, obesity, hyperandrogenism, facial hairs, acne, hair loss, and miscarriages. Women with PCOS have the risk of long-term complications like cardiovascular diseases, type 2 diabetes, hypertension, hyperlipidemia, inflammation, and endothelial dysfunction, breast and endometrial cancer, metabolic problems like impaired insulin resistance. PCOS-suffering women also face the risk of fetal deformities, premature delivery, and neonatal complications. (Pitchai, Pothiraj., et al. 2016), (Coker, Elise., Lahoud, Robert., & Abraham, Suzanne. 2016), (Dubasi, Kumar, Sravan., et al. 2019), (Taneja, Jyoti., et al. 2020).

According to the Rotterdam criteria, the clinical presentation of PCOS has been categorized into several distinct groups. These include (a) Classic PCOS, which is characterized by irregular menstrual cycles, increased testosterone secretion, and the presence or absence of ovarian cysts; (b) Ovulatory PCOS, which is defined by having multiple cysts and increased androgen secretion; and (c) Non-androgenic PCOS, which is associated with irregular menstruation and multiple cysts. (Radha, Penagaluru., Devi, Rama, Sarala., & Madhavi, Jalagam. 2016).

Diagnosis of PCOS depends upon signs and symptoms or ultrasound scanning and hormonal testing. (Yasin, Misbah., & Yasmeen, Fouzia. 2014). Early diagnosis of PCOS may help in control of the disease and prevent the development of co-morbidities. (Taneja, Jyoti., et al. 2020). Two of the following criteria must be present for the diagnosis of PCOS: polycystic ovaries on ultrasound, clinical or laboratory hyperandrogenism, and oligo-ovulation/anovulation. These criteria are also used for the diagnosis of PCOS like the degree of hirsutism (facial hairs), the amount of androgen in the blood, the degree of irregular menstruation, and the size and shape of the ovaries. (N, Sowmya, M., et al. 2017).

Most PCOS-suffering women are overweight so for treating PCOS weight loss and dietary management are the best solution. PCOS-suffering women also suffer from eating disorders like bulimia nervosa. (Coker, Elise., Lahoud, Robert., & Abraham, Suzanne. 2016). A healthy lifestyle, weight management, diet

modification, and behavioral management could alleviate the condition. (Taneja, Jyoti., et al. 2020), (Dubasi, Kumar, Sravan., et al. 2019).

OBJECTIVE:

- To analyze and identify the risk of PCOS among girls

METHODS AND MATERIAL:

Locale of the study: The research was conducted in the Shri Khushiram Mahavidyalaya, Kher, Aligarh, U.P.

Population: The population for the present study was the 3rd year students of B.A of Shri Khushiram Mahavidyalaya, Kher, Aligarh, U.P.

Selection of the sample: The researcher selects 100 students of B.A 3rd year through convenience sampling method.

Tool used for data collection: For data collection researcher used a self-assessment test for PCOS. It's a risk assessment checklist developed based on a survey provided by Elizabeth Lee Viet (1995). This checklist consists of 19 questions regarding the assessment of PCOS risk. Students were required to respond with "yes" or "no" to 19 questions. These questions focused on the risk factors for PCOS. Each "yes" response received a score of one, while each "no" response received a score of zero. Scoring 5 and above is presumed to be under the risk of PCOS.

Analysis and interpretation of data: Data was analyzed through frequency and percentage.

RESULTS:

Table 1.1: Frequency and percentage distribution of self-assessment test for PCOS risk.

Self-Assessment Test for PCOS Risk			
S.No	Questions	Frequency (n=100)	Percentage (n=100)%
1.	Do you crave for sugars?	31	31%
2.	Do you have difficulty in losing weight?	19	19%
3.	Do you have continuous weight gain?	21	21%
4.	Is your waistline more than 35cm?	18	18%
5.	Are your periods unpredictable?	11	11%
6.	Do your periods last longer than a week?	14	14%
7.	Are your periods heavy and prolonged?	12	12%
8.	Do you have excess facial hairs?	19	19%
9.	Do you have symptoms of hypoglycemia?	0	0%
10.	Do you have a family history of diabetes?	3	3%
11.	Do you family history of cardiovascular disease?	2	2%
12.	Do you feel outraged, irritable after eating sweets?	9	9%
13.	Do you have pigmentation on the skin?	19	19%
14.	Do you have an account of high blood pressure?	0	0%
15.	Are there an unusual amount of hairs on the breast?	15	15%

16.	Do you have PMS symptoms?	46	46%
17.	Do you have hair on your thighs?	53	53%
18.	Do you have thick pubic hair?	33	33%
19.	Are your acne worst at different times of the menstrual cycle?	29	29%

Table 1.1 shows the frequency and percentage distribution of the responses regarding symptoms of PCOS. 31% of respondents crave sugar, 19% of respondents face difficulty in losing weight, 21% of respondents face continuous weight gain problems, 18% of respondent have more than 35cm waistline, 11% of respondent periods are unpredictable, 14% respondent periods last longer than a week, 12% respondent periods are heavy and prolonged, 19% respondent has excess facial hairs problem, 0% respondent have symptoms of hypoglycemia, 3% respondent have family history of diabetes, 2% respondent have family history of cardiovascular disease, 9% respondent feel outraged, irritable after eating sweets, 19% respondent have pigmentation on the skin, 0% respondent have high blood pressure problem, 15% respondent have unusual amount of hairs on the breast, 46% respondent face PMS (Premenstrual Syndrome) symptoms, 53% respondent have hair on thighs, 33% respondent have thick pubic hair, and 29% respondent acne worst at different times of the menstrual cycle.

Table 1.2: Distribution of girls based on risk of PCOS.

Score	Frequency	Percentage %
Below 5	81	81%
5 and Above 5	19	19%
Total	100	100%

Table 1.2 depicts that 81% of girls score below 5 which means 81% of girls come under the no risk of PCOS. They did not have the risk of developing PCOS. And 19% of girls scored above 5 which mean 19% of girls **were found to be at risk of developing PCOS.** They have risk of developing PCOS.

CONCLUSION:

The present study aimed to analyze and identify the risk of Polycystic Ovarian Syndrome (PCOS) among third-year B.A. students at Shri Khushiram Mahavidyalaya, Kher, Aligarh, U.P., using a self-assessment checklist based on PCOS risk factors. The findings revealed that 19% of the respondents scored 5 or above, indicating they are at risk of developing PCOS, while 81% scored below 5, suggesting no current risk. The most frequently reported symptoms among the participants included hair on thighs (53%), premenstrual syndrome (46%), thick pubic hair (33%), sugar cravings (31%), and acne (29%). These symptoms align with commonly identified indicators of PCOS and highlight the need for increased awareness and early detection among young women.

These results underscore the need for heightened awareness, early screening, and health education regarding PCOS, especially among young women in educational institutions.

Early detection and lifestyle interventions including dietary modifications, weight management, and behavioural strategies may help reduce the risk and prevent long-term complications associated with PCOS, such as infertility, type 2 diabetes, cardiovascular disease, and metabolic syndrome. It is recommended that educational institutions incorporate routine health screenings and awareness programs focused on reproductive health to support early identification and management of PCOS.

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