

An Analytical Study about Awareness and Knowledge on PCOD among Coimbatore People

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ABSTRACT:

In recent years, the term PCOD – Polycystic Ovarian Disease is heard from female population, and question arises whether it is a disease or not, where it is some discomfort and health problem found in females due to bumpy life style habits. PCOD is the most common endocrine disorder in females especially in the reproductive age and has brought attentions of many mothers, doctors, scientists, Yoga therapists to get indulge to make awareness in females of both urban and rural areas. According to WHO, the estimation revealed that nearly 116 million women (3.4%) are affected by PCOD worldwide and nearly 20% of all Indian women, about 1 out of 5 women in the country is suffering from PCOD. In this paper, a brief discussion on PCOD, its cause and effect with some effective methods has been studied. Also it is an effort to attention and assess the awareness in females regarding their health. A survey has been done with questionnaire among 120 respondents, all within the age group of 18 – 30 years. The related data has been analyzed for demographic variables using descriptive statistics and examined the association between PCOD with some factors using statistical techniques such as correlation chi-square and other tests.

Keywords: PCOD, WHO, Descriptive Statistics, Chi-square, Correlation, Kruskal Wallis test.

1. INTRODUCTION

Women are essential pillars in the society especially in families and communities, providing care, support, and leadership. Women play a crucial role in child development and community building. Empowering girls drives economic growth, political stability, and social change. Women go through various stages in life, from infancy and puberty to sexual maturation, climactic period, and post-climactic years. Women's health is crucial worldwide. Women's health is essential for their well-being at every life stages, covering reproductive health, mental well- being, preventive care, and healthcare access. Prioritizing regular check-ups , screenings,

and healthy lifestyles empowers women to lead healthier lives and positively impacts their families and communities. During the life span and in between their lives, they have face lot of health issues. Most of women are affected by uterine fibroids, endometriosis, cancer, interstitial cystitis, Polycystic Ovary Syndrome, Sexually Transmitted Diseases (STDs). Given the detrimental work life culture, India’s reproductive age group is struggling with infertility.

PCOD is not a disease and is a lifestyle disorder and hormonal imbalance found in females only in these days and one of the major reason for infertility. PCOD is a condition in which ovaries produce many immature eggs. In female ovaries, the two hormones estrogen and progesterone are responsible for reproduction and the levels hormonal imbalance can create PCOD. Due to this, many other problems also developed in female body and their metabolic conditions. The primary cause of this condition is obesity, consumption of junk food, hormonal imbalance, having stress, infertility problems irregular periods, unwanted weight gain and other health issues.

PCOD is not an instant disease, and not easily tractable where it’s just a discomfort happening in our body due to some metabolic variations and lifestyle disorder what we are practicing for a long time as a daily routine in our everyday life whether knowingly or unknowingly. The symptoms associated with PCOD often leave a lasting impact on women’s physical and mental well-being leading to suffer from depression and anxiety. Following are some of the symptoms of PCOD such as Irregular or unpredictable menstrual periods, Heavy bleeding during periods, Excess body hair especially in face, Acne, Hair loss Obesity, Infertility, Sleeping disorders, Depression, Darkening skin or pigmentation around the neck and so on. PCOS seems to be same as that of PCOD, but minor difference exists between PCOS, where PCOD leads to PCOS. Even though eating habits are inculcated in childhood days, while growing individual should take care of eating habits and physical activities so that a better life style could be experienced.

PCOD	PCOS
PCOD is a medical condition, the ovaries produce immautre eggs transforming into cysts	PCOS is a more severe condition, the ovaries produces high quality of male hormones resulting in excess cysts formation.

PCOD has no serious complications	Some of the serious complications associated with PCOS is Type 2 diabetes, high BP, heart disease and endometrial cancer.
PCOD does not affect fertility in women and able conceive with little medications	PCOS adversely affect female fertility, if conceived having a high risk of miscarriage, premature birth or complications during pregnancy.
PCOD can be healed with balanced diet plan and able to recover naturally.	PCOS cannot be cured, the symptoms can be controlled through lifestyle changes and medicines
It does not release as many male hormones as PCOS, the symptoms are rarely noticeable and less frequent	Women struggle with the symptoms from younger age those who got affected by PCOS.

Review of Literature:

Many researchers have used correlation in impact of polycystic ovary syndrome on quality of life of women (Fauzia tabassum,2021),different polycystic ovary syndrome (PCOS) phenotypes – a cross-sectional study (monica gupta,2019), phenotypes of polycystic ovarian syndrome with anti - Mullerian hormone levels (Santhiya, R,2021), comparing Assisted reproductive Outcomes in women with Different Polycystic Ovary Syndrome phenotyoes Undergoing Frozen Embryo Transfer (Patel, 2023).

Numerous scholars and academics have employed chi-square in Assessment of Lifestyle and Diet Modification of Patients Suffering from Polycystic Ovarian Disease (PCOD) (Akriti Shrestha,2019), Effectiveness of planned teaching programme on knowledge regarding polycystic ovarian disease among adolescent girls (Durga Joshi,2021),Awareness of Polycystic Ovarian Disease (nayha arif,2017), Implications of ultrasonically diagnosed polycystic ovaries and Correlations with basal hormonal profiles (Ahmed Abdel Gadir ,1992).

A multitude of scholars and academics have utilized Kruskal Wallis test in how common are polycystic ovaries in normal women and what is their significance for the fertility of the population (R. N. Clayton, 1993), Insulin Sensitivity in Women with Polycystic Ovary Syndrome (Jana Vrbilkova 2004), MUC1 as a Discriminator between Endometrium from Fertile and Infertile Patients with PCOS and Endometriosis (L. Margarit,2010),Anti-Mullerian hormone (AMH) in the Diagnosis of Menstrual Disturbence Due to Polycystic Ovarian Syndrome (ali abbara 2019). In the article, A review: Brief Insight into Polycystic Ovarian Syndrome (Jeshica

Bulsara e.tal 2021) highlights the risk and pathophysiological treatment with drugs acting on anovulation, infertility plus clinical symptoms of PCOS. In a review paper, Polycystic Ovarian Disease or Polycystic Ovarian Syndrome: How to Identify and Manage – A Review, (Neha Minocha, 2020), studies that PCOD or PCOS is a reproductive disorder in which women's ovary gets enlarged and starts producing an excessive amount of male hormones (androgens) and is the main cause of infertility, diabetes, irregularity in menstrual periods and Hirsutism.

PCOD: A Lifestyle Disorder may lead to Infertility, (2022) by the authors Sachin Tyagi, Alphana Joshi e.tal has conducted a survey on 20 females randomly selected, analyzed and discussed about PCOD, its causes, body effects and commonly used medicines. Suggested to adopt healthy eating practices among females and has to bring awareness among both the genders to overcome PCOD that can be prevented from ovarian cancer.

2. Materials and Methods

The study is primary data type with Questionnaire consisting of selected demographic variables among women having the age ranging between 18 to 30 years in and around Coimbatore city. Using convenience sampling 120 samples have been collected among female population on socio demographic information, awareness and other variables of PCOD. Recent years, the term PCOD is often used and everyone is hearing or else experiencing in their regular life either by themselves, family members or outside family. Online platform helped for the collection of data through google form, compiled and analyzed using statistical packages such as SPSS 26.

3. Result and Discussion

The study includes 120 women from Coimbatore region. Among these samples, the age distribution of women is as follows: 7.5% are aged 17 to 20, 60% are aged 21 to 24, 18.3% are aged 25 to 28, and 14.2% are aged 29 and above. Regarding marital status, 44.2% are married and 55.8% are unmarried. In terms of education, 9.2% have completed up to the 10th grade, 8.3% up to the 12th grade, 44.2% have an undergraduate degree, 34.2% have a postgraduate degree, and 4.2% have other qualifications. Additionally, 30.8% of the women have PCOD, while 69.2% do not have PCOD. (Table 1)

Table 1: Demographic Characteristics of the Respondents

Variable	Number of Participants	Percentage
Age in Years		
17-20	9	7.5
21-24	72	60
25-28	22	18.3
29 above	17	14.2
Marital Status		
Married	53	44.2
Unmarried	67	55.8
Education Status		
10 th	11	9.2
12 th	10	8.3
UG	53	44.2
PG	41	34.2
Other	5	4.2
Occupation		
Government employee	5	4.2
Private employee	33	27.5
Entrepreneur	5	4.2
Home maker	26	21.7
Student	51	42.5
Food habit		
Vegetarian	19	15.8
Non-vegetarian	95	79.2
Vegan	5	4.2
Eggetarian	1	0.9
PCOD		
Yes	37	30.8
No	83	69.2

In the study, the mean age for puberty, marriage, sleeping duration, and PCOD onset are 13.41 years, 21.02 years, 7.16 hrs, and 1.65 years respectively. The standard deviations for these are 1.770, 2.461, 1.021, and 0.767, respectively. (Table 2 where the marriage age shows more deviation than other variables.

Table 2: Average of variables among the respondents in the study

Variables	Mean	SD
Mean age at puberty	13.41	1.770
Mean age at marriage	21.02	2.461
Mean of sleeping duration	7.16	1.021
Average years of experiencing PCOD	1.65	0.767

The frequency of symptoms observed are as follows: 63.3% have irregular periods, 11.7% have heavy bleeding, and 3.3% have excess body hair, 0.8% have sleep disorders, 2.5% have acne, 2.5% have hair loss, 5.8% have difficulty in getting pregnant, and 1.7% have skin darkening or pigmentation around the neck which was found and presented in (Table 3)

Table 3: Frequency of Symptoms among the Respondents

Symptoms	Number of respondents	% of respondents
Irregular period	76	63.3
Heavy bleeding	14	11.7
Excess body hair	4	3.3
Sleep disorder	1	0.8
Acne	3	2.5
Hairloss	3	2.5
Difficulty in getting pregnant	7	5.8
Darkness of skin or pigmentation around the neck	2	1.7

The study comprises 87.5% of participants are having knowledge as well as awareness about PCOD, while only 12.5% are not known about the term. Regarding the sources of previous knowledge about PCOD, 48.3% of women learned from health personnel, 26.7 % from friends, 1.7% from parents, 4.2% from teachers, 13.3% from media, and 5.8% have no information. The discomforts experienced based on sleeping during PCOD, is 6.7% said “Yes”, and 90% said “No”. Additionally, 43.3% are consulting a doctor for PCOD, while 35% are not. Based on the observations, the natural remedies followed by women include: 21.7% practicing yoga, 21.7% doing exercise, 11.7% using Ayurveda medicine, and 17.5% following other remedies. 67.5% believe that PCOD can be cured permanently when they follow either by doing Yoga or excises while only 13.3% believe it cannot be cured permanently. (Table 4)

Table 4: Knowledge and awareness of the study population

Variables	No	%
Aware of PCOD		
Yes	105	87.5
No	15	12.5
Previous knowledge about PCOD		
Health personnel	58	48.3
Friends	32	26.7
Parents	2	1.7
Teacher	5	4.2
Media	16	13.3
No information	7	5.8
Experience sleeping discomfort after PCOD		
Yes	8	6.7
No	108	90
Consult any doctor for PCOD		
Yes	52	43.3
No	42	35
Natural remedies		
Yoga	26	21.7
Exercise	26	21.7
Ayurvedic medicine	14	11.7
Other	21	17.5
PCOD can cure permanently		
Yes	81	67.5
No	16	13.3

4. Conclusion

The study is aimed to assess the awareness among women regarding the knowledge and attitude towards PCOD. Also aimed to give a difference about PCOD and PCOS. From the study, nearly 76% are having irregular periods, which may be due to lack of physical activities, food intake, hereditary and as on. Also shown that most of respondents 95 (79%) are non-vegetarians. Found that, knowledge regarding the symptoms of PCOD and other issues is 87.5%, the major health issues is irregular periods and heavy bleedings during their menstrual cycle. In order to overcome the problems, the women could lead normal and active lives with health management. Each symptom such as irregular periods, obesity, acne, facial hair, and infertility having hormonal imbalance. Millions of women are diagnosed with PCOD each year

around the globe, where careless PCOD leads to PCOS (2 to 3 times higher risk) that increases risk of developing Ovarian Cancer risk. PCOD is associated with a high prevalence of anxiety and depression that affects the mental health conditions of an individual.

To overcome the PCOD the following are the some of the recommendations made: Life style and dietary modifications are the need of the hour. Regular exercise, get Vitamin D and Calcium intake, increase of iron and fibre intake, more fruits and vegetables, drinking plenty of water

Reference

- Burger, c. W., korsen, t., van kessel, h., van dop, p. A., caron, f. J. M., & schoemaker, j. (1985). Pulsatile luteinizing hormone patterns in the follicular phase of the menstrual cycle, polycystic ovarian disease (PCOD) and non-PCOD secondary amenorrhea.,*61*(6), 1126-1132.
- Franks s, white dm. Prevalence of and etiological factors in polycystic ovarian syndrome. *Ann n y acad sci.* 1993; 687:112–4.
- Levesque, r. (2007). *SPSS programming and data management: guide for SPSS and SAS users* (4th ed.). Chicago, illinois: SPSS inc. Isban 1-56827-390-8.
- S.p. gupta; statistical methods; sultan chand & sons; 28th edition.
- Wayne w. Daniel; biostatistics ; wiley & sons.
- Seventh edition agtreti, alan; categorical data analysiss; wiley ; second edition.
- Argyrous, g. *Statistics for research: with a guide to SPSS.* London: sage. Isbn 1-4129-1948-7.
- Rotterdam eshre/asrm-sponsored PCOS consensus workshop group. *Reviied 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. Fertil steril.*2004; 81:19–25.
- Vaidya ra. Polycystic ovarian syndrome, a public health issue: Indian perspective oration delivered at the national institute for research in reproductive health icmr- on the occasion of nirrh 24th foundation day.
- Nair, m.k., pappachan, p., balakrishnan, s., leena, m.l., george, b. And russell, p.s. (2012) menstrual irregularity and poly cystic ovarian syndrome among adolescent girls—a two year follow-up study. *The Indian journal of pediatrics*, 79, s69-s73.