



## **A Study on Awareness of PCOS (Polycystic Ovary Syndrome) Amongst the Women**

<sup>1</sup>*Shweta Jagtap*, <sup>2</sup>*Asst. Prof. Vimal Makwana*

<sup>1</sup>Researcher, <sup>2</sup>Research Guide

<sup>1,2</sup>Parul University, Faculty of Social Work

---

### **ABSTRACT**

Polycystic ovarian syndrome (PCOS) is a common endocrine condition that affects about 5% of women of reproductive age. PCOS is characterised by ovarian follicles (eggs) that are abnormally large and do not break naturally, resulting in an accumulation of fluid and testosterone in the blood. Insulin resistance, obesity, and other health issues have also been linked to PCOS. PCOS has no single cause; however, it is thought to be caused by a combination of hereditary and environmental factors. Polycystic Ovary Syndrome is a common hormonal disorder in which females produce excessive amounts of male hormones (affecting up to 1 in 10 women of childbearing age). A hormonal imbalance in a woman's ovaries, the organs that (nearly) completely manage a healthy menstrual cycle, produces issues. As a result, women with PCOS have irregular or skipped periods and have difficulty conceiving.

---

### **Introduction**

Polycystic ovarian syndrome (PCOS) is a prevalent endocrine condition that affects around 5% of reproductive-age women. PCOS is characterized by excessively large follicles (eggs) in the ovary that do not break naturally, leading to an accumulation of fluid and testosterone in the blood. PCOS has also been linked to insulin resistance, obesity, and other health issues. There is no single cause of PCOS, however, it is thought to be caused by a mix of hereditary and environmental factors. Some PCOS patients have a history of high-risk factors such as obesity, insulin resistance, and a family history of the condition.

Other factors that may lead to PCOS include Insulin sensitivity: Insulin resistance occurs when the cells of the body do not respond as well to the insulin hormone. This can result in weight gain, elevated blood sugar levels, and other PCOS-related health issues. Insulin resistance occurs when the body's cells do not respond as well to the insulin hormone.

This can result in weight gain, elevated blood sugar levels, and other PCOS-related health issues. Male sex hormones, such as testosterone, can lead to insulin resistance. Insulin resistance can be caused by male sex hormones such as testosterone.

Reproductive hormones, such as oestradiol and progesterone, can potentially produce insulin resistance. Insulin resistance can also be caused by reproductive hormones such as estragon and progesterone. Obesity is a significant risk factor for PCOS. Obesity is a significant risk factor for PCOS. Genetics: Some people are more likely than others to acquire PCOS. Some people are more likely than others to acquire PCOS. Environmental variables: Environmental factors, such as exposure to chemicals and tobacco, can potentially cause to PCOS. PCOS is a tough condition to diagnose, and there is no cure. Treatment usually entails adjustments in lifestyle, such as weight loss and a balanced diet, exercise, and stress management. Some ladies use medicine to treat their symptoms as well.

---

### **Common Symptoms of PCOS:**

**Heavy bleeding at the time of menstruation:** Since the lining of the uterus takes longer than usual to build-up, it is likely that you will have heavier bleeding than normal.

**Irregular (or no) Periods:** The lack of ovulation prevents the lining of the uterus from shedding every month. While some women might have fewer than 8 periods a year, some don't get their period at all.

**Excess (Body) Hair Growth:** Fueled by male hormones, females with PCOS tend to have excess hair growth on their face and body - a condition known as hirsutism.

**Hormonal Acne:** Male hormones result in the secretion of excess oil that is likely to surface as acne on your face and upper back.

**Weight Gain:** This is one of the most common symptoms of PCOS. Over 80% of women who have PCOS are overweight/obese.

**Hair Loss/Thinning:** While body hair grows in excess, the hair on your scalp starts to get thinner - again, as a result of all the male hormones.

**Headaches:** There are many hormonal changes that happen to women who suffer from PCOS which can trigger headaches.

**Skin Darkening:** It is not uncommon to find dark patches of skin in women who have PCOS - especially on the neck, groin, and under the breasts.

---

### Causes of PCOS:

PCOS's actual cause is uncertain. However, there is a relationship between PCOD and low-grade inflammation, excess insulin, excessive male hormone production (Hyperandrogenism), and heredity. Furthermore, menarche at a young age, an unhealthy lifestyle, and pollution are all factors that lead to PCOS.

**Excess insulin:** Insulin is the hormone produced in the pancreas that allows cells to use sugar, your body's primary energy supply. If your cells become resistant to the action of insulin, then your blood sugar levels can rise and your body might produce more insulin. Excess insulin might increase androgen production, causing difficulty with ovulation.

**Low-grade inflammation:** The term is used to describe the production of substances to combat white blood cell infections. Studies show that women with PCOS can develop a type of mild inflammation that stimulates polycystic ovary to produce androgens, causing heart and blood vessel problems. Inheritance. Studies have shown that certain genes may be associated with PCOS.

**Excessive androgens:** The ovaries produce abnormally high levels of androgens, causing hirsutism and acne.

---

### Complications in PCOS:

- Gestational diabetes or pregnancy-induced high blood pressure.
- Infertility.
- Miscarriage or premature birth.
- Depression, anxiety and eating disorders.
- Non alcoholic steatohepatitis — a severe liver inflammation caused by fat accumulation in the liver.
- Metabolic syndrome — a cluster of conditions including high blood pressure, high blood sugar, and abnormal cholesterol or triglyceride levels that significantly increase your risk of cardiovascular disease.
- Type 2 diabetes or prediabetes.
- Sleep apnea.
- Abnormal uterine bleeding.
- Obesity is associated with PCOS and can worsen complications of the disorder.
- Cancer of the uterine lining (endometrial cancer).

---

### Types of Polycystic Ovary Syndrome (PCOS):

1. **Insulin-resistant PCOS:** This is the most common kind of PCOS. Smoking, sweets, pollution, and trans fat are all risk factors for this kind of PCOS. High insulin levels in this situation impede ovulation and lead the ovaries to produce testosterone. If your doctor has diagnosed you with borderline diabetes and your glucose tolerance test results were abnormal. You may have insulin resistance PCOS if you have high insulin levels and are overweight.
2. **Pill-induced PCOS:** This is the second most frequent kind of PCOS. It is caused by birth control medications that suppress ovulation. Most women experience only short-term effects and restart ovulating once the pill's effect has worn off. However, even when the pills' effects wear off, some women do not ovulate for months or years. During this time, women should see a doctor. If you had regular and normal periods before starting the tablets, this could indicate pill-induced PCOS. A blood test showing high LH levels could also be a symptom.
3. **Inflammatory PCOS:** Ovulation is hindered in PCOS due to inflammation, hormone imbalance, and the production of androgens. Stress, environmental pollutants, and inflammatory foods such as gluten all contribute to inflammation. You may have inflammatory PCOS if you have symptoms such as headaches, infections, or skin allergies, and your blood tests show that you are vitamin D deficient, your blood count is abnormal, and your thyroid levels are increased. **DO NOT TAKE STRESS!** Avoid inflammatory foods such as dairy, sugar, and wheat. Begin taking magnesium supplements, which are anti-inflammatory. The process of improvement takes roughly nine months because it is a sluggish procedure.

4. **Hidden PCOS:** This is a milder variant of PCOS that takes three to four months to resolve once the underlying cause is addressed. Hidden PCOS is caused by thyroid problems, iodine insufficiency (ovaries require iodine), a vegetarian diet (makes you zinc deficient, and the ovaries require zinc), and artificial sweeteners.

---

### **Treatment of PCOS:**

The cure for PCOS has yet to be discovered. The disease will be controlled by making lifestyle changes. A multidisciplinary approach involving a dietitian, gynaecologist, endocrinologist, dermatologist, and infertility expert is also required. The best way to control and manage PCOS is to maintain a healthy weight. Even a 5% weight loss can make a significant difference in the treatment of the disease.

As a result, PCOS patients must exercise regularly and eat a healthy diet. Sugars and carbohydrates should be limited in the diet. Patients suffering from PCOS should consume a lot of protein and fibre. The rest of the cure can be carried out according to the symptoms.

### **Review of Literature**

#### **Current aspect of Polycystic Ovary Syndrome - Victor Hugo Lopes DE Andrade et al. Rev Assoc Med Bras (1992):**

The primary goal of this study is to search the databases Pubmed and Scielo for publications on Polycystic Ovaries in order to determine its pathogenesis, clinical manifestations, diagnosis, and various therapeutic aspects, as well as its relationship with cardiovascular and arterial hypertensive disorders.

#### **Review related to risk factor - Rosenfield RL. The University of Chicago Pritzker School of Medicine, Department of paediatrics (2007):**

Polycystic ovary syndrome (PCOS) appears to be a complex trait caused by both heritable and nonheritable factors, according to the findings of this study. The purpose of this research is to look into whether or not risk factors for polycystic ovary syndrome (PCOS) can be identified in childhood. Childhood has been identified as an independent prepubertal risk factor for the development of polycystic ovary syndrome. During adolescence, polycystic ovary syndrome can manifest as physiological adolescent anovulation. As our understanding of the disorder's basis improves, identifying children at risk for polycystic ovary syndrome offers the possibility of preventing some of the syndrome's long-term complications.

#### **Review related to Treatment - Moran LJ, Pasquali R, (2009):**

According to the study, for women with polycystic ovary syndrome, lifestyle management should be used as the primary therapy with or without overweight and for the treatment of metabolic complications.

#### **Review related to Treatment - Jeans YM, (2009):**

They conducted an experimental study on the dietary management of women with polycystic ovary syndrome in the study (PCOS). They conclude that many overweight women were not following a diet to promote weight loss, which has an impact on polycystic ovary syndrome treatment.

#### **Review related to polycystic ovary syndrome - Minerva Pediatr (2010):**

PCOS is a complex disorder characterized by high levels of androgens in the female ovary and, in the majority of cases, insulin resistance. Among the clinical manifestations are menstrual irregularities, acne, alopecia, and hirsutism. Although it typically manifests itself around puberty, a number of risk factors in childhood may contribute to a high index of suspicion for PCOS development in adolescents. The pathophysiology of PCOS is unknown, but it is likely caused by a combination of genetic factors, insulin resistance, and environmental factors. In suspected cases, additional testing or exercises are required, and several management options have been proposed. Because PCOS is associated with a variety of long-term complications Early diagnosis and therapeutic intervention are recommended in these cases. PCOS is a complicated trait with a significant genetic component.

#### **The prevalence of polycystic ovary syndrome - Ritu Deswal, Vinay narwal, Amita Dang, Chandra S Pundir (2020):**

Polycystic ovary syndrome (PCOS) is a common problem among women of reproductive age all over the world. The purpose of this study is to compile the most recent data on the prevalence of polycystic ovary syndrome (PCOS). This study shows that there is a lack of agreement about different levels of hyperandrogenism, as well as less or limited information about different levels of androgens during the adolescent period. As a result, determining androgen system abnormality is challenging. Many polycystic ovary syndrome treatments may be available to reduce the severity of clinical manifestations.

#### **Polycystic ovary syndrome and female reproduction - Robert A. Wild (1 May 2022):**

Women with PCOS appear to have a higher prevalence of cardiovascular risk factors, insulin resistance/diabetes, and/or uterine pathology, though more outcome studies are needed to determine the incidence. The information on some of the long-term health consequences of PCOS is summarized. We searched Medline, Current Contents, and PubMed for studies from the time we became interested in this issue in 1980 to the present. The examination is restricted to publicly available human data. Women with this syndrome, according to the current literature, have a high risk of premature morbidity and mortality. Long-term health outcomes require large multi-site collaborative studies.

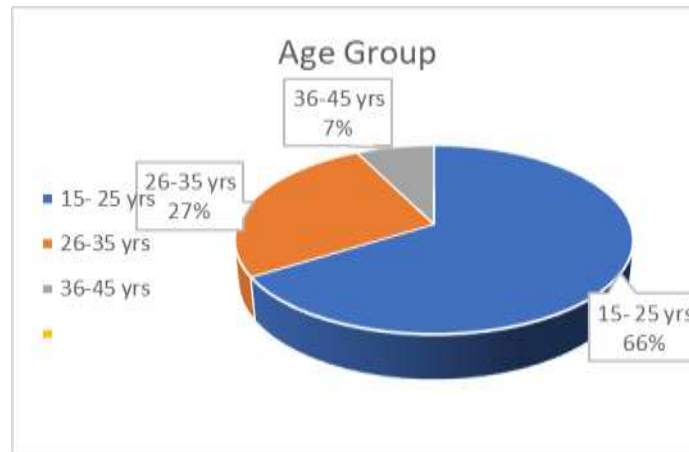
## Data Analysis and Interpretation

### Age of the respondents:

SR NO.	AGE OF RESPONDENT	FREQUENCY	PERCENTAGE (%)
1.	15 – 25 years	80	66.1
2.	26 – 35 years	32	26.4
3.	36 – 45 years	9	7.4
<b>Total</b>		<b>121</b>	<b>100%</b>

In the above table, the percentage of age groups has been shown. This table shows that out of 121 respondents, 66% of women are of 15-25 years of age, 26.4% of women are of 26-35 years of age, and 7.4% of women are of 36-45 years of age.

So, it can be seen that the majority of women (66.1%) are of the 15-25 age group.

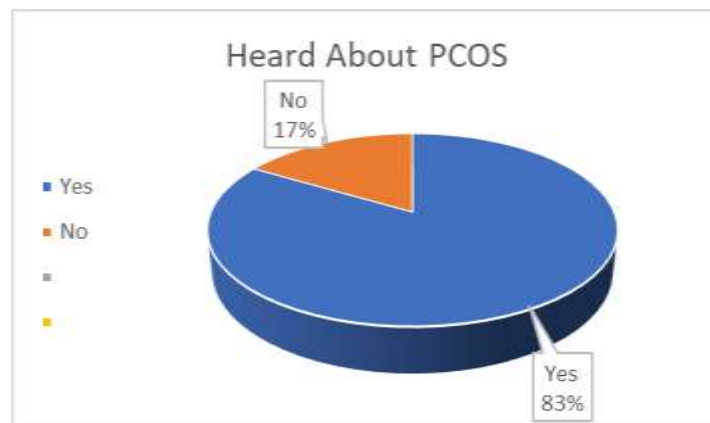


### Percentage of Women Heard About PCOS:

SR NO.	HEAR ABOUT PCOS	FREQUENCY	PERCENTAGE (%)
1.	Yes	101	83.5
2.	No	20	16.5
<b>Total</b>		<b>121</b>	<b>100%</b>

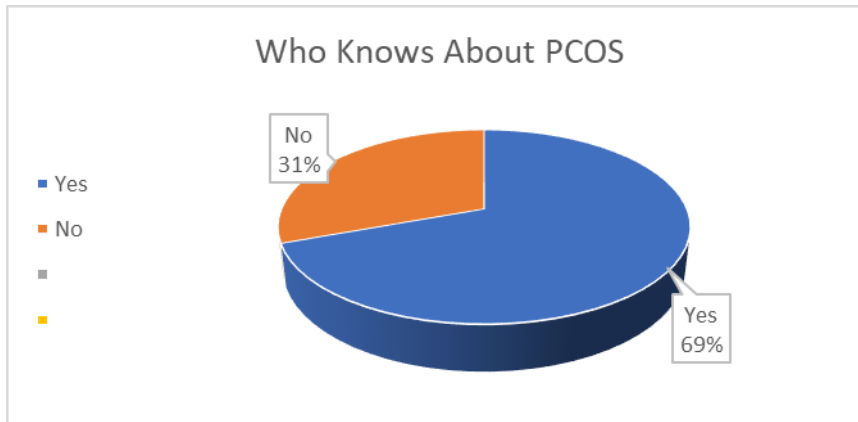
In the above table, the percentage of women who have heard about PCOS has been shown. This table shows that out of 121 respondents, 83.5% of women have heard about PCOS, and 16.5% of women are there who have not heard about PCOS.

So, it can be seen that the majority of women (83.5%) have heard about PCOS.



### Percentage of Women Who Knows About PCOS:

SR NO.	WHO KNOWS ABOUT PCOS	FREQUENCY	PERCENTAGE (%)
1.	Yes	84	69.4
2.	No	37	30.6
<b>Total</b>		<b>121</b>	<b>100%</b>

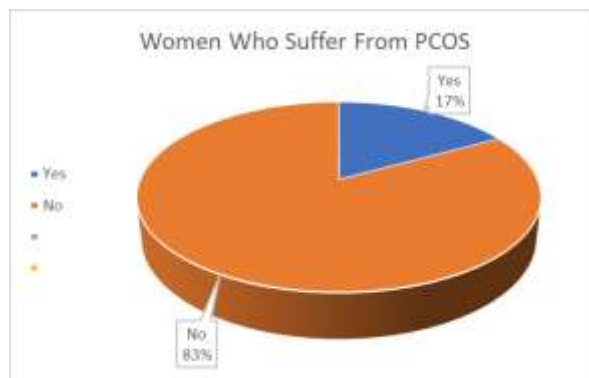


In the above table, the percentage of women who knows about PCOS has been shown. This table shows that out of 121 respondents, 69.4% of women know about PCOS, and 30.6% of women know about PCOS.

So, it can be seen that the majority of women (69.4%) are aware of PCOS.

#### Percentage of Women Suffer From PCOS

SR NO.	WOMEN WHO SUFFER FROM PCOS	FREQUENCY	PERCENTAGE (%)
1.	Yes	19	17
2.	No	93	83
<b>Total</b>		<b>112</b>	<b>100%</b>



In the above table, the percentage of women who suffer from PCOS. This table shows that out of 121 women, 17% of women are suffering from Polycystic Ovary Syndrome and 83% of women are not suffering from Polycystic Ovary Syndrome.

So, it can be seen that the majority of women (83%) are not suffering from Polycystic Ovary Syndrome.

## Research Methodology

- **Title:**

“A study on awareness of Polycystic Ovary Syndrome (PCOS) amongst the women”

- **Subtitle:**

“A study on awareness of polycystic Ovary Syndrome (PCOS) amongst the 120 women in Vadodara City”

- **Significance of the Study:**

Polycystic ovary syndrome is a very common disease that affects one out of every two women today. The disorder exists in the majority of women, but they are unaware of it. It is a common hormonal condition in which male hormone production increases. It could be caused by both genetic and environmental factors. This problem is especially prevalent during the reproductive years. Polycystic ovary syndrome is a serious medical condition that cannot be cured; however, symptoms can be managed with proper treatment or medical attention.

Many women have PCOS or suffer from it but are unaware of it. So, the study's objective is to increase awareness among women. And to find out how many women are aware of PCOS. Many women will learn about PCOS as a result of this study, and if they suffer from it, they will be treated.

- **Main Objectives:**

To study on awareness of Polycystic Ovary Syndrome (PCOS) among the women.

- **Sub Objective:**

1. To spread awareness of Polycystic Ovary Syndrome (PCOS).
2. To study the impact of Polycystic Ovary Syndrome (PCOS) on women.
3. To improve and change the thinking of women.
4. To gain more knowledge about Polycystic Ovary Syndrome.

- **Research Design:**

The conceptual framework within which research is conducted; it serves as the blueprint for data collection, measurement, and analysis. It is systematic planning that leads to research. It is the process of gathering, analysing, and interpreting data. The goal of this study was to raise awareness. So, the research design is exploratory design.

- **Universe:**

The universe for this study consists of Vadodara city.

- **Sample/Sampling:**

Here, the researcher has used the method of simple random sampling method and selected 120 respondents from urban areas which are randomly selected.

**Variables:**

They are two types of variables independent and dependent

**Independent variable**

Independent variable includes personal information like Age, education, occupation, marital status etc.

**Dependent variable**

The dependent variable includes information related to awareness of Polycystic Ovary Syndrome (PCOS), its impact on women etc.

- **Tool for the Data Collection:**

**Primary Data:**

Interview schedule

**Secondary Data:**

Internet, previous dissertations, journals, and articles.

- **Limitation of the Study:**

In this study, the limitation is within the Vadodara district. The study is related to the awareness within the women and to study the cause of Polycystic Ovary Syndrome (PCOS).

---

**Findings**

- Majority of the women (66.1%) are in 15-25 years of age.
- Majority of the women (56.2%) are graduated.
- Majority of the women (60.3%) are students.
- Majority of the women (70.2%) are single.

- Majority of the women (83.5%) are aware of polycystic ovary syndrome and heard about this disorder.
- Majority of the women (54.5%) are those who heard about polycystic ovary syndrome from the internet.
- Majority of women (69.4%) are aware of Polycystic Ovary syndrome.
- Majority of women (79%) know the full form of PCOS.
- Majority of women (90.8%) are knowing the right full form of PCOS, which is Polycystic Ovary Syndrome.
- Majority of the women (53.8%) know that PCOS and PCOD are not the same.
- Majority of women (70.1%) Are not suffering from Uncertain periods.
- Majority of women (83%) are not suffering from Polycystic Ovary Syndrome.
- Majority of women (75.3%) have not gone to Gynecologist.
- Majority of women (90.3%) don't have a family history of Polycystic Ovary Syndrome.
- Majority of the women (62.1%) are those whose family members or friends are not suffering from Polycystic Ovary Syndrome.
- Majority of women (46.5%) are not sure that Polycystic Ovary Syndrome is a curable disease.
- Majority of women (52.6%) are aware that PCOS is Treatable.
- Majority of women (76.6%) don't know that PCOS is a life-long disease.
- Majority of women (91.9%) know the real about PCOS is that PCOS is a hormonal Disorder which is common amongst women.
- Majority of the women (67%) know the symptoms of PCOS.
- Majority of women (91%) responded to Irregular periods, Weight gain, Excessive Hair Growth, and Acne.
- Majority of women (51.3%) know that Pregnancy is affected due to PCOS.
- Majority of women (54.2%) respond to a communicable type of PCOS.
- Majority of women (45%) are not sure that PCOS is Genetic.
- Majority of women (77.7%) responded YES for PCOS affecting weight.
- Majority of women (41.7%) know that PCOS causes pain.
- Majority of women (81.4%) responded YES that PCOS can be managed through Diet and Exercise.
- Majority of women (91.3%) responded YES that every girl or woman should know about PCOS.
- Majority of women (64%) responded YES that they got aware of PCOS after completing this survey.

## Reference

<https://www.medicalnewstoday.com/articles/323002#seeing-a-doctor>

<https://www.nightingales.in/blog/womens-health/pcod-causes-symptoms-and-treatment/>

<https://www.health.qld.gov.au/news-events/news/7-signs-you-might-have-polycystic-ovarian-syndrome>

<https://www.eatright.org/health/pregnancy/fertility-and-reproduction/polycystic-ovarian-syndrome>

[https://www.google.com/search?q=pcos&rlz=1C1CHBD\\_enIN901IN901&oq=pcos&aqs=chrome..69i57j0i13i433i512j0i433i512j0i512j0i433i512j0i433i512j0i433i512j0i512j0i13i433.7529j0j15&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=pcos&rlz=1C1CHBD_enIN901IN901&oq=pcos&aqs=chrome..69i57j0i13i433i512j0i433i512j0i512j0i433i512j0i433i512j0i433i512j0i433i512j0i512j0i13i433.7529j0j15&sourceid=chrome&ie=UTF-8)

<https://my.clevelandclinic.org/health/diseases/8316-polycystic-ovary-syndrome>

<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.istockphoto.com%2Fphotos>

<https://www.eatright.org/health/pregnancy/fertility-and-reproduction/polycystic-ovarian>

<https://www.nightingales.in/blog/womens-health/pcod-causes-symptoms-and-treatment/>

[https://www.news-medical.net/health/Polycystic-Ovary-Syndrome-\(PCOS\)-Irregular](https://www.news-medical.net/health/Polycystic-Ovary-Syndrome-(PCOS)-Irregular)

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwinx>