

# PCOS

## Polycystic Ovary Syndrome

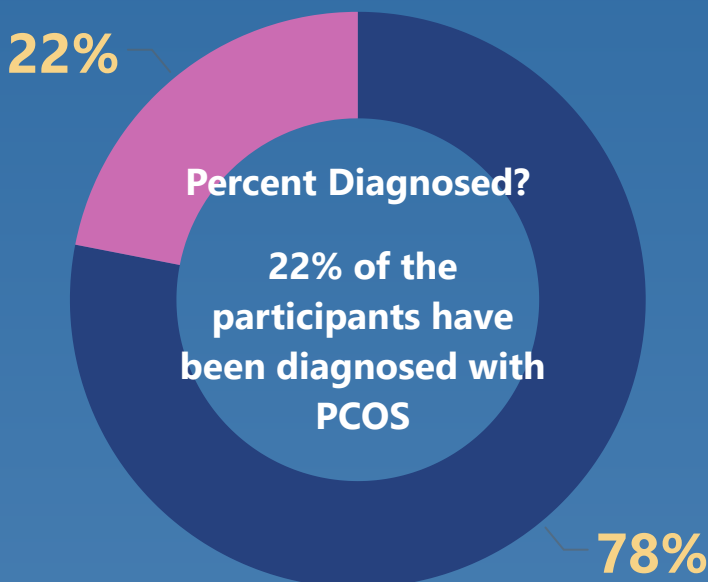
A brief exploratory analysis of a PCOS case study



### 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%
- **Up to 70% 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



### 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 its 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.

Breakdown of Participant Ages:

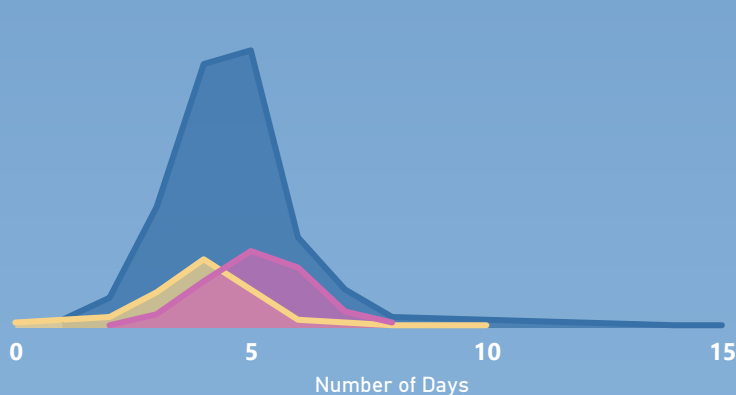


The focal point of the analysis centers around the 20-35 year age group as it makes up over 60% of the participants. The 50+ segment is limited possibly due to the onset of peri-menopause/menopause. More participant information would be needed to make an accurate assessment. Peri-menopause marks the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

### Effects & Symptoms of PCOS

#### Menstrual Cycle Duration

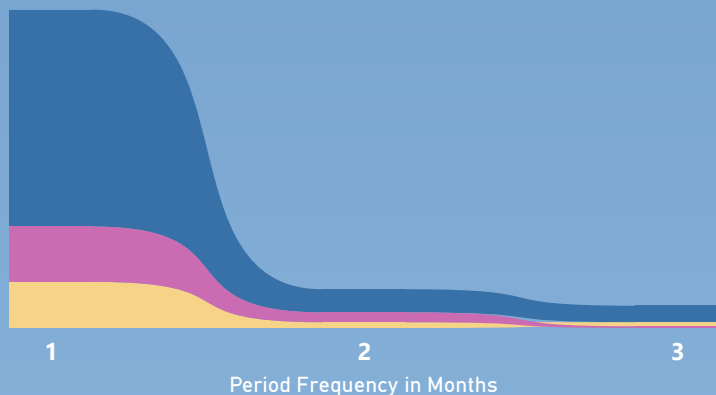
Age Group Ran... ● 20-35 ● 35-50 ● Under 20yrs



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 ● Under 20yrs



We can see that periods (*menstrual cycles*) 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. (2) Menstrual cycle occurs after 2 months and (3) menstrual cycle occurs after 3 months.

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	Under 20yrs
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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>