INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD
ISSN(O): 2455-0620 [Impact Factor: 9.47]
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value : 86.87
Volume - 11, Issue - 07, July - 2025

DOIs:10.2015/IJIRMF/202507052 --:-- Research Paper / Article / Review

Awareness on Polycystic Ovary Syndrome (PCOD/PCOS) among college going girls in Nagpur City

[1]Dr. Durgesh Wasnik, and [2]Aiman Fatema Mohammad Sadique
[1]Principal, Umang Geetai College of Women's Education, Koradi Road, Panjara, Nagpur 441111.
[2]Student, Umang Geetai College of Women's Education, Koradi Road, Panjara, Nagpur 441111

Email - dwasnik75@gmail.com

Abstract: *Polycystic Ovary Syndrome (PCOD/PCOS) is an endocrine disorder which affects the adolescent girls. It affects 5% to 10% of women in their reproductive age. Awareness and accurate diagnosis are the first step in managing PCOS/PCOD as it improves the quality of life of the patient. The study was conducted to access the knowledge and awareness on PCOS/PCOD among young adolescent girls. Survey of 80 girls was done to access the knowledge on PCOD/PCOS among college going young girls young girls studying in graduation 1st, 2nd year. The data was collected from the students by using structured questionnaire. In the present study, 63.75% had normal BMI, 25% were underweight, 8.75% were overweight and 2.5% was obese. 48.75% had continuous weight gain, 26.23% has access facial hairs and 38.75% had pimples and pigmentation on skin. 67.5% had normal menstrual cycle while other girls had irregular menses. In the present study 37.5% girls got knowledge from friends, 27.5% girls got knowledge from internet, 7.5% had information from doctors and health care workers, 6.25% had knowledge from parents and relatives and 21.25% were unaware about PCOD/PCOS. Thorough knowledge of the disorder and counselling for adolescent should be included in the curriculum which will provide awareness towards the disorder and lifestyle modification. Accurate diagnosis at a younger age may be a key.*

Keywords : *PCOS/PCOD, college girls.*

1. INTRODUCTION :

Polycystic Ovary Syndrome (PCOS/PCOD) is a condition in which the ovaries produce an abnormal amount of androgens, male sex hormones that are usually present in women in small amount. The name polycystic ovary syndrome describes the numerous small cysts (fluid- filled sacs) that form in the ovaries. However, some women with this disorder do not have cysts, while some women without the disorder do develop cysts. Ovulation occurs when a mature egg is released from an ovary. This happens so it can be fertilized by a male sperm. If the egg is not fertilized, it is sent out of the body during the period. In some cases, a women doesn't make enough of the hormones needed to ovulate. When ovulation doesn't happen, the ovaries can develop many small cysts. These cysts make hormones called androgens. Womens with PCOS often have high levels of androgens. This can cause more problems with a women's menstrual cycle and may cause many of the symptoms of polycystic Ovary Syndrome (PCOS/PCOD)[1,2].

Polycystic Ovary Syndrome (PCOS/PCOD) is the common cause of an ovulatory infertility. As there are no well accepted criteria for diagnosis, the incidence of Polycystic Ovary Syndrome is not really known. However, it is postulated that to be about 20% - 30 % in the general population [3]. Polycystic Ovary Syndrome (PCOS/PCOD) may lead to various complications like, abnormal uterine bleeding, infertility or hypertension infertility, Type 2 diabetes, preterm labour and premature birth, metabolic syndrome, NASH (non alcoholic steatohepatitis), depression, endometrial cancer (due to thickened uterine lining), miscarriage (spontaneous loss of a pregnancy). Females those who are diagnosed with Polycystic Ovary Syndrome (PCOS/PCOD) should monitor their health on regular basis to avoid any complications in the future[4].

PCOD/PCOS appears to be related to diet and lifestyle factors, particularly as they influence body weight, insulin resistance, inflammation, oxidative stress, and, in turn, androgen activity. Between 30-75% of women with PCOD/PCOS are obese, and women with PCOD/PCOS often have excess body fat, particularly central adiposity, even in the absence of obesity.[5] A meta analysis of diet studies found that weight loss improved PCOD/PCOS symptoms in overweight women regardless of diet composition. Other studies have shown that losing as little as 5-10% of weight results in resumption of menses and decrease in blood androgen levels[6].

Awareness is necessary for early intervention, including behavior modification, to minimize the immediate and chronic consequences of Polycystic Ovarian Syndrome (PCOD/PCOS). In view of this and the fact that prevalence of this syndrome in our community remains unknown and complete screening of every girl is uneconomical in our setting, we attempt to find its prevalence and awareness in a community of young girls of age between 18 - 23 years.

1.1 Objectives:

1. To create awareness about Polycystic Ovary Syndrome (PCOS/PCOD) among college going girls.
2. The study will be only among college going girls with the age group of 18-23 years.
3. The study will only take place in Nagpur city.

2. METHODOLOGY

- **Research design:**

The main purpose of observational research design is to identify the root cause in relation with the objectives of the research and hypothesis stated. Data obtained is completely free from errors as researchers has critical about each and every step as samples, their analysis observational according maintaining the recording tackled by the social herself data records is appropriately processses tabulated analyse the present study**.**

- **Locale of the study:**

Researcher is the student of Umang Geetai College, Nagpur. This college was established for only girls education. The nature of the study can be institutional survey (college) which is basically an evaluation study. Its purpose is to gather detailed information to be used as a basic for judging awareness of PCOD/PCOS among college going girls in Nagpur city.

- **Selection of the topic:**

The study on awareness about Polycystic Ovary Syndrome (PCOD/PCOS) among college going girls in Nagpur city. (18-23 years) will be conducted with a special intention that the awareness about Polycystic Ovary Syndrome which is found in every second girl in the early age and in adolescent period with bad consequences in future life as well as in present period.

- **Sample selection:**

The survey method gathers data from a relatively large number of samples at a respective time (2 days). It is concerned with generalized static that results when data are abstracted from a number of individual cases. It is essentially observational cross sectional. The headed data may be gathered from survey of the sample population group

- **Data analysis:**

The data was collected in Nutrition department in Umang Geetai College Nagpur, to carry out any type of research data must be gathered with to test the different method and procedures have been developed to aid in the acquation of data for the purpose of this study to collect data " The questionnaire" method was hired.

The data collected were subjected to statistical analysis. Percentage was used as tool analysis and interpretation of data. Random sampling method is used.

a) **Characteristics of the Questionnaire:**

This study emphasizes only the awareness about Polycystic Ovary Syndrome among college going girls with the age group of 18-23 years.

PERSONAL CHARACTERSTIC

1. Name
2. Age
3. Height
4. Weight
5. BMI

b) Nutrition and Polycystic Ovary Syndrome

1. Awareness of PCOD/PCOS
2. Menstrual regularities
3. Food choices
4. Physical fitness
5. Type of diet
6. Awareness of Symptoms of PCOD/PCOS & its bad consequences
7. Risk factors
8. Consultation
9. Prevention

Diet Chart for patient with Polycystic Ovary Syndrome

Meal	Menu	Serving
Early morning	Luke warm water / Green Tea (with lemon drops or honey)	1 glass/1cup
Breakfast	Idli Sambhar/ Plain dosa/ Rava Upma/ Oats Upma/ Moong dal cheela	1 Serving
Mid-day snack	Fruits(Apple/Papaya/Orange/Pineapple/Kiwi/Po megranate)	1 Serving
Lunch	Roti (Multigrain/Jowar/bajra), Dal (Any Dal) Sabji (Green leafy vegetables, other vegetables), Salad (Carrot/cucumber/Beetroot/Cabbage etc.), Grilled Chicken/Fish	2 pc 1 Bowl 1 Serving 1 Serving 2 pc
Evening snack	Sprouts/Phutana/ Murmura/ Makhana/ Buttermilk/ Nuts (Almond/Walnut)	1 Serving
Dinner	Roti/Phulka (Multigrain), Dal (any dal) Sabji (Mix veg/Paneer/Cabbage/Methi etc.) Khichdi/ Dalia /Oats Khichdi Salad	2pc 1 Bowl 1 Serving 1 Serving 1 Serving

3. RESULTS AND DISSCUSSION

To fulfill the purpose of the study, to find out the awareness about Polycystic Ovary Syndrome (PCOD/PCOS) among college going girls in Umang Geetai College, Nagpur, the researcher used the method of questionnaire. The data thus collected are presented and analyzed in this chapter.

Analysis and interpretation of data:

Tables are presented for each characteristic considered separately.

Table 1 : Age distribution

Sr No.	Age	Frequency	Percentage
1.	18	33	41.25%
2.	19	14	17.5%
3.	20	09	11.25%
4.	21	09	11.25%
5.	22	10	12.5%
6.	23	05	6.25%

In the present study 41.25% girls were young girls in the age group of 18 years and 17.5% girls were of age of 19 years. 20 and 21 years of age group consist of 11.25 of girls. 22 years consist of 21.5% whereas only 6.25% of young were in the 23 year of age.

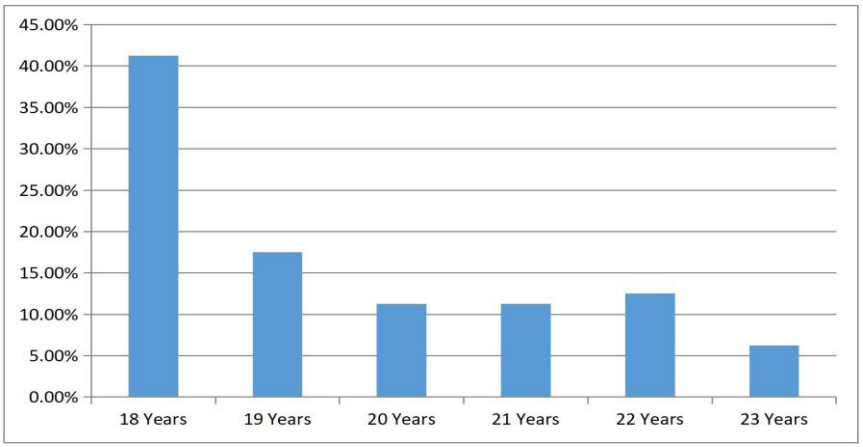

Fig 1 : Age Distribution

Table 2 : BMI

Sr. No	BMI	Reference Value	Frequency	Percentage
1.	Underweight	<18.5	20	25%
2.	Normal	18-24.9	51	63.75%
3.	Over weight	25.0-29.9	07	8.75%
4.	Obesity	30.0-34.9	02	2.5%

In the present study, 63.75% girls had normal BMI, 8.75% were over weight, while 25% were underweight. Over weight and obese girls were more prone for PCOD/PCOS. Counselling was given and weight reduction was advised.

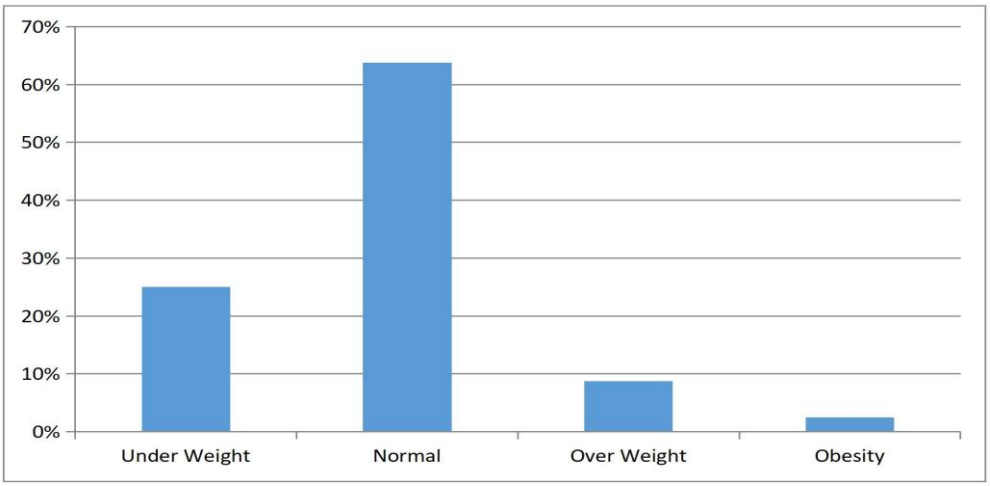

Fig 2 : BMI

Table 3 : Awareness of Polycystic Ovary Syndrome (PCOD/PCOS).

Sr No.	Sample Characteristic	Frequency	Percentage
1.	Have you heard of PCOD/PCOS?		
	Yes	58	72.5%
	No	22	27.5%
2.	Where did you heard about it?		
	Friends	30	37.5%
	Health care workers	06	7.5%

	Internet	22	27.5%
	Parents/Relatives	05	6.25%
	Don't know	17	21.25%
3.	Are you aware that PCOD can be managed with diet and exersice?		
	Yes	51	63.75%
	No	29	36.25%
4.	Are you aware of the symptoms of PCOD?		
	Yes	60	75%
	No	20	25%

In the present study, 72.5% adolescent girls had information about PCOD/PCOS where 27.5% was unaware about PCOD/PCOS. 37.5% know about PCOD/PCOS from friends,7.5% got information from health care workers, 27.5% got information from internet, 6.25% known from parents and relatives and 21.25% girls were unknown. In the above table 3, 63.75% of girls were aware that PCOD/PCOS can be managed with diet and exercise and 36.25% girls were not aware about it. Symptoms of PCOD/PCOS were known to 75% of girls and 25% of girls were unaware about the symptoms.

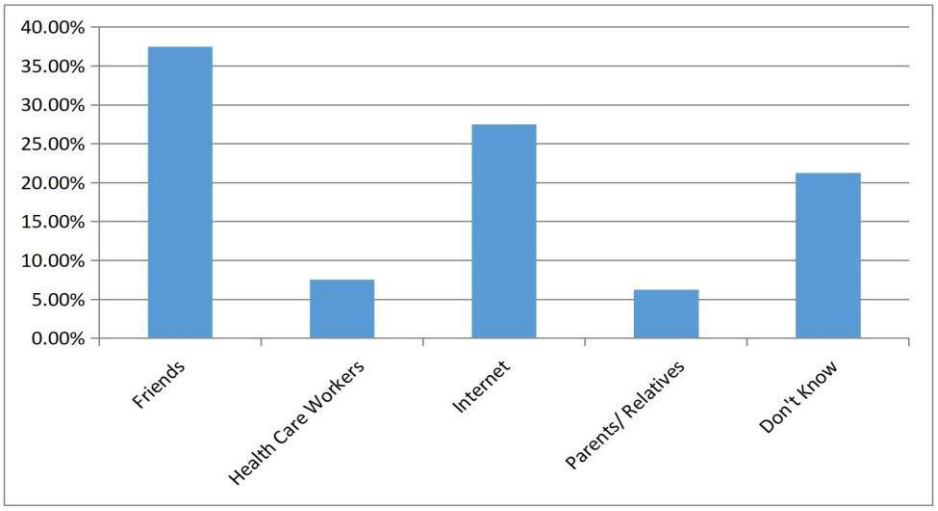

Fig 3 : Awareness of PCOD/PCOS (Source of Knowledge)

Table 4 : Ratio of education status of mother.

Sr No	Mother's education	Frequency	Percentage
1.	Literate	18	22.5%
2.	Illiterate	62	77.5%

In the above table 4, 22.5% mother of adolescent girls were literate and 77.5% were illiterate.

Table 5 : Ratio of family income

Sr No.	Family income per month	Frequency	Percentage
1.	Less than 10,000	36	45%
2.	10,000 - 30,000	27	33.75%
3.	Greater than 30,000	17	21.25%

Above table 5 stated that 45% of girls have very low income family, 33.75% of girls had under 30,000 and only 21.5% had greater than 30,000 income.

Table 6 : Ratio of type of diet and physical activity

Sr No.	Sample Characteristic	Frequency	Percentage
1.	What is your type of diet?		
	Vegetarian	20	25%
	Non Vegetarian	15	18.75%
	Both	45	56.25%
2.	What is your eating habit?		
	Street food	10	12.5%
	Home made food	25	31.25%
	Organic food	01	1.25%
	As per availability	44	55%
3.	Do you consume junk food more often?		
	Yes	60	75%
	No	20	25%
4.	Do you exercise regularly?		
	Yes	28.4	35.5%
	No	51.6	64.5%

In the present study, 25% adolescent girls were vegetarian whereas 18.75% were non vegetarian and 56.25% were mix. 12.5% girls had street food habit, 1.25% girls were organic food lover whereas 31.25% girls had habit of home made food and majority girls, 55% has food as per availability. 75% girls student consume junk food oftenly and only 25% girls said no to junk food. Regularly exercise students were 35.5% while 64.5% girls were not doing exercise regularly.

Table 7 : Ratio of problems related to PCOD/PCOS.

Sr No.	Sample Characteristic	Frequency	Percentage
1.	Do you have continuous weight gain?		
	Yes	39	48.75%
	No	41	51.25%
2.	Do you have excess facial hairs?		
	Yes	21	26.25%
	No	59	73.75%
3.	Do you have pigmentation/ pimples/ acne on skin?		
	Yes	31	38.75%
	No	49	61.25%

In the above table 7, 48.75% students had weight gain while 51.25% were normal, 26.25% girls had excess facial hairs while 73.75% girls were normal. 38.75% had pimples/ acne/ pigmentation on skin, while 61.25% girls had normal skin.

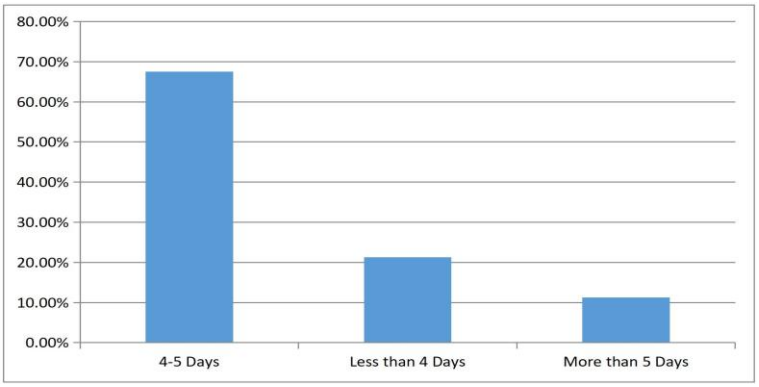

Fig 4 : Ratio of Menstruating Days

Table 8 : Ratio of bad consequences of PCOD/PCOS at reproductive age and type of doctor attended.

Sr No.	Sample characteristic	Frequency	Percentage
1.	Complication of PCOD may lead to?		
	Menses disorder, infertility, ovulation issues, endometrial cancer.	71	88.75%
	Heart attack, kidney failure, brain damage	01	1.25%
	None of this	08	10%
2.	After marriage, PCOD may increase risk of?		
	Infertility, miscarriage,fetal deformities, premature delivery& neonatal complications.	50	62.5%
	Don't know	30	37.5%
3.	If a woman experience the symptom of PCOD, what should she do?		
	Consult a general physician	19	23.75%
	Consult gynecologist/endocrinologist	50	62.5%
	Consult Cardiologist	11	13.75%

In the above table, 88.75% girls students had knowledge about complications of PCOD such as infertility, ovulation issues etc. And only 1.25% of girls know about heart attack, kidney failure etc. As bad consequences. 10% girls were unknown about bad consequences of PCOD/PCOS. 62.5% girls were known about post marriage risk of PCOD such as miscarriages, infertility etc. But 37.5% girls don't know about risk after marriage of PCOD. Majority students know about consulting gynecologist/endocrinologist when experiencing PCOD/PCOS symptoms i.e 62.5%.

Table 9 : Ratio of Menstruating days

Sr No.	Menstruating days	Frequency	Percentage
1.	4-5 days	54	67.5%
2.	Less than 4 days	17	21.25%
3.	More than 5 days	09	11.25%

In the above table 4.9, 67.5% girls had 4-5 days of menstruation cycle, while 21.25% girls menstruate less than 4 days and 11.25% girls had more than 5 days of menstrual cycle.

Table 10 : Ratio of awareness after completing the survey.

Sr No.	Sample Characterstic	Frequency	Percentage
1.	Are you more aware of PCOD after completing this survey?		
	Yes	69	86.25%
	No	11	13.75%

In the above table 4, revealed that awareness about PCOD among college going girls after completing the survey was higher i.e. 86.25% and only 13.75% of student were less aware.

4. Discussion:

In the present day scenario, PCOS/PCOD is an extremely common endocrine disorder, which poses a health problem in adolescent. PCOS/PCOD is a chronic condition having physiological and reproductive manifestations which usually begins in adolescent, then progress to include fertility and increasing metabolic complications over time. A timely diagnosis of PCOD/PCOS leads to awareness of this condition associated with hormonal and metabolic complications and provides an opportunity for healthy lifestyle counselling, testing for co-morbidities or medications. 11.25% of the girls in the present study had oligomenorrhoea and oligomenorrhoea is a good screening indicator to diagnose a probable case of PCOD/PCOS. Many studies have shown that PCOS/PCOD has been mostly associated with

menstrual irregularities. Obesity was noted only 2.5% of the surveyed girls, majority of the girls in this study were normal 63.75%. Coming to the awareness of PCOS/PCOD, 86.25% of the girls were aware about PCOD/PCOS. Another 13.75% were unaware of the term. Out of 80 girls, 30 girls had heard about PCOD/PCOS from friends, internet was the place they read about it. While remaining girls had heard it from family and relatives. Hence there is a need for increased awareness about PCOD/PCOS through many modes of teaching and camps by doctors in every girls college to prevent long term consequences.

5. Summary:

The purpose of the study was to find out the awareness on PCOS/PCOD among adolescent girls. The data was collected from the students from Umang Geetai College of Women's Education Nagpur. The students were requested to give actual information regarding their awareness status. The researcher thoroughly checked and it was found that the entire questionnaire was completed and properly answered.

6. Conclusion:

The collected data shows that there were less awareness on PCOD/PCOS among young adolescent girls. The prevalence of PCOD/PCOS in the present study was, a timely diagnosis of PCOD/PCOS in symptomatic girls is important in order to initiate appropriate treatment. Health education and screening for PCOS/PCOD need to be incorporated in adolescent education program and as an assessment of target groups by simple menstrual history could detect possible PCOD/PCOS during adolescent to facilitate early appropriate intervention.

7. Recommendations:

- Counselling for adolescents should be included in the curriculum which will provide an awareness to the disorder to the lifestyle modification.
- There is a need for intensified efforts in early detection.
- Accurate diagnosis at a younger age may be a key to preventing many of the long term health consequences associated with this syndrome.

REFERENCES :

1. Ding DC, Chen W, Wang JH, Lin SZ. Association between polycystic ovarian syndrome and endometrial, ovarian, and breast cancer: A population-based cohort study in Taiwan. Medicine (Baltimore). 2018 Sep;97(39):e12608. [PMC free article] [PubMed]
2. Norman RJ, Teede HJ. A new evidence-based guideline for assessment and management of polycystic ovary syndrome. Med J Aust. 2018 Sep 01;209(7):299-300
3. Stephaine Watson. PCOS. Healthline. Sep 27 2017. https://www.healthline.com/health/polycystic-ovary-disease
4. Robert Hurd. Polycystic ovary disease. Medline plus medical. Encyclopaedia. 2006. National library of medicine. US. 8600. Rockville pike Bethesda-20894.
5. Balen A.H., Tan S.L., MacDougall J., Jacobs H.S. Miscarriage rates following in-vitro fertilization are increased in women with polycystic ovaries and reduced by pituitary desensitization with buserelin. Hum. Reprod. 1993;8:959–964. doi: 10.1093/oxfordjournals.humrep.a138174.
6. Vidya Bharathi R., Swetha S., Neerajaa J., Varsha Madhavica J., Janani D.M., Rekha S.N., Ramya S., Usha B. An epidemiological survey: Effect of predisposing factors for PCOS in Indian urban and rural population. Middle East Fertil. Soc. J. 2017;22:313–316.