

A Review on Health Care Surveillance of PCOD

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Abstract

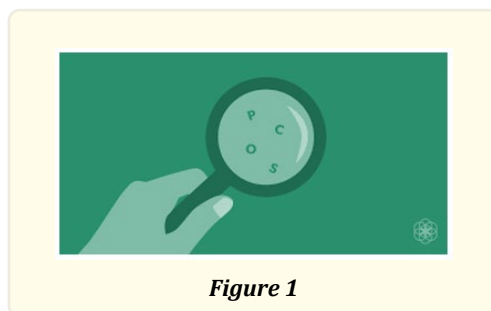
The "Healthcare Surveillance of PCOD" study aims to understand the prevalence, symptoms, management strategies, and perceptions of PCOD among patients. Findings indicate that PCOD predominantly affects unmarried women in the age group of 18-25 years, with the most common symptoms being irregular periods, weight gain, acne, hirsutism, hair loss, and infertility. The majority of patients sought medical intervention, with a significant proportion opting for medication and diet and exercise. The perception regarding management of PCOD through lifestyle changes varied, with some believing it to be effective, while others expressed scepticism. Lifestyle changes were adopted by a majority of patients, with varying levels of success reported.

Keyword: PCOD; irregular periods; hair loss

Introduction of pharmacovigilance in accordance with PCOD/PCOS

The introduction of pharmacovigilance in accordance with PCOD involves establishing a systematic approach to monitor and report any adverse effects associated with the use of drugs used to treat PCOD. This includes collecting, analysing, and reporting data on the safety and effectiveness of these medications, identifying any new or rare adverse effects, and ensuring that appropriate measures are taken to manage them. It could also involve the communication of safety information to healthcare professionals and patients to ensure safe and Effective use of these drugs.

In the International Classification of Diseases (ICD), PCOD (Polycystic Ovary Syndrome) is classified under the category of endocrine, nutritional, and metabolic diseases. Specifically, PCOD is assigned the code E28.2 in the 10th revision of the ICD (ICD-10).



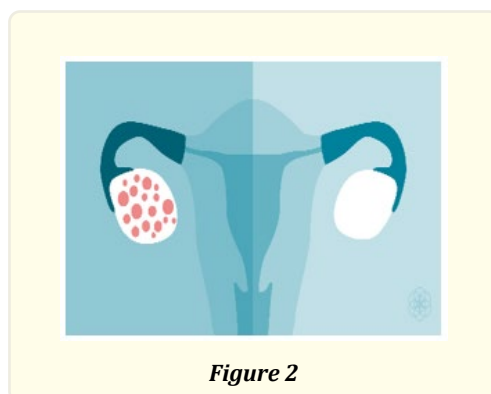
Pharmacovigilance is important in PCOD because many women with this condition may be prescribed medications such as hormonal contraceptives, metformin, or other drugs to manage their symptoms. PCOD is often treated with a combination of medications, including oral contraceptives, insulin sensitizers, and anti-androgens. These medications can have potential adverse effects and interactions with other drugs. Therefore, these risks are needed to be monitored and managed appropriately.

Some medications commonly used to treat PCOD, such as metformin, have been associated with adverse effects such as gastrointestinal disturbances and lactic acidosis. Other medications, such as clomiphene citrate, may increase the risk of ovarian cancer. Therefore, it is important to monitor and report any adverse effects/ ADR's associated with the use of these medications.

Pharmacovigilance activities in the context of PCOD may include:

- Monitoring of adverse events associated with medications used to treat PCOD.
- Collecting and analysing data on the safety and effectiveness of these medications.
- Reporting adverse events to regulatory authorities.
- Educating healthcare professionals and patients about the risks and benefits of medications used to treat PCOD.
- Developing and implementing risk management plans to minimize the risks associated with these medications.

Polycystic Ovarian Disease



Polycystic Ovary Syndrome is also known as Polycystic Ovarian Disease (PCOD), Stein-Leventhal Disease, Sclerocystic Ovarian Disease and Ovarian Dysmetabolic Syndrome. It has a complex pathophysiology and is one of the commonest endocrine metabolic disorders affecting 6-10% of women in their reproductive age (Figure 3) (Roger et al., 2004).

PCOD is the most common endocrine disorder in women of reproductive age and is the most common cause of infertility due to ovulation. It is a hormonal disorder that affects between 5% and 10% of women in their reproductive years and is characterized by

elevated levels of male hormones (androgens), acne, and hirsutism. It can also cause IR, anovulation, and infertility on prolonging incidence of cysts. The most common symptoms of PCOD are obesity, acne, amenorrhea, irregular menstrual cycles, hirsutism, insulin resistance (IR), and high cholesterol. It is a major disorder characterized by elevated levels of male hormones (androgens), acne, and hirsutism, and can even cause IR, anovulation, and infertility on prolonging incidence of cysts. There is a growing interest in herbal remedies or allopathic medication to cure PCOD, and there is a need to change lifestyle management and diet to control the PCOD level.

Levels and mechanism of PCOD

There are several levels and mechanisms that are involved in the development and progression of polycystic ovary syndrome (PCOS) such as:

1. **Hormonal imbalances:** Women with PCOS have higher levels of androgens (male hormones) and lower levels of progesterone (a female hormone) than normal. This hormonal imbalance can lead to irregular menstrual cycles, acne, and other symptoms of PCOS.
2. **Insulin resistance:** Many women with PCOS also have insulin resistance, which means that their bodies are less able to use insulin effectively. This can lead to high levels of insulin in the blood, which can contribute to the development of PCOS.
3. **Inflammation:** Chronic low-grade inflammation may also play a role in the development of PCOS, as it can affect insulin sensitivity and hormone production.
4. **Genetic factors:** PCOS may be hereditary, with a higher incidence of the condition observed in families.
5. **Environmental factors:** Exposure to environmental toxins, such as endocrine disruptors, may also contribute to the development of PCOD.

The combination of these factors can lead to the formation of multiple small cysts on the ovaries, which is a hallmark of PCOD. These cysts can interfere with ovulation and lead to infertility. In addition, the hormonal imbalances associated with PCOD can cause a variety of other health problems, such as type 2 diabetes, heart disease, and certain types of cancer. Treatment for PCOD typically involves a combination of lifestyle modifications, medications, and fertility treatments, as appropriate for the individual patient.

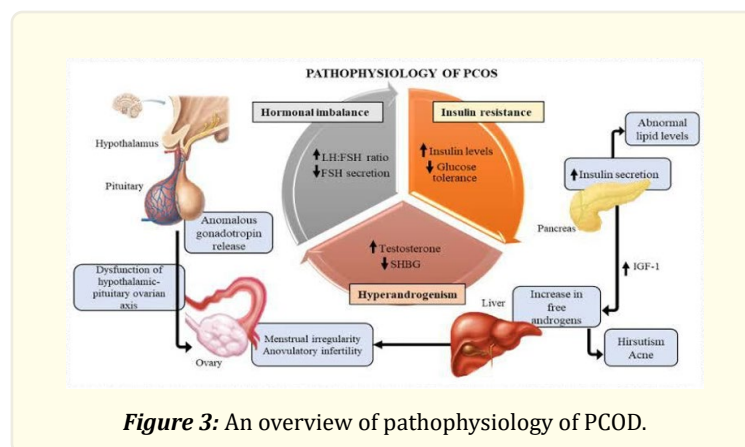


Figure 3: An overview of pathophysiology of PCOD.

History of PCOD

The condition was first described in 1935 by American gynaecologists Irving F. Stein, Sr. and Michael L. Leventhal, from whom its original name of 'Stein-Leventhal syndrome' is taken (Marrinan et al., 2011; Richard, 2011). Both gynaecologists were born in Chicago, both were graduates of Rush Medical College, and spent their entire professional careers at the Michael Reese Hospital (Speert, 1996).

Both these scientists reported seven women, four of whom were obese, presented with problems of amenorrhea, anovulation, hirsutism and bilateral enlarged polycystic ovaries with thickened tunica. All seven resumed regular menses and two became pregnant

after bilateral ovarian wedge surgery, involving the removal of one-half to three-fourths of each ovary.

Later on, Stein reported another 75 women who also underwent wedge resection; 90% of whom responded to have regular menstrual flow and 65% of them conceived (Stein et al., 1948). Stein and Leventhal developed the wedge resection procedure after observing a resumption of menstrual flow, following ovarian biopsy in several patients with amenorrhea. They speculated that the thickened ovarian capsule prevented follicles from reaching and escaping from the surface of the ovary.

However, the history of the disorder can be traced back to 1721 in an Italian (Kovacs et al., 2007) print out which reads as:

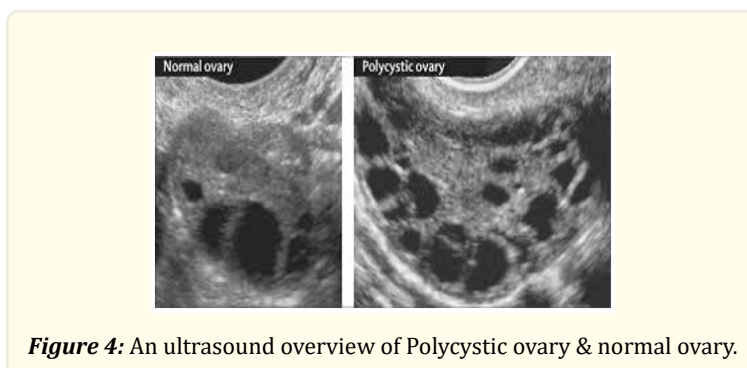
Young married peasant women, moderately obese and infertile with two larger than normal ovaries, bumpy, shiny, and whitish, just like pigeon eyes.

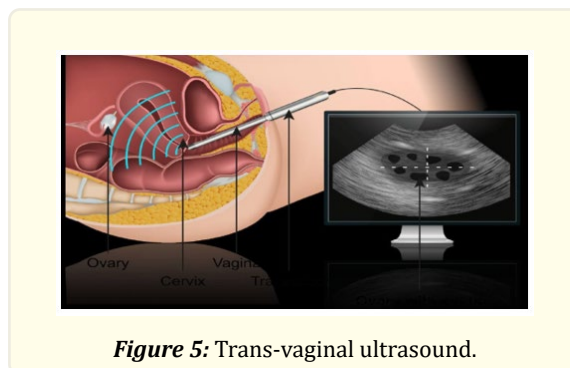
Despite the original description of PCOS by Stein and Leventhal in 1935, it was not known until 1980 when Yen postulated that PCOS is a disorder that begins at menarche and whose characteristics are not changed by age (Stein et al., 1935; Yen, 1980).

Diagnosis of PCOD

The diagnostic criteria for PCOS can vary slightly depending on the medical guidelines being followed, but typically include the following:

1. **Symptoms:** PCOS is characterized by a combination of signs and symptoms, which may include irregular menstrual cycles, heavy or prolonged periods, acne, excessive hair growth (hirsutism), weight gain, and/or difficulty getting pregnant.
2. **Physical examination:** A physical examination by a healthcare provider may reveal physical signs of PCOS, such as acne, hirsutism (excessive hair growth), and/or an enlarged ovary.
3. **Medical history:** Your healthcare provider may ask you about your menstrual history, including the regularity of your periods, any past or current medical conditions, and family history of PCOS or other hormonal disorders.
4. **Blood tests:** Blood tests may be conducted to measure hormone levels, including levels of luteinizing hormone (LH), follicle-stimulating hormone (FSH), estrogen, progesterone, and testosterone. Elevated levels of certain hormones, such as LH and testosterone, may be indicative of PCOS.
5. **Imaging studies/ pelvic examination:** An ultrasound may be performed to visualize the ovaries and look for the presence of cysts. However, the presence of cysts alone is not sufficient for a PCOS diagnosis, as cysts can be present in other conditions as well.
6. **Trans-vaginal ultrasound:** An ultrasound can check the appearance of your ovaries and the thickness of the lining of your uterus. A wand like device (transducer) is placed in your vagina. The transducer emits sound waves that are translated into images on a computer screen.
7. **Exclusion of other conditions:** Other conditions with similar symptoms to PCOS, such as thyroid disorders, adrenal gland disorders, and other hormonal imbalances, should be ruled out through appropriate testing.





Material and Method

Study design: OPD Patient based health care surveillance.

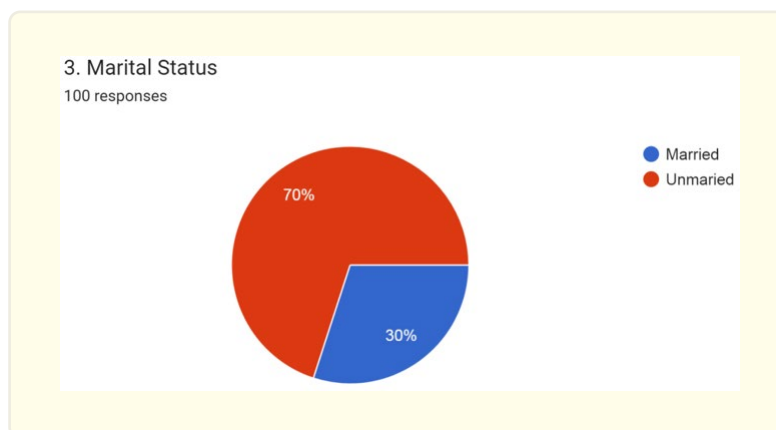
Methodology: The study was done in different hospitals. After the approval of particular gynecologist, hospital administration as well as patient available.

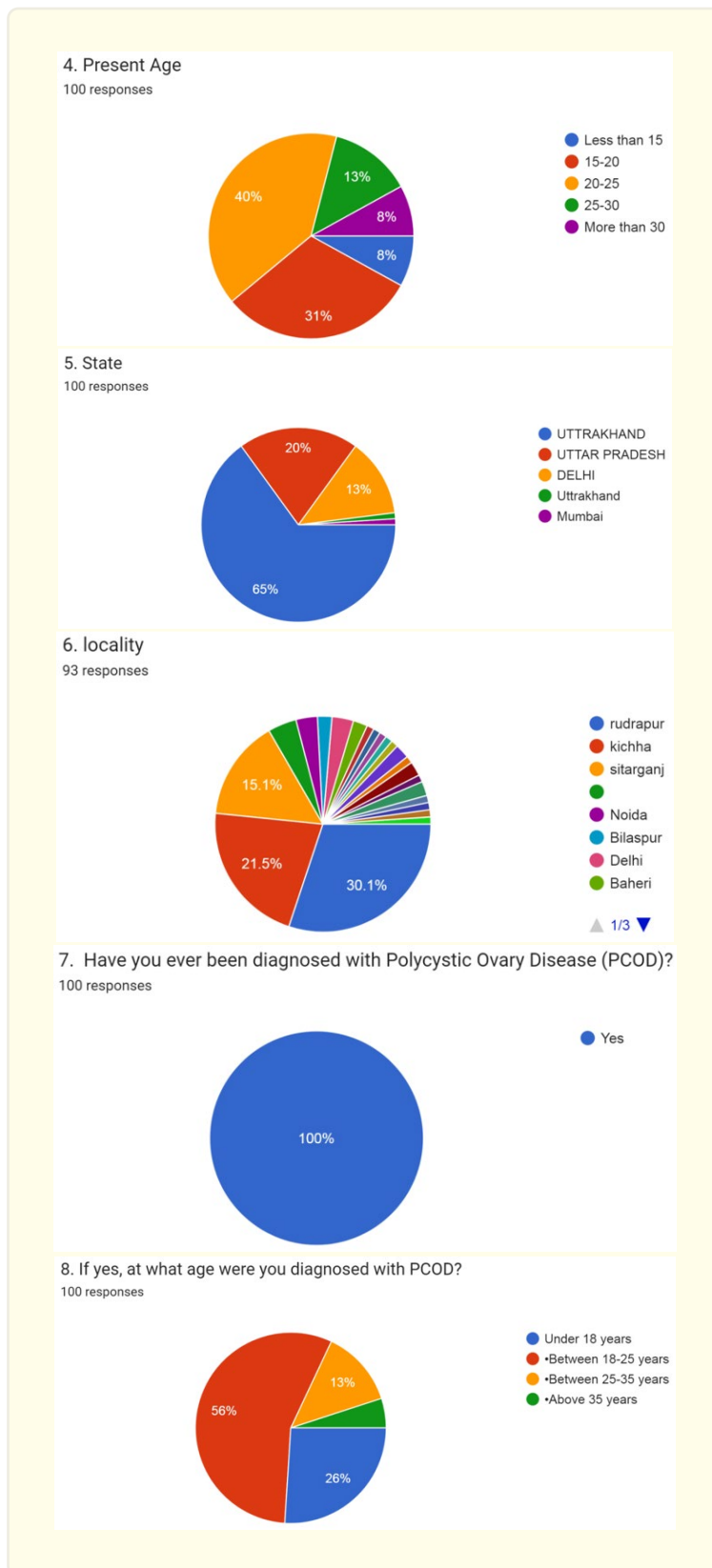
The data by patient contains(wrt. Disease):

- Age.
- Family history.
- Underlying disease.
- Their lifestyle habits.
- Prescribed drug + others.
- The side effects of drug with its efficacy.

Result and Discussion

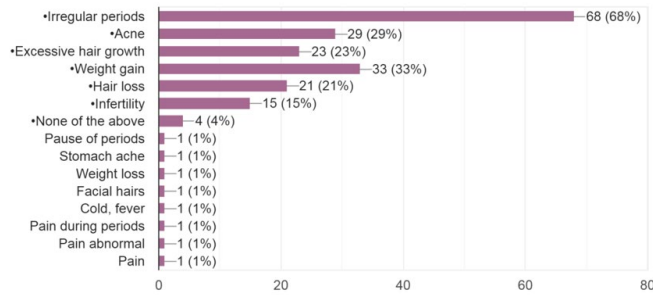
As a part of my project I had done this survey on pcod patients with the help of some questions I had collected the data of approx 100 patients and the outcome was as follows:





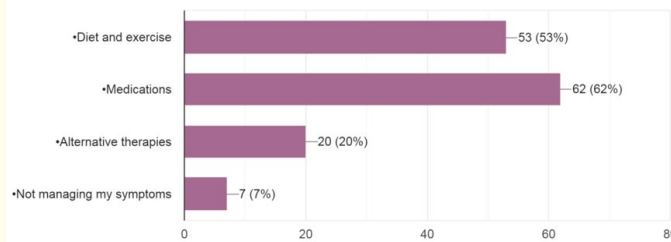
9. What are the symptoms you have experienced related to PCOD?

100 responses



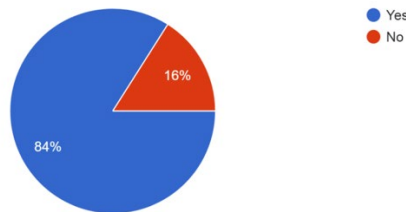
10. How do you manage your PCOS/PCOD symptoms?

100 responses



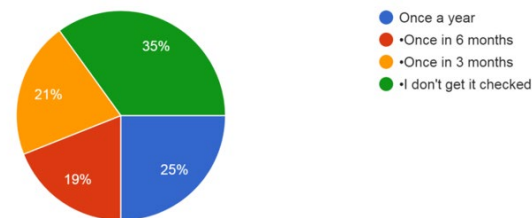
11. Have you ever consulted with a gynecologist or endocrinologist for your PCOD?

100 responses



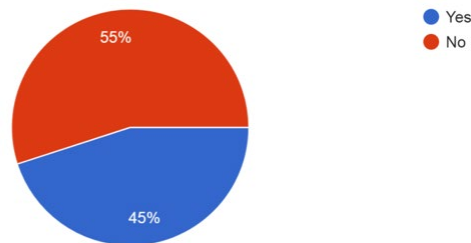
12. How often do you get your hormonal levels checked?

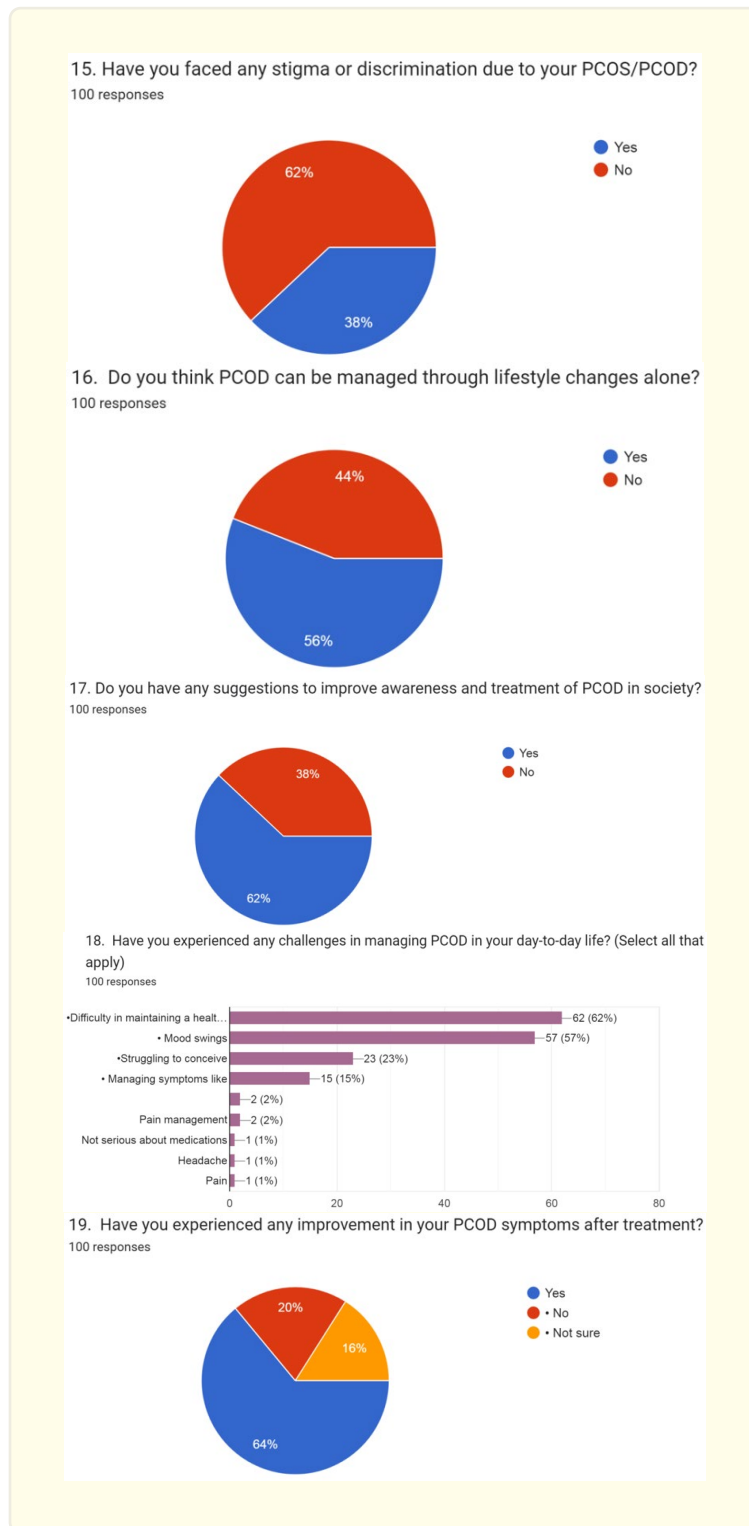
100 responses



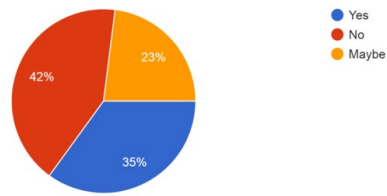
14. Do you believe there is enough awareness about PCOD in society?

100 responses

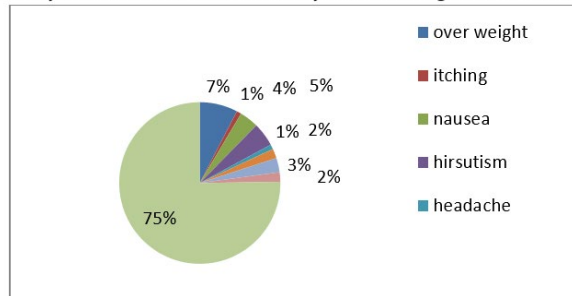




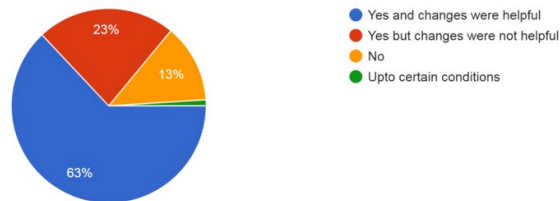
20. Have you experienced any side effects from the treatments you received for PCOS/PCOD?
100 responses



21. If yes than what are the side effects you faced during and after the treatment.

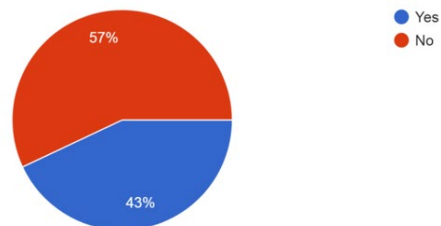


22. Have you made any lifestyle changes, such as diet or exercise, to help manage your PCOS/PCOD? If so, have these changes been helpful?
100 responses



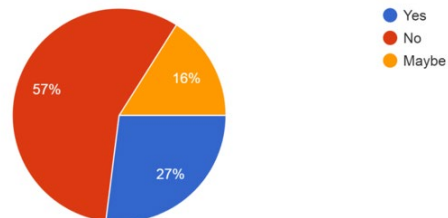
23. Do you take any herbal medicine.

100 responses



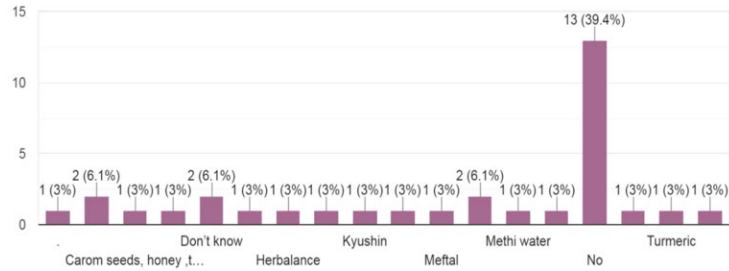
24. If yes, then are those medicines helpful.

100 responses



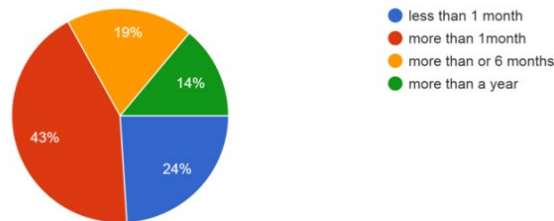
25. If yes than Name of the herbal drug you take.

33 responses



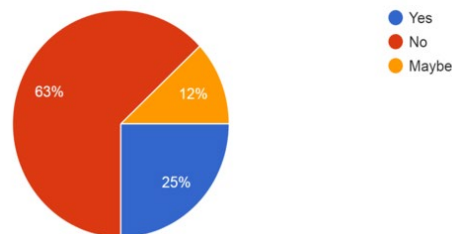
26. How long you had been taking the PCOD medicine

100 responses

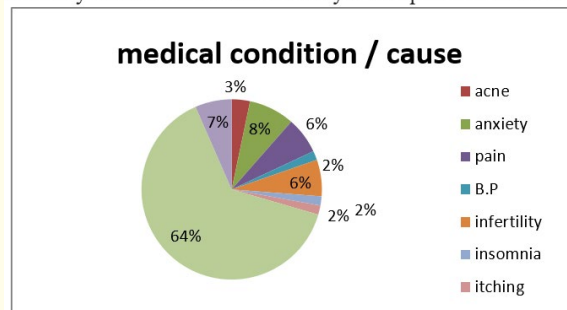


27. Do you have any family history related to PCOD?

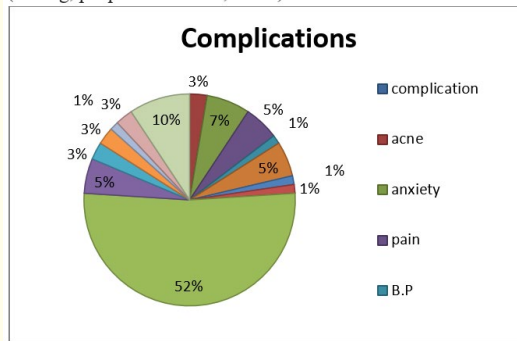
100 responses



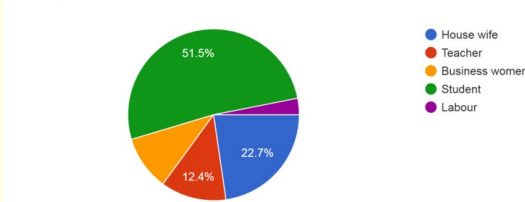
28. what were the cause of PCOD according to you and do you have any other medical condition? If yes then please mention below?



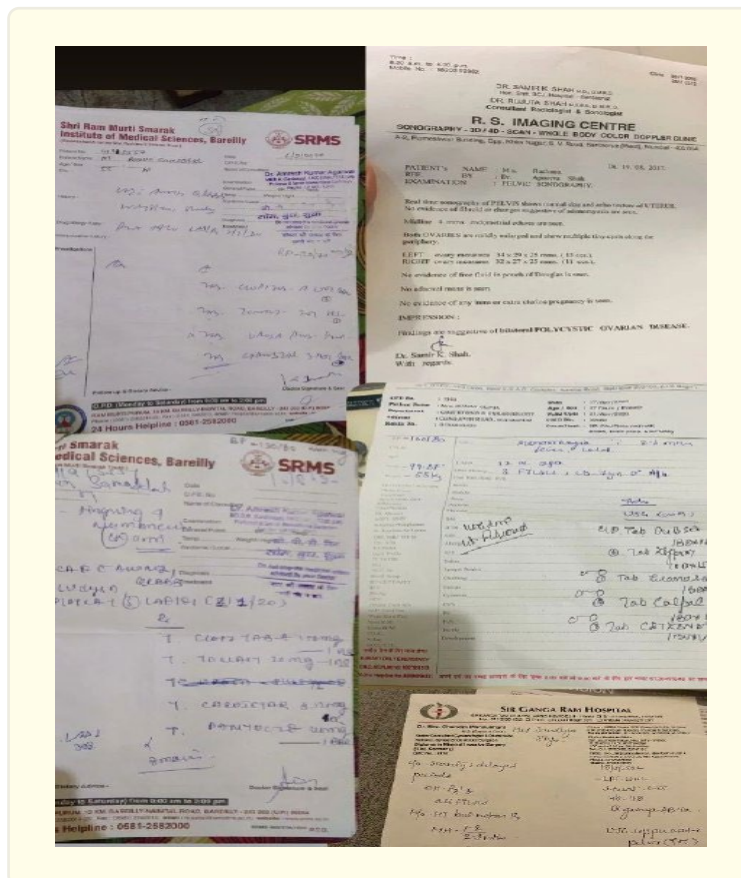
29. what were the complications during your treatment.
(feeling, people interaction, stress)

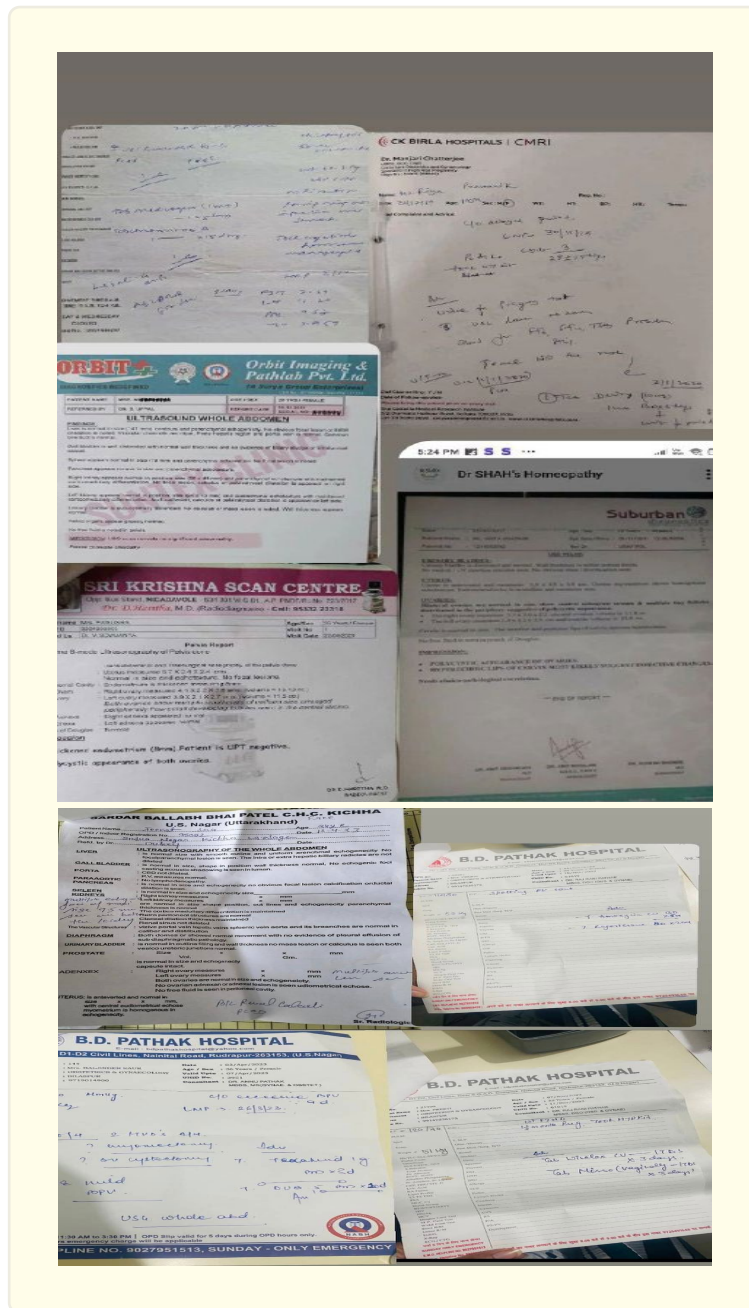


30. Profession
97 responses



Prescription





Conclusion

According To The Survey It Was Concluded That:

- Maximum PCOD Patients Were Teenagers (18-25yrs) And Were Students.
- The Major Problem Patients Faced Was Irregular Periods & Unhealthy Weight.
- Maximum Patients Had Adopted Medication For Their Treatment With The Combination Of Diet And Exercises.
- There Is Not Enough Awareness In The Society About PCOD & Due To Which Some Patients Had Also Faced Discrimination, As Well As Patients Do Not Have Proper Awareness About Their Hormonal Level Check-up.

- For Maximum Patients The Cause Of Their PCOD Was Their Improper Diet, Stress As Well As Junk Food And For A Few Patients.
- Mainly Used Drugs For The Treatment Were Metformin, Clomiphene, Dubset.
- Some Patients Had Also Adopted Herbal Medication For Their Treatment.
- Patients Faced Challenges In Their Pain Management, Mood Swings, Weight Management, & Struggling To Conceive.
- Some Of The Patients Had Faced Certain Side Effects From The Medications Such As- Abnormal Bleeding, Hirsutism, Anxiety, Nausea, Stomach Pain.

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