

# PCOS

## Polycystic Ovary Syndrome

A brief exploratory analysis of a PCOS case study

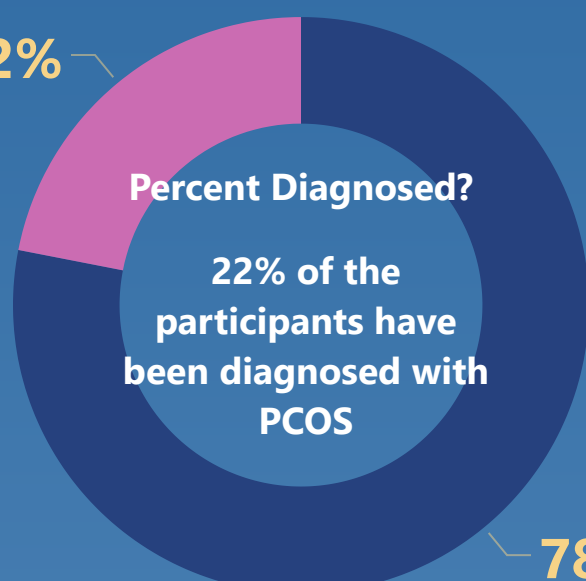


### What is PCOS?

Polycystic Ovary Syndrome (**PCOS**) is a common health problem caused by an imbalance of reproductive hormones. The exact cause is unknown but it usually starts during adolescence and the symptoms fluctuate over time.

- Affects an estimated 8–13% of reproductive-aged women
- **Up to 70% of affected women remain undiagnosed worldwide**
- PCOS is a leading cause of infertility and is associated with a variety of long-term health problems that affect both physical and mental wellbeing

22%



78%

### The Case Study



465

Total Participants

The dataset for analysis was initially collected by a team of final-year engineering students via a Google survey as part of a research project that focused on a risk prediction system.

Despite the small size of only 465 participants, the dataset still offers a significant window into PCOS and it's symptoms. It also sheds light on important insights that can aid future research.

For access to the original dataset, please refer to the link provided at the bottom of the dashboard.

Below 19 Yrs



20-35 Yrs



35-50 Yrs



50+ Yrs

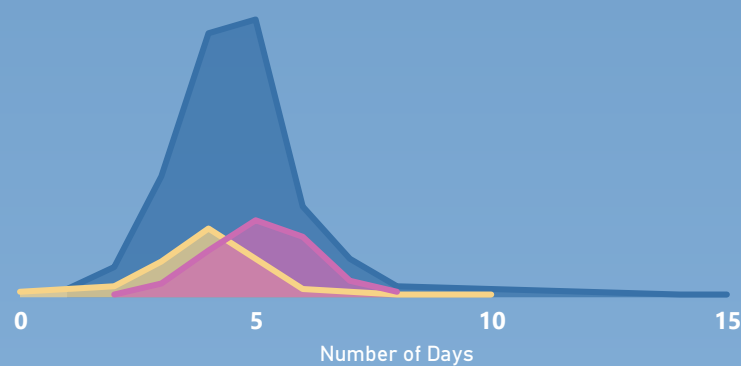


The focal point of the analysis centers around the 20-35 year age group as it makes up over 60% of the participants. The 50+ segment is limited possibly due to the onset of peri-menopause/menopause. More participant information would be need to make an accurate assessment. Peri-menopause marks the time when the ovaries begin producing less hormones and Menopause is when a woman's menstrual cycle stops. Due to the decrease in hormones, the symptoms may be less frequent.

### Effects & Symptoms of PCOS

#### Menstrual Cycle Duration

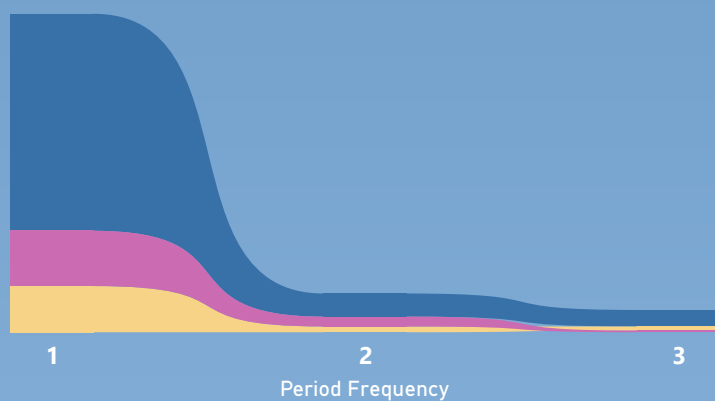
Age Group Ran... ● 20-35 ● 35-50 ● 5-20



Those in the 50-65 age range are not show in the above charts as the data for that range was negligible.

#### Menstrual Cycle Frequency

Age\_Range\_Grps ● 20-35 ● 35-50 ● 5-20



We can see that periods generally last between 4-6 days (**Duration** graphic) among all the age groups shown. The **Frequency** graphic shows that the majority of participants get a period every month. Unfortunately, the variables 2 & 3 were not given a definition but they could represent more irregularity.

Along with fatigue, depression and pelvic pain, below are some of the more common symptoms of PCOS and the percentage of the study that responded 'Yes' to having them.

To see the data by diagnosis, select from dropdown

Diagnosed?

All

Age\_Range\_Grps

Select all	20-35	35-50	50-65	5-20
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Acne

41.3%

Jaw line, chest & back



Weight Gain

50.1%

Unexplained gaining



Moods

76.1%

Mood Swings



Exercise?

28.6%

On a regular basis



Fast Food

35.9%

As part of regular diet



Hair Growth

26.5%

Excessive body/facial hair



Hair Loss

61.9%

Hair loss/thinning



Skin Issues

33.8%

Darkened/velvety patches



Regularity

78.5%

Periods occur regularly

#### Resources used:

Dataset Link: [PCOS 2023 Dataset \(kaggle.com\)](https://www.kaggle.com/datasets/pcos2023/pcos-2023-dataset)

<https://www.womenshealth.gov/a-z-topics/polycystic-ovary-syndrome>

<https://www.who.int/news-room/fact-sheets/detail/polycystic-ovary-syndrome>