

Prevalence and Risk Factors of Polycystic Ovarian Syndrome Among Women



A dissertation submitted to the department of the pharmacy, Daffodil International University in the partial fulfilment for the degree of Masters of pharmacy (M.Pharm)

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APPROVAL

This project paper “A survey on Polycystic Ovarian Syndrome submitted to the Department of Pharmacy, Faculty of Allied Health Science, Daffodil International University, has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of masters of Pharmacy.

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DECLARATION

This is to confirm that the findings of the inquiry contained in this project work are unique and have never been presented in substance for any degree or certificate offered by this university. The entire present study was presented as a project paper for the purpose of earning a master's of Pharmacy degree.

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I'd want to express my gratitude to Almighty, who has given me the chance to complete my project report in very comfortable manner

A project is never the work of a single person. It is more than a collection of people's thoughts, suggestions, reviews, contributions, and effort.

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DEDICATION

I dedicate this work to my family especially my parents.

ABSTRACT

The illness known as polycystic ovarian syndrome, or PCOS, is diverse and mainly unidentified. The most commonly used diagnostic criteria for PCOS are the Rotterdam criteria, which are defined by polycystic ovaries, oligo/anovulation, and physical or biochemical evidence of hyperandrogenism. A diagnosis of PCOS and all associated consequences will be given for any two of the three, after other possible complicating conditions have been ruled out. Given the increased risk of infertility, cardiovascular disease, type 2 diabetes, and gynecologic malignancies associated with a PCOS diagnosis, it is critical that the right diagnosis be established and that screening protocols be followed. Every PCOS consequence has a variety of treatments available, ranging from in vitro fertilization to lifestyle changes. These are going to be discussed in the next.

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Chapter One

Introduction

1.Introduction

Polycystic ovarian syndrome (PCOS) is a frequent reproductive and endocrinologic condition in 6-10% of females [1]. Ovulatory dysfunction, polycystic ovaries, and hyperandrogenism are the three primary phenotypic features of this illness [2]. Moreover, metabolic problems linked to this syndrome include obesity, hyperinsulinemia, insulin resistance (present in 60–80% of women with PCOS), and type 2 diabetes mellitus (T2DM). Cardiovascular issues, neurological and psychological consequences on quality of life (such as sadness and anxiety), and endometrial and breast malignancies are all linked to PCOS. PCOS has been identified in up to 20% of women with infertility issues, such as fecundability and early pregnancy loss [3]. It is frequently referred regarded be the most typical cause of female anovulatory infertility [4].

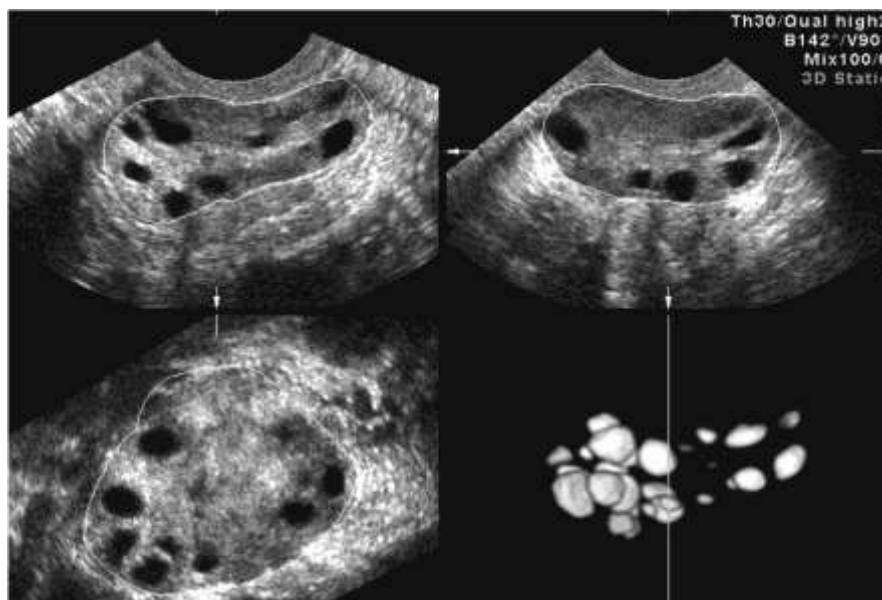


FIG 1: Polycystic ovary

The topic of PCOS research has seen a rise in interest recently. Thousands of papers about the various facets and connections related. Several issues are still unclear despite PCOS's high and rising prevalence in the general population. There aren't many studies that fully understand PCOS's intricacy.

one of the most important parts of the illness is still hotly debated. This disease's etiology is not fully understood. To find the underlying causes of PCOS, further research on the pathophysiology of the condition is fundamentally needed. A growing body of research genetics plays a major role in this illness and employs novel methods to comprehend the relationship between genotype and phenotype. The metabolic complications (including IR) have been linked to genetic abnormalities, which can be found in both male and female first-degree relatives of PCOS-afflicted women. However, since genetic research on PCOS is still in its infancy, results that have already been published need to be reexamined. Genetic research on PCOS has shown several contradictions [9].

Numerous other cutting-edge fields of study are also accessible through the genetic assessment of PCOS. The fast evolution of the illness has confused researchers, so finding the genomic loci would provide a great deal of information. The development of genetic analysis may help clarify the controversial relationship between male relatives and PCOS. To advance our understanding of the disease's etiology, these two areas need a solid theoretical foundation. Also, these findings would contribute to the development of a novel remedy or cure [10].

PCOS is an extremely complex condition with ambiguous diagnostic criteria, making research in this area difficult. To advance the field of PCOS, this article aims to review the current state of the field and develop an intriguing and clinically relevant research direction.

1.1 What is polycystic ovarian syndrome

The condition known as polycystic ovary syndrome (PCOS) is a hormonal imbalance brought on by an overabundance of hormones produced by the ovaries, the organ that produces and releases eggs [11]. Ovaries produce androgens (male hormones) in abnormally high amounts if you have

PCOS. Reproductive hormones become out of balance as a result. Consequently, irregular menstrual cycles, missed periods, and unpredictable ovulation are common in PCOS patients. During anovulation, or the absence of ovulation, can cause small follicle cysts, which are fluid-filled sacs containing immature eggs.

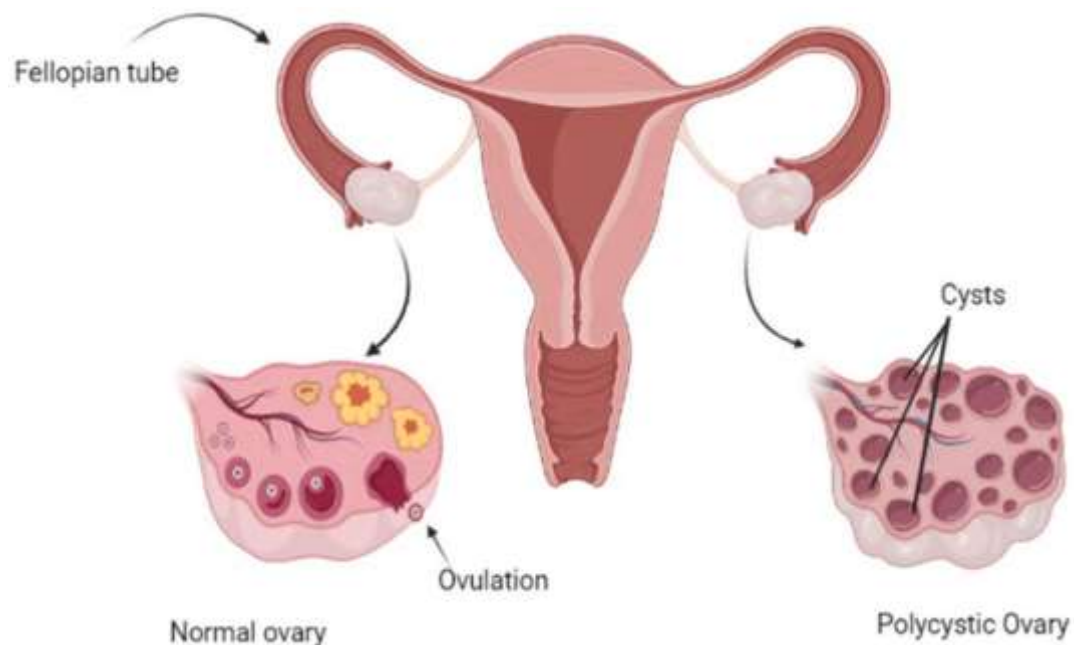


Fig 2: Normal vs polycystic ovary

1.2 What are the signs of polycystic ovarian syndrome?

the most typical PCOS symptoms and signs:

Period irregularities: Missing periods or not getting a period at all are signs of abnormal menstruation. It might also result in severe menstrual bleeding.

Unusual hair growth: Might have a lot of facial hair or hirsutism, or excessive hair growth on arms, chest, and abdomen. This impacts as many as 70% of PCOS patients.

Acne: Particularly on the face, back, and chest, PCOS can result in acne. Acne can persist well into adolescence and can be challenging to cure.

Skin darkening: May develop dark spots on skin, particularly under breasts, in the groin (the area between legs), under neck folds, and under armpits. We call this acanthosis nigricans.

Cysts: On ultrasound, the ovaries of many PCOS patients appear larger or have many follicles (egg sac cysts).

Skin tags: Skin tags are tiny, extra skin flaps. They are frequently discovered on neck or in your armpits.

Hair loss: Individuals with PCOS may experience hair loss in certain areas of their heads or even go bald.

infertility: The most frequent cause of infertility in AFAB individuals is PCOS. The inability to conceive may be caused by irregular or infrequent ovulation.

1.3 The main cause of PCOS

Increased amounts of androgens, or male hormones:

High levels of androgen prevent the ovaries from releasing eggs, which causes irregular menstruation periods. Ovaries packed with fluid can also develop on ovaries due to irregular ovulation. Excessive hair growth and acne are some side effects of elevated testosterone in women and individuals with AFAB.

Insulin resistance: Ovaries produce and release androgens, which are masculine hormones, in response to an increase in insulin levels. Male hormone excesses suppress ovulation and exacerbate other PCOS symptoms. Insulin facilitates the body's use of glucose, or sugar, as fuel. body doesn't process insulin correctly if you have insulin resistance, which raises blood glucose levels.

Mild Inflammation Patients with PCOS frequently have low-grade inflammation that lasts forever. Your healthcare practitioner can measure the levels of C-reactive protein (CRP) and white blood cells in your blood to determine the degree of inflammation in your body.

1.4 PCOS and Reproductive Health

The most prevalent cause of anovulatory infertility is PCOS; approximately 90–95% of anovulatory women seeking infertility therapy have PCOS [12]. Women who seek infertility treatment may later discover they have PCOS. In addition to high levels of androgens and insulin, the majority of women with PCOS had decreased follicle-stimulating hormone (FSH) increased luteinizing hormone [13]. Both oligomenorrhea and amenorrhea (infrequent or absent menstruation) are possible symptoms of these imbalances. Additional clinical signs that can arise from the ovaries producing too much testosterone, dehydroepiandrosterone, and androstenedione, and insufficient amounts of estrogen, include hair and skin complaints and small cysts on the surface of the ovaries called polycysts [14]

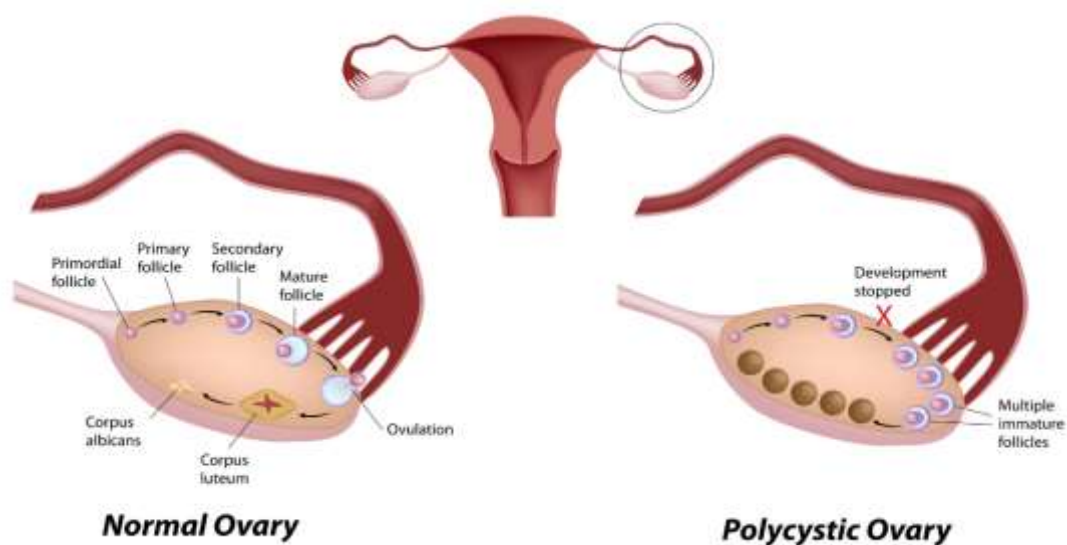


Fig 3: Cross section of normal ovary and polycystic ovary

1.5 Metabolic Health

Insulin resistance with compensatory hyperinsulinemia affects 65–70% of women with PCOS [10]. Thirty to forty percent of PCOS patients have impaired glucose tolerance (IGT), and seven to ten percent have type 2 diabetes [7,9]. However, PCOS is more common in women who have previously been diagnosed with type 1 or type 2 diabetes [2]. Studies show that the annual progression rate of women with PCOS from normal glucose tolerance to insulin-producing tissue (IGT) and from IGT to type 2 diabetes was significantly greater. Obese women who have a family history of type 2 diabetes are more at risk [9,11] [Impulse sensitivity Insulin resistance, a disease that affects PCOS patients irrespective of weight, may interfere with ovulation and fertility by inhibiting the hepatic generation of sex hormone-binding globulin (SHBG) (2) (13). Reduced SHBG levels cause an increase in free testosterone levels [14]. Women with PCOS who have normal testosterone levels and chronic anovulation usually do not have insulin resistance [15]. Together, anovulation and hyperinsulinemia may promote the proliferation of endometrial cells, increasing the likelihood of anomalies like endometrial carcinomas [16]. With hyperinsulinemia in compensation blood vessel function, in addition to problems related to glucose and insulin [1,2]. Obesity affects between 35 and 60% of PCOS-afflicted women [15], which seems to exacerbate the disorder's metabolic and reproductive aspects, especially when

visceral adiposity is present [18]. Insulin resistance is a condition that Numerous anthropometric and metabolic abnormalities are shared by PCOS and metabolic syndrome, and hyperinsulinemia may play a key role in the relationship between the two [14].

1.6 Quality of life in patients with PCOS

substantially worse scores [19, 20]. Despite not being systematically controlled, [21]. Even though these patients' quality of life is still lower than that of the control groups, their care appears to enhance it [19]. The authors of a study assessing the impact of oral contraception in PCOS patients discovered a positive correlation between the patients' improved hirsutism and cycle problems [22]. After six months of treatment, however, the usage of contraceptives had no beneficial effect on depression and anxiety ratings.

Similar to several chronic diseases like asthma or migraine, the detrimental effects of PCOS on quality of life appear to persist over time and even in the final years of reproductive life, as demonstrated by research done on a cohort of patients in Northern Finland who were 31 and 46 years old [23]. It is currently advised to use questionnaires like the PCOS,[24].

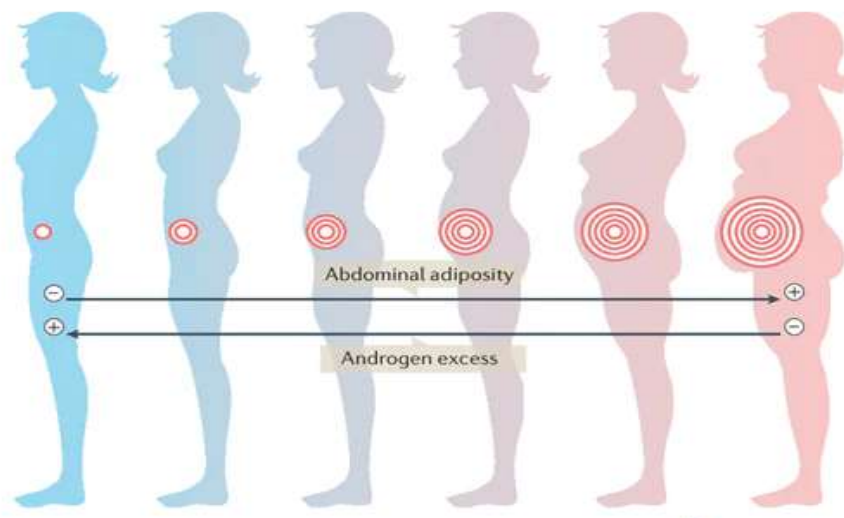


Fig 4: Obesity on PCOS

1.7 Effects on Self-Image

It seems that PCOS patients are less appreciative of their looks and health and more self-conscious about their weight [11]. Higher anxiety and depression risk scores are predicted by these characteristics. Video interviews with ten PCOS patients with a range of symptoms (cycle problems, hirsutism, acne, obesity, etc.) were done by Williams et al. [25] Six participants talked about how having PCOS has impacted their sense of self as a woman and how much the condition's symptoms can compromise this perspective. In a study [26] using a photographic analysis method to illustrate the experience of PCOS patients, individuals explained their symptoms with masculine terms or metaphors, like "shaving the moustache."

1.8 Effect on Way of Life

Lifestyle changes are a crucial component of PCOS care and the first line of non-pharmacological PCOS treatment, particularly when they are linked to obesity or being overweight [4, 6]. The authors of a study assessing the diet, which included increased physical activity and vegetable intake in newly diagnosed PCOS patients, found no evidence of dietary changes following the diagnosis [27]. Although it has been demonstrated that these lifestyle changes (dietary changes, increased physical activity) can improve some PCOS parameters (ovulation rate, regularity of cycles), it is challenging to demonstrate a positive impact on these patients' quality of life due to the paucity of available data [28]. Additionally, it seems that PCOS individuals are more likely to acquire weight than non-PCOS people. Dietary and physical activity habits appear to be linked to this weight gain [29].

1.9 Effects on Sexual Activity and Contraceptive Usage

The usage of contraception is impacted by a PCOS diagnosis. According to a 2020 study, 14% of patients who were diagnosed with PCOS quit taking contraception, whereas 4% of individuals without PCOS did the same [27]. The oral contraceptive pill is one of the most important tools for treating cycle problems and hyperandrogenism in women with PCOS, although an Australian cohort published in 2014 reported a reduced percentage of patients utilizing contraception [5]. Additionally, there was a higher likelihood that these patients were attempting to become pregnant. Moreover, the authors discovered decreased rates of contraceptive coverage among patients who did not wish to become pregnant [30]. Regardless of the existence of infertility, PCOS also seems to affect patients' sexual lives and plea In a study that used validated self-questionnaires and interviews to compare patients with and without PCOS, the investigators discovered that patients with PCOS had considerably higher rates of inadequate vaginal lubrication and patients who were unhappy with their sexual lives [32]. On the other hand, there appeared to be no difference in the quantity of partners or frequency of sexual activity [32, 33]. Patients' sexuality appears to be impacted by hirsutism, one of the diagnostic criteria for PCOS [33].

Teenage sexual lives are also impacted by PCOS [34, 35]. Despite the fact that the age of the first sexual encounter did not differ significantly between the two groups, they reported substantially fewer sexual encounters than the control patients [35]. PCOS affects patients' sexual health in a number of ways, including desire, lubrication, satisfaction, pain, and other areas [35]. Thus, a consultation is necessary to evaluate these patients' sexual health. [31].

1.10 Effect on Life Plans and Fertility's Function

PCOS patients worry about becoming pregnant as early as adolescence [34, 35]. An advertisement on the social media platform Facebook was used to recruit 30 PCOS patients for a 2018 study. This study revealed a number of themes, including patients' worries about their ability to conceive, a lack of knowledge about advice for those who are thinking about getting pregnant, and a wish to broaden their sources of information on PCOS and infertility. Most PCOS patients express concern about the possibility of infertility linked to their condition. However, in a 2008 study [31],

1.11 Risk of cancer

Most likely, prolonged exposure to unopposed estrogen is the proximate risk factor. The results could be skewed by diabetes, hypertension, and obesity—all known risk factors for endometrial cancer. Every woman with PCOS should get tested. Individuals who do not have obesity have a higher risk, and women who have not used oral contraceptives have the highest risk.

Oral contraceptives should be highly considered as a prophylactic drug since it has been demonstrated that they lower the risk of endometrial and ovarian cancer. It's uncertain whether women with PCOS are more likely to have breast cancer because other factors, such as weight, are confounding variables. Given the correlation between PCOS and breast cancer.[20]

Endometrial Cancer

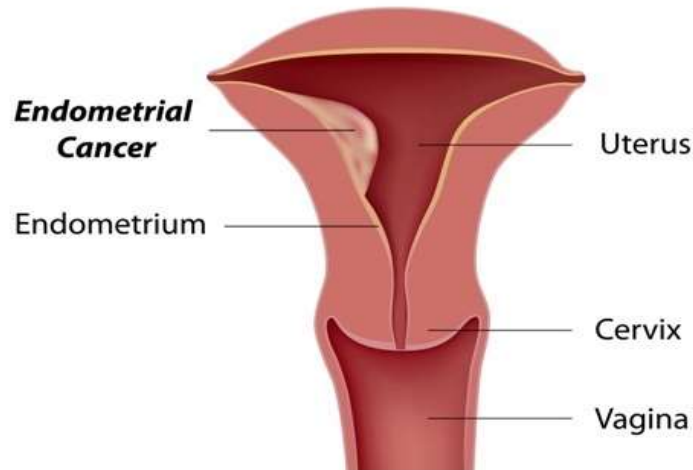


Fig 5: Endometrial cancer

1.12 Treatment for PCOS

Treatment for PCOS is impacted by multiple factors. These can include your age, the intensity of your symptoms, and your general health. The type of treatment you receive may also be affected by your future plans to become pregnant.

a change in diet and exercise. By eating a healthy diet and getting more exercise, you can reduce your symptoms and lose weight. They might also make ovulation easier and improve the way your body uses insulin. Additionally, they can reduce blood glucose levels.

medications that induce ovulation. Drugs can help the ovaries release eggs on a regular basis. There are additional risks associated with these medicines. They might increase the likelihood of multiple births, including twins. Additionally, they could cause hyperstimulation of the ovaries. The ovaries start to overproduce hormones at this point. It could cause symptoms including bloating in the abdomen and pelvic pain.

If you're not planning on getting pregnant, there are several treatment options for you.

Birth control pill: One of the common methods is using birth control pills. These pills serve a dual purpose: regulating your menstrual cycle and reducing androgen levels, which can help alleviate acne problems.

Diabetes medication: Although primarily used for managing insulin resistance associated with PCOS, it can also be helpful in lowering androgen levels and slowing down excessive hair growth. Plus, it can even assist in promoting more regular ovulation.

Diet and physical activity: Making changes to your diet and incorporating more physical activity into your daily routine can also play a significant role in managing PCOS symptoms. A healthy diet coupled with exercise can aid in weight loss, ultimately reducing your symptoms. Moreover, they can improve your body's insulin utilization, lower blood glucose levels, and potentially enhance ovulation.

Additionally, certain medications are available to target specific symptoms. For instance, there are medications specially formulated to reduce excessive hair growth or combat acne issues.

Remember, these treatment options are tailored to individuals who aren't planning on conceiving. If you have any concerns or questions about which treatment route is best for you, consult with your healthcare provider. They can guide you in selecting the most suitable approach for managing your PCOS symptoms.

Chapter two
Literature Review

2.1 Article name: Polycystic Ovary Syndrome: A Literature Review With a Focus on Diagnosis, Pathophysiology, and Management

Chronic anovulation and hyperandrogenism are the most common endocrine conditions in females with polycystic ovarian syndrome (PCOS). This disease affects women from the time of conception until death, putting their health at risk and lowering their quality of life. Additionally, it raises the morbidity and death rates. The earliest signs of PCOS appear throughout the puberty years. Acne, anovulation, and irregular menstruation are signs of both PCOS and normal female puberty. The same sickness might have several different phenotypes, thus it's important to look at each one separately since they might respond differently to different therapies and have different consequent About 6%–20% of females in the reproductive age range are thought to have PCOS, depending on the diagnostic criteria. No one diagnostic marker, such as hyperandrogenism or polycystic ovarian syndrome (PCO), can be utilized to make a clinical diagnosis of PCOS as long as it remains a syndrome. Depending on the symptoms, female PCOS patients are treated differently. Menstrual issues, symptoms associated with androgens, or infertility due to ovulatory disruption are a few examples of these. Anovulation is associated with low levels of follicle-stimulating hormone (FSH) in females with PCOS and a stop in the growth of antral follicles during the last stages of maturation. Laparoscopic ovarian drilling is one surgical option for treating the problem; other drug options include glucocorticoids, metformin, aromatase inhibitors, clomiphene citrate (CC), tamoxifen, and gonadotropins. A variety of androgenic symptoms, including hirsutism, acne, and/or baldness, will be experienced by patients. Patients who exhibit these unsettling symptoms must get the right medical attention. The evaluation highlights how important it is for managing a range of ailments.

2.2 Article name: Genetic Basis of Polycystic Ovary Syndrome (PCOS): Current Perspectives

The prevalent infertility condition known as polycystic ovarian syndrome (PCOS) affects a sizeable segment of the world's population. With a prevalence of 8–13%, depending on the criteria applied and the population investigated, it

is the primary cause of anovulatory infertility in women and the most prevalent endocrinopathy afflicting women of reproductive age. Because the illness is complicated and multifactorial, it is frequently challenging to diagnose because of overlapping symptoms. There are numerous etiological factors associated with PCOS. One cannot assess the pathophysiology with a single genetic diagnostic test because it involves involving multiple pathways and proteins, single genetic diagnostic tests cannot be determined nevertheless, not much is understood about the molecular actors and signaling pathways underlying it. In summary, polygenic and multifactorial syndromic condition PCOS is. PCOS has been linked to numerous genes that either directly or indirectly impact fertility. Nevertheless, research on PCOS patients from several families was unable to identify a completely penetrant variant. The goal of the current study was to examine our current understanding of the disease's genetic profile. It is yet unknown how gene variations increase the risk of PCOS and what kind of physical and genetic interactions exist between the various genetic components that underlie PCOS. Understanding the cellular processes and genetic factors that underlie PCOS would undoubtedly improve our comprehension of the pathophysiology of this condition. To discover novel treatment options, the study also addresses the state of PCOS treatment modalities at the moment.

2.3 Article name: Diet and lifestyle modifications for effective management of polycystic ovarian syndrome (PCOS)

The development of tiny fluid-filled sacs in the ovaries as a result of aberrant androgen production is the root cause of polycystic ovarian syndrome (PCOS). Because it interferes with a woman's physiology and psychology during her reproductive years, this illness makes her life quality worse. Moreover, there may be a connection between PCOS and other morbidities like diabetes and hypertension. The occurrence of this illness in women is attributed to several variables, including unbalanced food habits, unhealthy lifestyle choices, inadequate treatment and medicines, delayed diagnosis, and ignorance. Therefore, a prompt diagnosis and better nutritional and lifestyle management may enhance the patient's quality of life and speedy recovery from this illness.

There is a positive link observed in the reduction of PCOS markers by several herbal preparations. One of the main topics of this review is how diet and lifestyle choices affect PCOS. In addition, suggestions are provided for dietary

and lifestyle modifications that may have a good impact on PCOS healing. Women who suffer from polycystic ovarian syndrome (PCOS) have a significantly lower quality of life. The severity of PCOS and its associated implications are influenced by a combination of co-occurring medical illnesses, dietary patterns, and lifestyle choices. To effectively manage this disease, this page offers enough information on dietary and lifestyle changes. Additionally, the information it contains can help gynecologists, obstetricians, dietitians, and nutritionists comprehend and create care plans to lessen the severity and symptoms of the disease.

Chapter Three
Purpose of the study

3.1 Purpose of the study

- To understand what is PCOS and its management
- To identify the prevalence rate PCOS
- To identify the most common symptoms of PCOS
- In order to determine what age group is most likely to be impacted by PCOS
- To see what people think about this disease
- To increase public awareness about PCOS

Chapter Four
Methodology

Methodology

4.Introduction

The examination is guided via online learning. A total of people took part in the survey. Which included questions. Some undergraduate and graduate students from daffodil international University came up with responses.

4.1 Research Design

This investigation was planned using a Google framework that has questions. Start by clearly definition the goals and objectives of the survey. For example:

- What is the prevalence of PCOS among different age groups
- How dose PCOS impact mental health

4.2 Questionnaire Development

- Use clear, simple language to avoid ambiguity.
- Make questions concise and direct.
- Include a mix of multiple -choice questions, scaled rating.
- Arrange questions in a logical order.

4.3 Target population and sample size determination

Identify the target population for survey. Focus on a specific age group. Target population will allow to answer questions analysis accordingly. Determine the appropriate calculation and ensure the results are representative of the specifies group.

4.4 Data collection methods

Decide on the data collection methods that align with target population and available resources. Common methods include online surveys, phone interview, mailed questionnaires, or face to face survey. Consider the pros and cons of each method in term of response rate, data accuracy, respondent convenience.

4.5 Ensuring anonymity and confidentiality

Assure responders that you will keep their answers private and anonymous. To foster confidence and promote sincere responses, make sure that our commitment and privacy statement are communicated clearly.

4.6 Research instrument

A set of neatly arranged surveys was created and added to a Google framework.

4.7 Method of data analysis

Following the collection of data, all polls were reviewed for precision and internal consistency to rule out missing or conflicting data, and those were eliminated. Microsoft dominate updated rendition was used to conduct the prove.

4.8 Survey questionnaires

1. Age

- Under 18
- 18-24
- 25-34
- 35 or older

2. Educational background

- Department of business administration
- Department of commerce

- Department of Pharmacy
- Department of real estate
- Department of tourism and hospitality management
- Department of Entrepreneurship
- Department of CSE
- Department of software engineering
- Department of MTC
- Department of GED
- Department of ES and DM
- Department of TEE
- Department of Architecture
- Department of CE
- Department of NFE
- Department of PH
- department of English
- Department of Law
- Department of JMC

3. Marital status

- Single
- Married
- Divorced
- Widowed

4. Are you aware of polycystic ovarian syndrome (PCOS) before taking this survey?

- Yes
- No

5. Do you have PCOS (polycystic ovarian syndrome)?

- Yes
- No

6.If yes, at what age were you diagnosed with PCOS?

- Before 18
- 18-24

- 25-34
- 35-44
- 45 or older

7. Was your PCOS diagnosed after experiencing specific symptoms?

- Yes
- No

8. If yes, please select the symptoms you experienced before diagnosis.

- Irregular periods
- Heavy or painful periods
- Acne and oily skin
- Excessive hair growth (hirsutism)
- Hair thinning or hair loss
- Weight gain or difficulty losing hair
- Fatigue
- Mood swings
- Fertility issues

9. Have you made dietary change to manage your PCOS symptoms?

- Yes
- No

10. Have you engaged in regular exercise to manage your PCOS symptoms?

- Yes
- No

11. Do you smoke?

- Yes
- No

12. Have you experienced weight gain after the diagnosis of PCOS?

- Yes
- NO

13. Do you have a family history of PCOS ?

- Yes
- No

14. Have you been tested for insulin resistance?

- Yes
- No

15. Have you been diagnosed with any other hormonal disorder?

- Yes
- No

16. Have you undergone any fertility treatment due to PCOS related infertility?

- Yes
- No

17. Have you sought information about PCOS from online sources or support groups?

- Yes
- No

18. How would you rate your overall knowledge about PCOS

- Excellent
- Good
- Fair
- Poor

19. How would you rate your quality of life since being diagnosed with PCOS?

- Excellent
- Good
- Fair
- Poor

20. Has PCOS affected your self-esteem and body image?

- Yes
- No

Chapter Five
Result and Discussion

Result

5.1. Age

According to this survey total of 245 people participated and we took only positive results. 48.1% of people are 18-24 years and 51.9% of people are 25-34 years old in this survey.

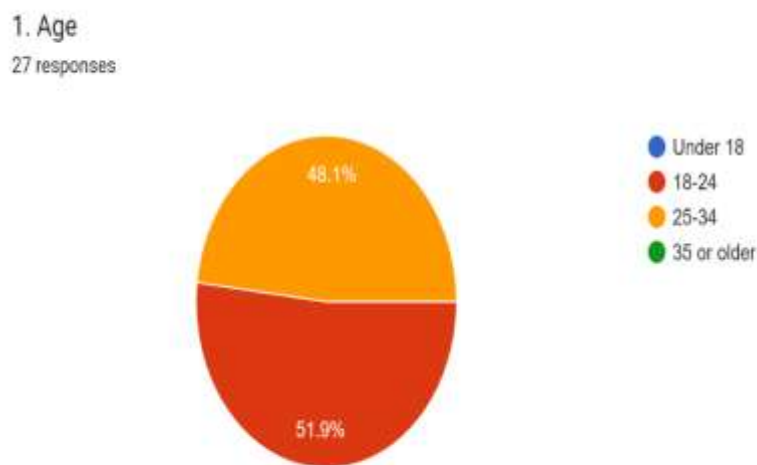


Fig 6: Age range of participate

5.2. Educational background

In this survey total of 245 people participated and got positive results from 27 people. Department of Law 11.17%, Department of Architecture 3.77, Department of NFE 14.8%, Department of English 18.5%, Department of CSE 14.8%, Department of Tourism and Hospitality Management 11.1%, Department of Pharmacy 25.9%.

2. Educational background

27 responses

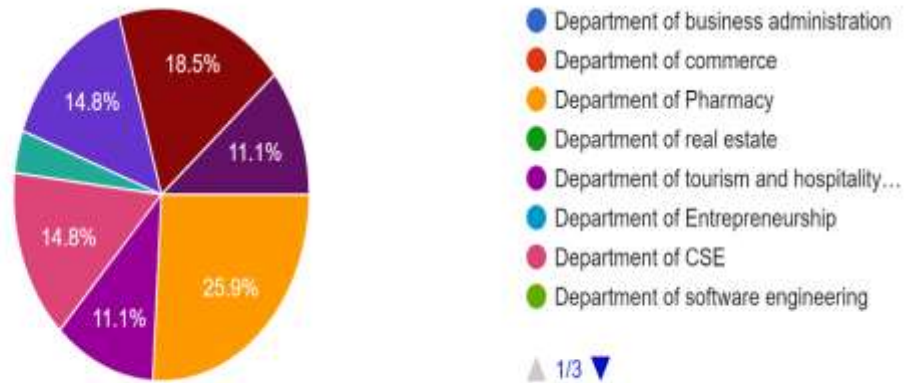


Fig 7: Educational Background

5.3. Marital Status

A total of 245 people participated. In which positive result got from 27 people. And there 22.2% of people are married and 77.8% people are single.

3. Marital status

27 responses

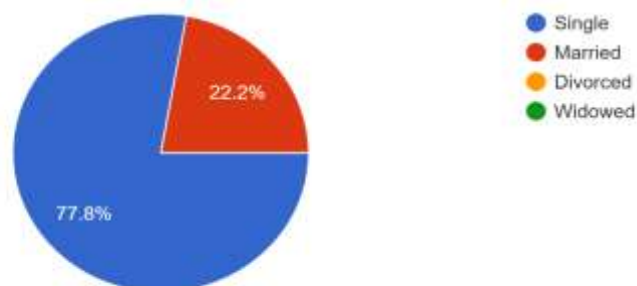


Fig 8: Marital Status

5.4. Aware of PCOS

4. Are you aware of Polycystic Ovarian Syndrome (PCOS) before taking this survey?

27 responses

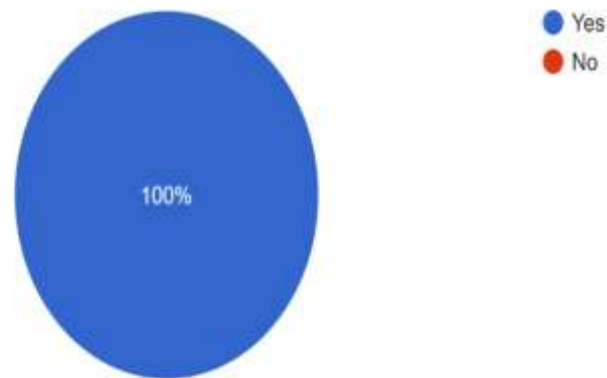


FIG 9: Aware of PCOS

5.5. Suffering by PCOS

Around 245 people participated in this survey. And 27 people are suffering from PCOS.

5. Do you have PCOS (Polycystic ovarian syndrome)?

27 responses

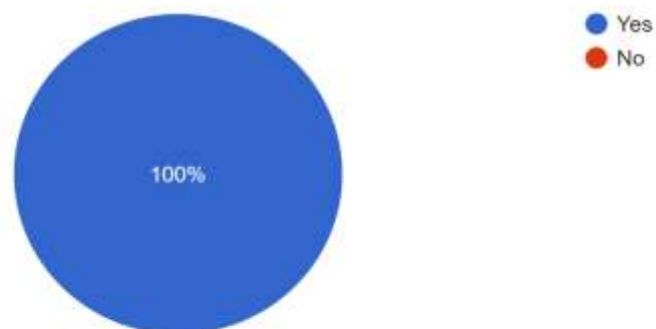


Fig 10: Affected by PCOS

5.6. Diagnosed with PCOS

Diagnosed with PCOS 25–34-year-old are 7.4%, 18-24 years old are 92.6%.

6. If yes, at what age were you diagnosed with PCOS?

27 responses

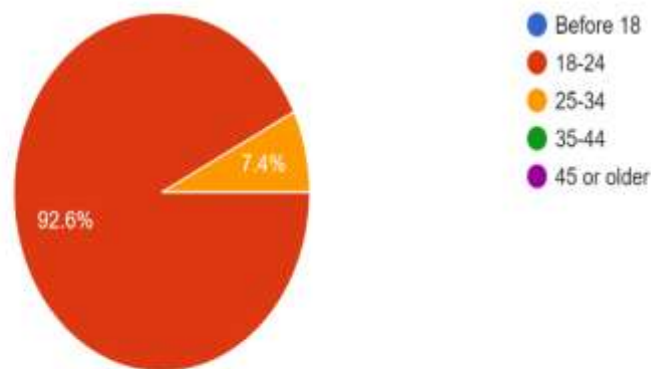


Fig 11: Diagnosed with PCOS

5.7. Specific symptoms

About 245 people participated in this survey. We took only a positive response which is 27 people. They got specific symptoms when diagnosed with PCOS.

7. Was your PCOS diagnosed after experiencing specific symptoms?
27 responses

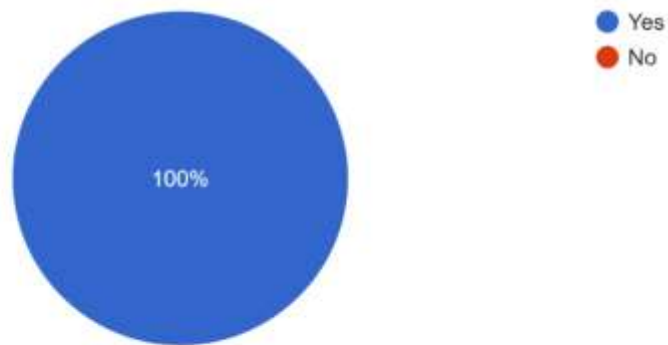


Fig 12: Experiencing Specific symptoms

5.8. Symptoms before diagnosis with PCOS

The onset of puberty and the first menstrual cycle are typically when PCOS indications and symptoms first manifest. Later in age, PCOS can manifest as severe weight gain, acne, irregular or painful periods, infertility, and excessive hair growth, among other symptoms.

8. If yes, please select the symptoms you experienced before diagnosis.

27 responses

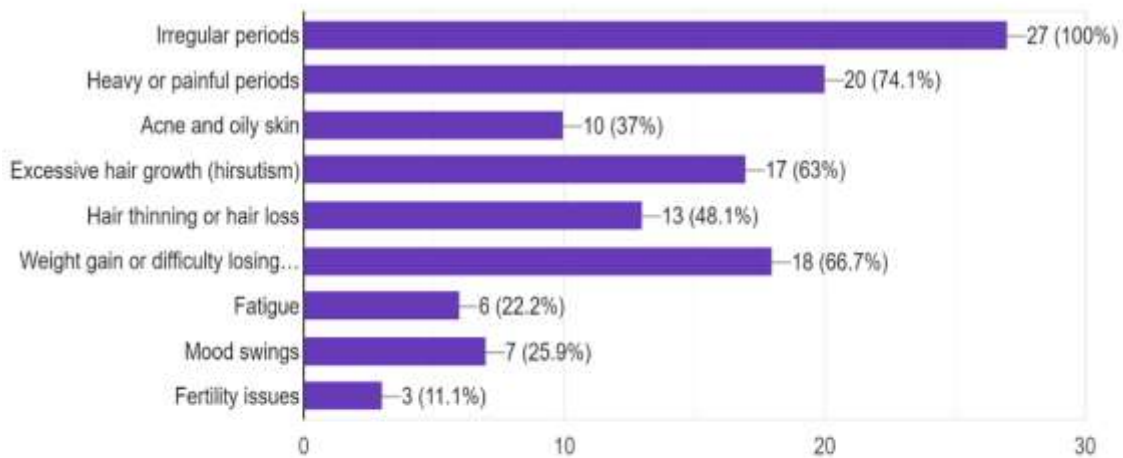


Fig 13: Specific symptoms

5.9. Dietary change to manage PCOS symptoms

18.5 % of people do not change their diet to manage PCOS and 81.5 % of people change their diet to manage PCOS.

9. Have you made dietary change to manage your PCOS symptoms?

27 responses

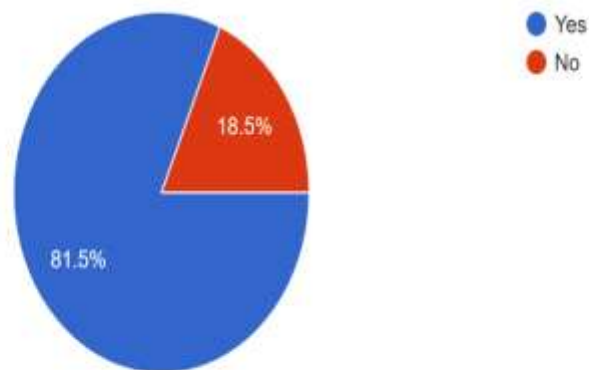


Fig 14: Dietary change

5.10. Manage PCOS symptoms by exercise

55.6% participate in doing regular exercise to manage PCOS symptoms and 44.4% don't do regular exercise.

10. Have you engaged in regular exercise to manage your PCOS symptoms?

27 responses

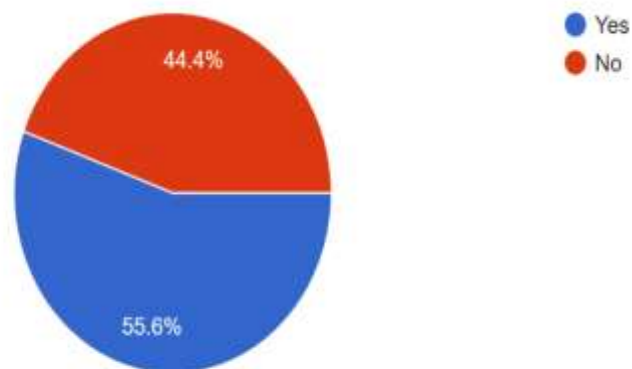


Fig 15: Engaged in regular exercise

5.11. Smoking

Participants do not smoke.

11. Do you smoke?

27 responses

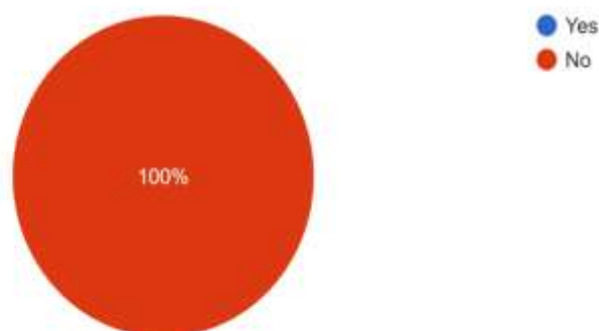


Fig 16: Smoking

5.12. Weight gain after diagnosis

11.1% of participants did not gain any weight after diagnosis of PCOS and 88.9% of participants gained weight after diagnosis of PCOS.

12. Have you experienced weight gain after the diagnosis of PCOS?

27 responses

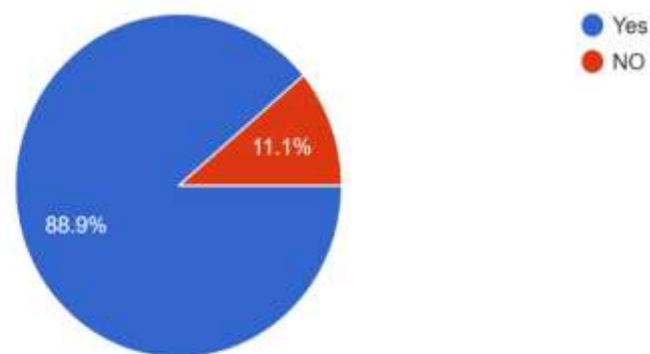


Fig 17: Gain weight

5.13 Family history of PCOS

One medical issue that may run in families is PCOS. The likelihood of developing PCOS is increased if one's mother, sister, or aunt has the condition. This suggests that PCOS may have a hereditary component, though specific genes linked to the illness are still unknown. While 18.5% of respondents' family relatives have PCOS, 81.5% of respondents' family members do not have the condition.

13. Do you have a family history of PCOS ?

27 responses

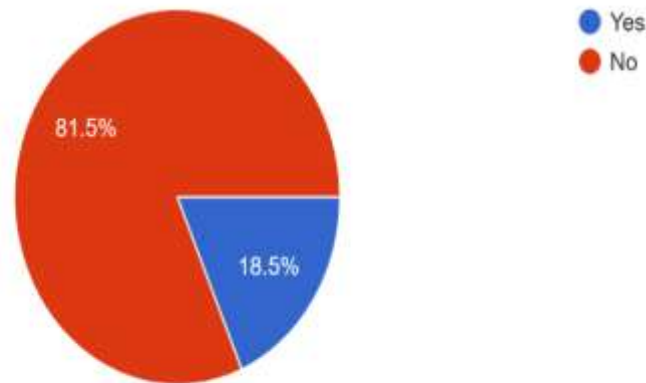


Fig 18: Family member suffering from PCOS

5.14. Tested for insulin resistance

55.6% of participants were not tested for insulin resistance but 44.4% of participants were tested for insulin resistance.

14. Have you been tested for insulin resistance?

27 responses

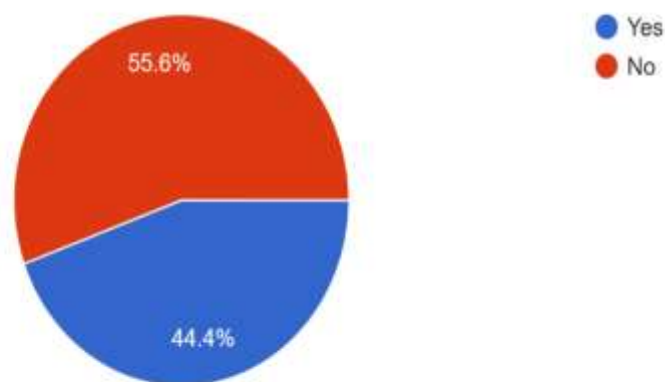


Fig 19: Tested for insulin resistance

5.15. Others hormonal disorders

74.1% of participants are not diagnosed with any other hormonal disorders but 25.9 % of participants are diagnosed with other hormonal disorders.

15. Have you been diagnosed with any other hormonal disorder?

27 responses

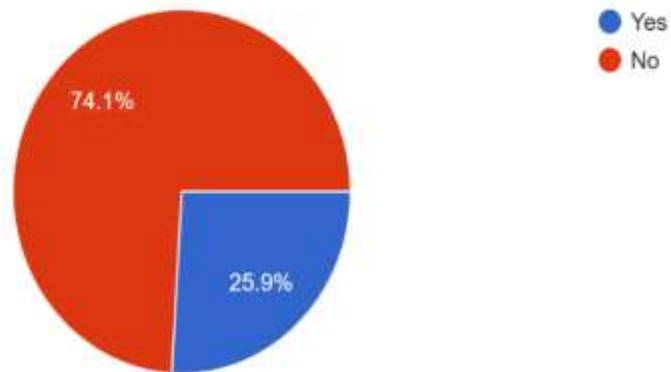


Fig20:Others hormonal disorders

5.16. Fertility treatment

PCOS is a hormonal disorder caused by an imbalance of hormones in the body. It causes many problems in the body of women. 74.15% of participants don't need any fertility treatment because of PCOS but 25.9% of participants need fertility treatment because of PCOS.

16. Have you undergone any fertility treatment due to PCOS related infertility?

27 responses

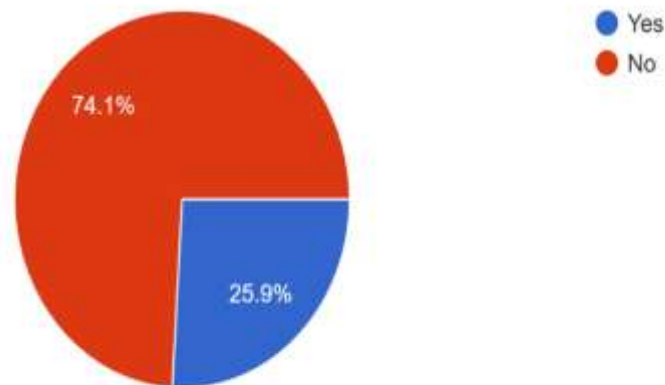


Fig 21: Fertility treatment

5.17. Sought information from online or support groups

About 245 people participated in this survey. We got 27 participants with positive results. 96.3% participate in learning about PCOS from online groups and support groups.

17. Have you sought information about PCOS from online sources or support groups?

27 responses

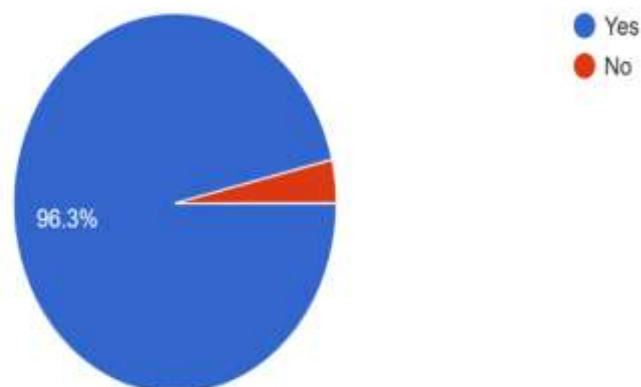


Fig 22: Sought information

5.18. Knowledge about PCOS

It's important to have a solid knowledge of PCOS so we can better understand this condition. 51.9% participate having good knowledge about PCOS, 40.7% having fair knowledge about PCOS.

18. How would you rate your overall knowledge about PCOS

27 responses

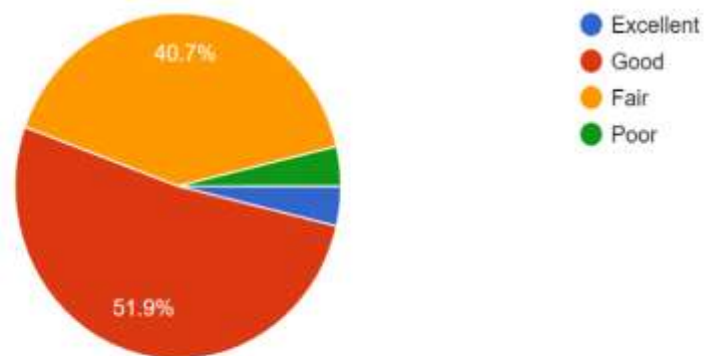


Fig 23: Knowledge about PCOS

5.19. Impact of lifestyle

Managing PCOS often requires lifestyle changes including modifications to diet and exercise. The functioning hormone associated with PCOS can cause mood swings and fatigue, making it important to find strategies to alleviate these symptoms and maintain a healthy lifestyle. 66.7% of participants said it's fair, 18.5% said good, and 11.15% said poor.

19. How would you rate your quality of life since being diagnosed with PCOS?

27 responses

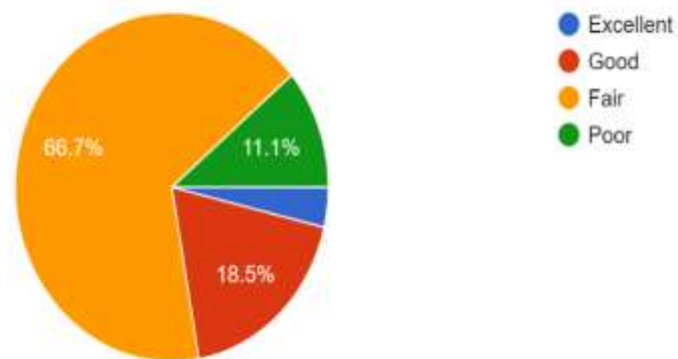


Fig 24: Impact of lifestyle

5.20. Self-esteem and body image

Living with PCOS can introduce a range of emotional challenges. The unpredictability of irregular periods and difficulties in conceiving can cause distress and frustration. Physical changes, such as acne and excess hair growth.

20. Has PCOS affected your self-esteem and body image?

27 responses

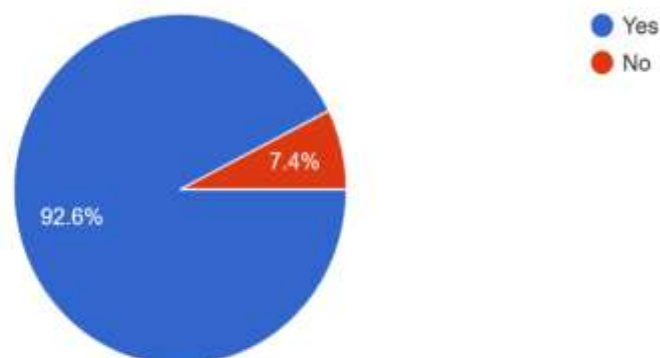


Fig 25: self-esteem and body image

Chapter Six
Conclusion

Conclusion

PCOS is not just a singular issue; it's a package deal. symptoms and challenges come together to create this hormonal imbalance. It affects the entire body, from metabolism to reproductive health. In this case, testosterone, overshadows the rest. This hormone takes center stage, disrupting the delicate symphony of and progesterone. As a result, ovulation becomes irregular, and ovarian cysts may form.

PCOS can present some hurdles along the way. The infrequent or lack of ovulation makes it more challenging to conceive. Advances in medical science and fertility treatments offer new avenues for those wishing to embark on the journey of parenthood.

Elevated insulin levels can trigger an increase in androgen production, further intensifying PCOS symptoms. Managing insulin resistance can have a positive ripple effect, helping to regulate hormones and reduce the impact of PCOS.

It's no secret that weight management plays a significant role in PCOS. While shedding excess pounds can alleviate symptoms. Balanced nutrition, regular exercise, and a proactive mindset are key for overall well-being.

Lifestyle changes can emerge as powerful allies in the fight against PCOS. Incorporating stress-reducing practices like yoga or meditation can help regulate hormones and promote a sense of calm. Prioritizing sleep, adopting a nutrient-rich diet, and keeping tabs on blood sugar levels can augment the empowering journey towards healing.

As with any multifaceted condition, there's still much to unravel about PCOS.

Each person's experience with PCOS is unique. PCOS is an intricate syndrome that touches many aspects of a person's life. Though the conclusion may not be a straightforward one, knowledge is power. By understanding PCOS holistically, embracing a healthy lifestyle, and staying informed.

Chapter Seven
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