

Screening of Pcod in Mid Adolescent Girls

To Analyse the Awareness of Polycystic Ovarian Disease (PCOD) in Mid Adolescent Girls. To analyse the Risk Polycystic Ovarian Disease in Mid-Adolescent Girls by using the Self-Made Questionnaire

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Abstract:-

➤ Objective:

Screening of pcod was done to evaluated the knowledge of PCOD amongst students.

➤ Sample Size: 300

➤ Methodology:

In this study, 300 mid-adolescent girls aged 15 to 18 years old from various schools in Bangalore participated was predicated on inclusion and exclusion standards It was requested of each participant to complete the questionnaire forms, Body Mass Index (BMI), Waist Hip Ratio (WHR), and basic demographic information are all included in the questionnaire. and preliminary question regarding if the girls heard about the term PCOD or not, and followed by the 11 questions which are based on most common symptoms of PCOD.

➤ Result:

The used questionnaire was successful to help was known the students who was at risk.

There is statistically significant difference in level of risk with $p < 0.001$. Majority of them are at moderate risk (50.5%). High risk (39.9%), Moderate risk (50.5%), Low risk (8.3%) for PCOD was seen using as self-made questionnaire.

➤ Conclusion:

The conclusion of the study based on screening of pcod in mid adolescent girls in Bangalore concludes that the awareness of PCOD is 22.3% and the majority of the students i.e., 77.7% out of 300 are unaware of the PCOD

Keywords:- Mid -Adolescents, PCOD, Prevalence, Prevention, Self-made Questionnaire.

I. INTRODUCTION

PCOD, a complicated women of reproductive age are harmed by an endocrine and metabolic condition, is characterized by hyperandrogenism, ovarian cysts, and oligo- or anovulation¹. With an estimated worldwide incidence of 4–20%, polycystic ovarian disease (PCOD) is one of the most prevalent endocrinopathies afflicting women of reproductive age.² It frequently causes health problems in teenagers.^{3,4} Children as early as 16 years old may show signs of the hormonal imbalances or abnormalities that cause the polycystic disease condition.^{3,5,6} Due to hormonal abnormalities, the ovaries may release excess eggs³. These eggs develop into cysts, which cause the ovaries to enlarge and become heavily populated with cysts. It first manifests itself in adolescence and primarily affects adult ovarian girls who are of childbearing age.

Teenage screening provides the opportunity for early detection of risk factors, promotion of a healthy lifestyle, and early intervention to prevent the development of PCOS in the future⁷. The development of a normal menstrual cycle is crucial for adolescent girls, Polycystic ovarian syndrome (PCOD), a prevalent endocrine system disorder among women of reproductive age, affects one in ten Indian women according to a study by the PCOD Society⁸. Additionally, six of every ten women with PCOD are teenage females.⁹

Between 2.2 and 48% of people will have PCOD worldwide in 2020. Since the late 1900s, studies have revealed a trend of rising PCOD prevalence. In the previous several years, PCOD incidences have increased by almost 30% in India. The significant rise in PCOD occurrence It's

believed that changes in lifestyle brought about by a lack of knowledge and challenges in recent years.^{10,11}

Although the occurrence of any illness or ailment can cause anxiety and worry, studies have indicated that women with PCOD feel emotional discomfort, sadness, and anxiety more frequently than others, and some become more worried and stressed when confronted with the disorder.^{12,9,6} The joys of adolescence are impacted by the stigma surrounding hyperandrogenism, which is more prevalent in this age group and is likely to negatively impact adolescent females' psychological development.¹² Teens diagnosed with PCOS do not have to have long-term reproductive problems, cardiometabolic, and mental effects by being diagnosed early and receiving treatment.⁷ Sometimes losing weight on its own can help hormone levels return to normal, which makes many symptoms go away or become milder.³ Exercise and healthy eating habits can help prevent weight gain⁶.

Identification of women who require therapy depends on public understanding of the disorder's signs and its incurable nature. In addition to promoting healthy living, which improves women's quality of life and lifespan, recognizing PCOD is just one part of increasing awareness of the issue. The two primary risk factors for this condition are believed to be sedentary behavior and ignorance.¹ The current study's objective was to assess how well-aware mid-adolescent females were of PCOS.

II. METHODOLOGY

➤ *Study Design:* Survey

By using self-made questionnaire using demographic data and symptoms of PCOD which is verified by gynaecologist

➤ *Study Sample:*

Sample size of 300 between the age group of 15-18 years based on inclusion and exclusion criteria.

➤ *Sample Method:* Convenient sampling.

➤ *Study Duration:* 21-01-2023 TO 11-04-2023(4months)

➤ *Setting:* Mid-Adolescent girls of different schools in Bangalore

➤ *Inclusion Criteria:*

- Age group of 15-18 years
- Unmarried

- School/college girls
- 2years since Menarche

➤ *Exclusion Criteria:*

- Systemic illness
- Diagnosed with PCOS
- Endocrinological disorder
- Above 18
- Married
- Not attained 2years since Menarche

➤ *Procedure*

This was a survey study was carried out at Different High schools of Bangalore.

In this study 300 mid adolescent girls participated between the age group of 15-18 years, according to the inclusion and exclusion standards. All the participant's written consent was obtained and, in each school, principal permission was taken to carry out our research study. The pupils were instructed to complete the questionnaire on their own, the researcher helped the students to clear the terminology used in questionnaire. The Waist Hip Ratio (WHR), Body Mass Index (BMI), and basic demographic data are all included in the inquiry, and preliminary question regarding if the girls heard about the term PCOD or not, and followed by the 11 questions which are based on most common symptoms of PCOD, each 11 question was given options of yes or no, to relate their symptoms and to choose the answer and while filling the questionnaires the students height, weight was measured to calculate the BMI using BMI calculator and waist hip circumference was also measured using inch tape for WHR ratio which was calculated using WHR calculator.

III. DATA ANALYSIS AND INTERPRETATION

With SPSS23.0, a statistical analysis of the data was carried out. The frequency and percentage of categorical variables were displayed. The means and standard deviations of continuous variables were displayed.

Table 1 Showing Age Distribution of Mid Adolescent Girls

Age	Frequency	Percent
15	171	56.8%
16	80	26.6%
17	19	6.3%
18	30	9.8%
Total	300	100

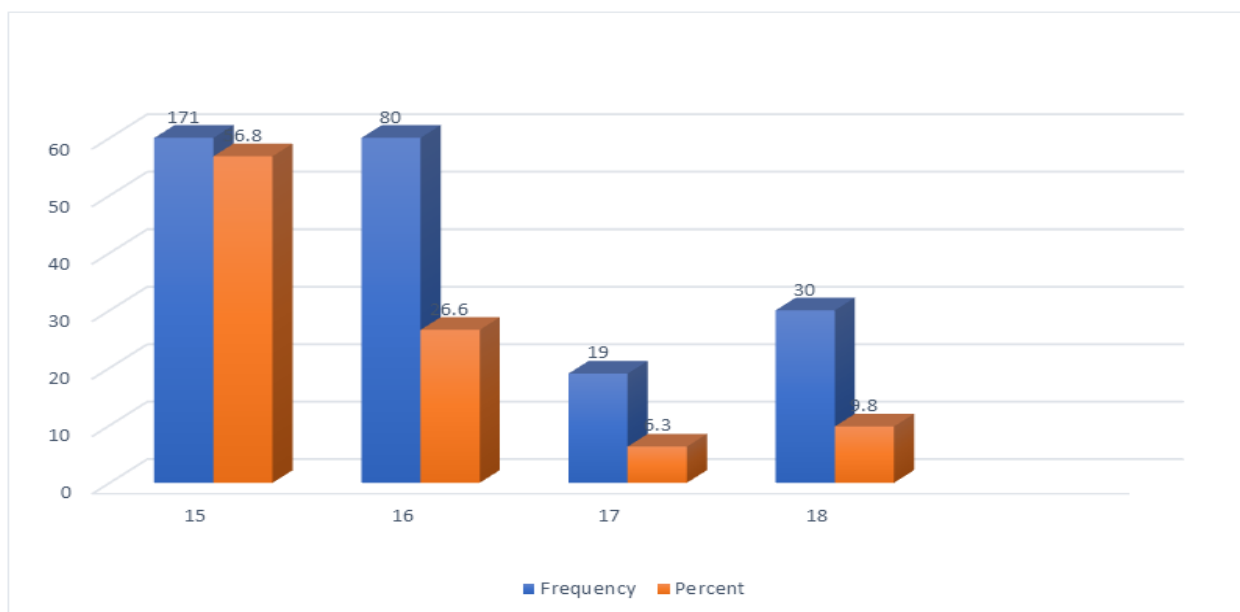


Fig 1 Representation of Age of Mid Adolescent Girls. The Study Consisted of 300 Mid Adolescent Girls. Majority of 171(56.8%) were of Age 15 years followed by 80(26.6%) of 16 years Girls ,19(6.3%) Girls of 17 years, 30(4.3%) 18 years

Table 2 Showing the Knowledge of PCOD in School Going Children

Question	Yes Frequency	Percentage	No Frequency	Percentage
Have you heard the term pcod	67	22.3%	233	77.7%

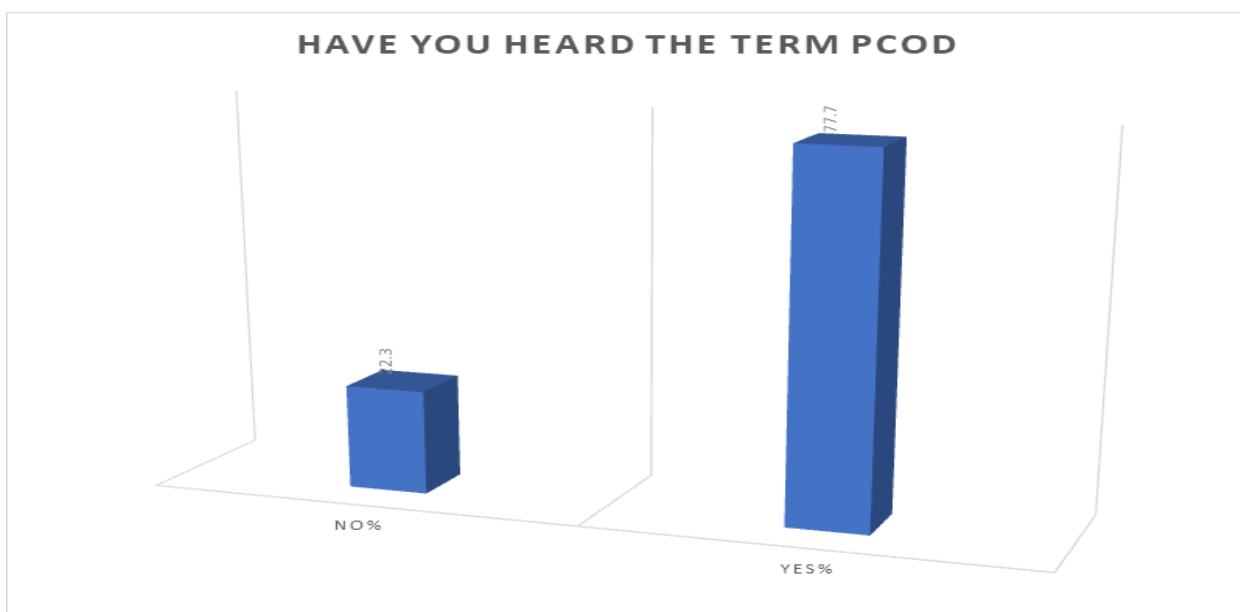


Fig 2 Showing the Knowledge of PCOD in School Going Children Representation of Age of Mid Adolescent Girls .2 22.3% of the Students has not the Term of PCOD

Table 3 Table Showing of BMI

	Frequency	Percent
Under weight	144	48.0%
Normal	105	35.0%
Over weight	37	12.3%
Obese	14	4.7%
Total	300	100.0

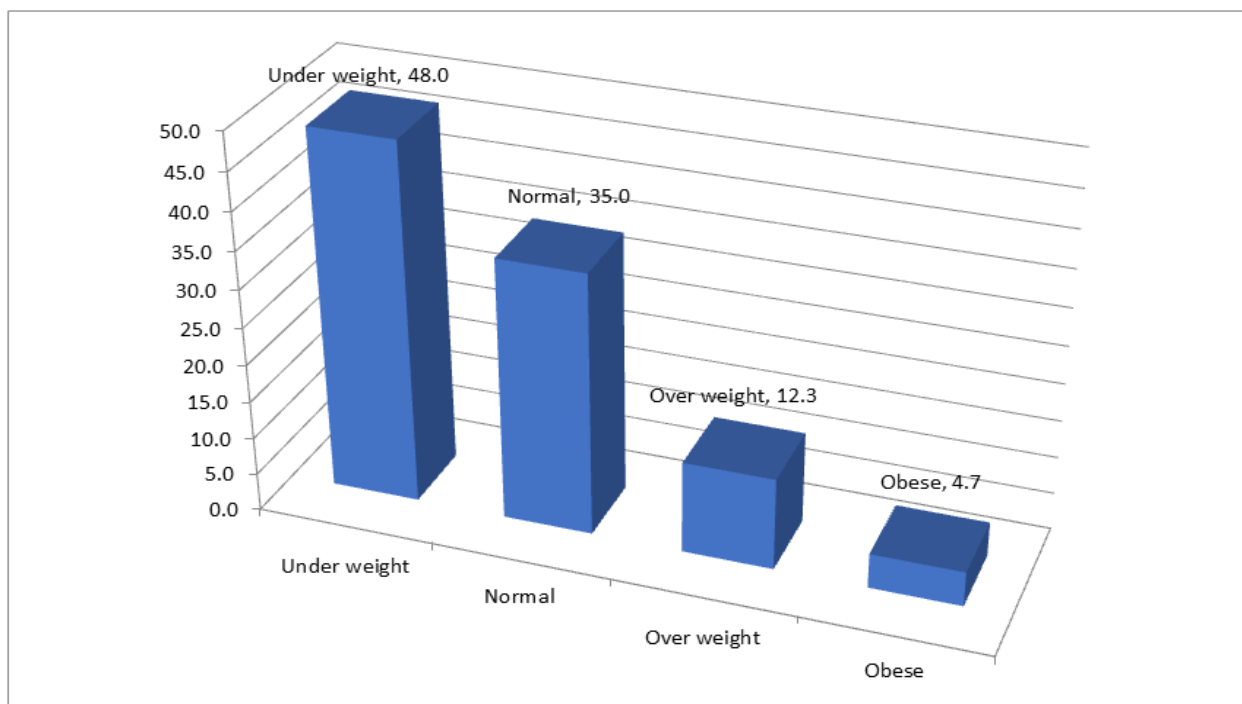


Fig 3 Representation of BMI

Table 4 Showing of WHR

	Frequency	Percent
Low Health Risk	101	33.7%
Moderate Health risk	66	22.0%
High Health Risk	133	44.3%
Total	300	100.0

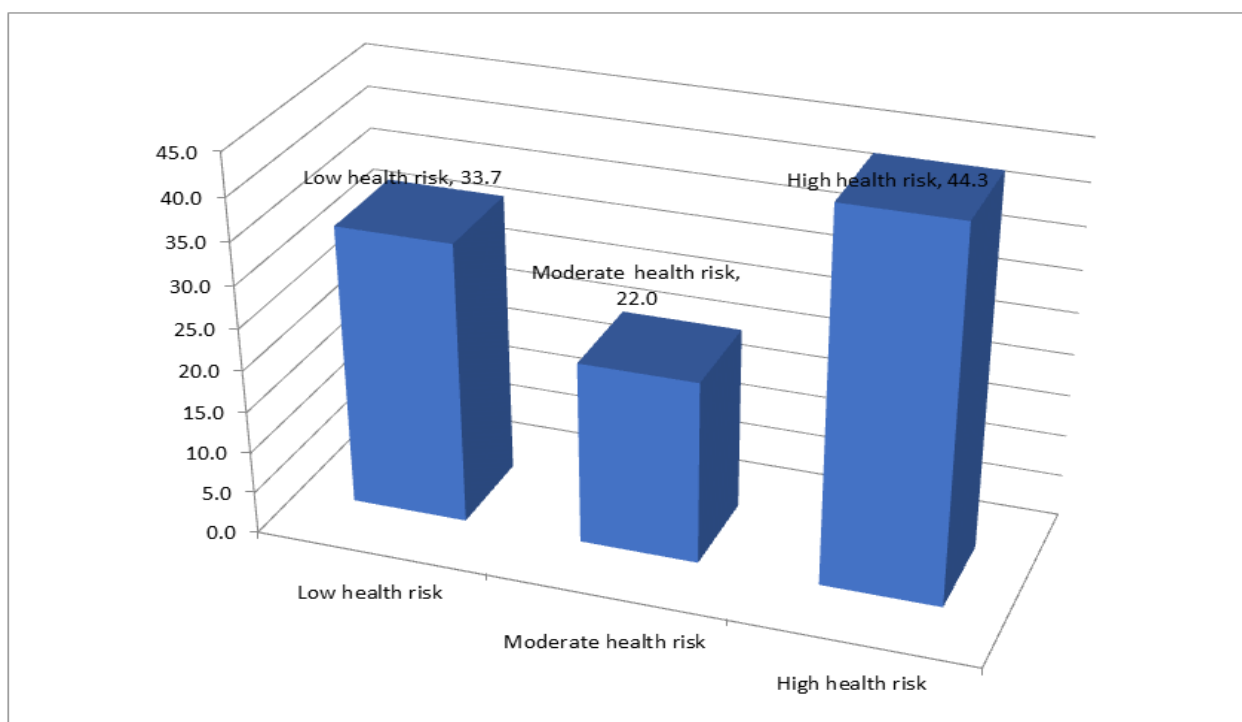


Fig 4 Representation of WHR

Table 5 Mean and Standard Deviation of Age at First Menarche

	Total Number	Minimum	Maximum	Mean	Standard Deviation
Age at first menarche	300	8.00	19.00	12.2600	1.20994

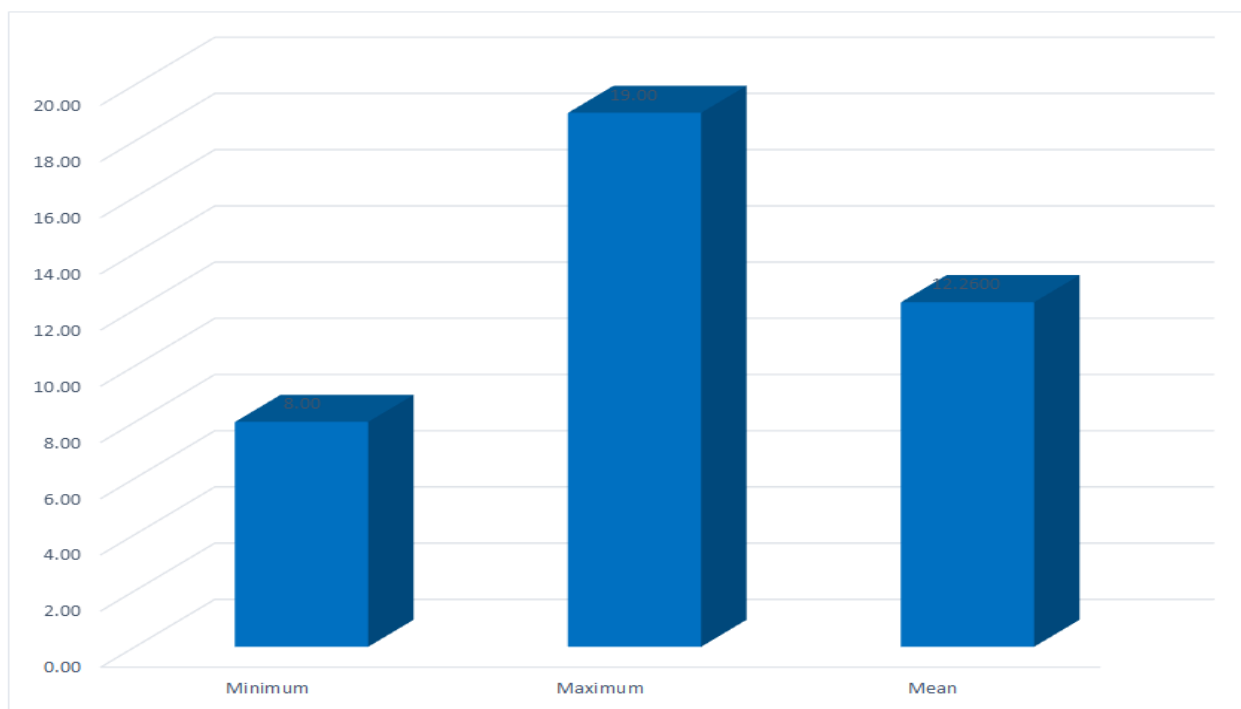


Fig 5 The Present Study Shows Age at First Menarche was 12.26±1.209 with Minimum of 8 years and maximum of 19 years

Table 6 Showing Frequency and Percentage on Risk Factors of PCOS

		Frequency	Percent
Have you ever heard the term PCOD	No	233	77.7%
	Yes	67	22.3%
Do you have an irregular / missing cycle /period	No	162	54.0%
	Yes	138	46.0%
Do you have a very painful menstrual cramp	No	94	31.3%
	Yes	206	68.7%
Do you have an abdominal pain	No	195	65.0%
	Yes	105	35.0%
Do you have Lower Abdominal Pain /Low Back Pain	No	104	34.7%
	Yes	196	65.3%
Did you notice any sudden Facial Acne	No	101	33.7%
	Yes	199	66.3%
Did you recently notice any Visible growth of Hair on Chin or Upper Lip or Body	No	179	59.7%
	Yes	121	40.3%
Do you have any kind of physical activity regularly	No	176	58.7%
	Yes	124	41.3%
Do you feel you have sudden Weight Gain from past 3 months	No	148	49.3%
	Yes	152	50.7%
Do you have Mood Swings	No	66	22.0%
	Yes	234	78.0%
Do you feel Tiredness or Fatigue Often	No	76	25.3%
	Yes	224	74.7%

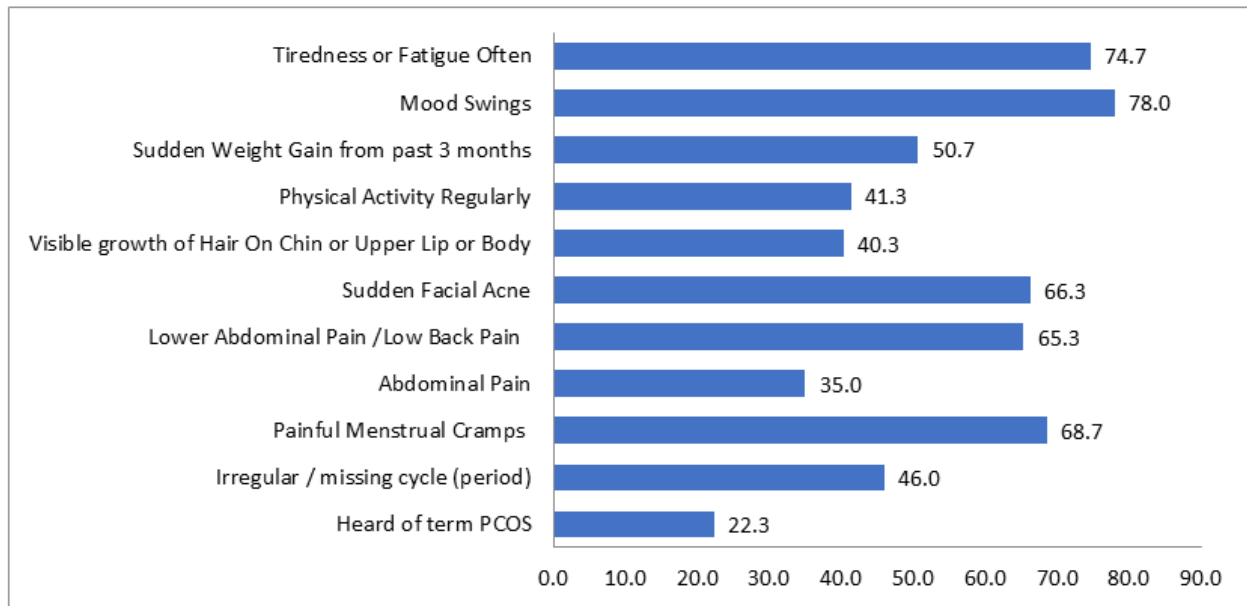


Fig 6 Showing Frequency and Percentage on Risk Factors of PCOS

Table 7: Showing Mean and Standard Deviation of Score

Total number	Minimum	Maximum	Mean	Standard Deviation
300	.00	10.00	5.8867	1.90242

Table 7: Frequency and Percentage on the basis of Number of Risk Factors

	Frequency	Percent
Not at risk	4	1.3%
with 1 risk factor	3	1.0%
with 2 risk factors	9	3.0%
with 3 risk factors	12	4.0%
with 4 risk factors	39	13.0%
with 5 risk factors	45	15.0%
with 6 risk factors	68	22.7%
with 7 risk factors	64	21.3%
with 8 risk factors	35	11.7%
with 9 risk factors	18	6.0%
with 10 risk factors	3	1.0%
Total	300	100.0

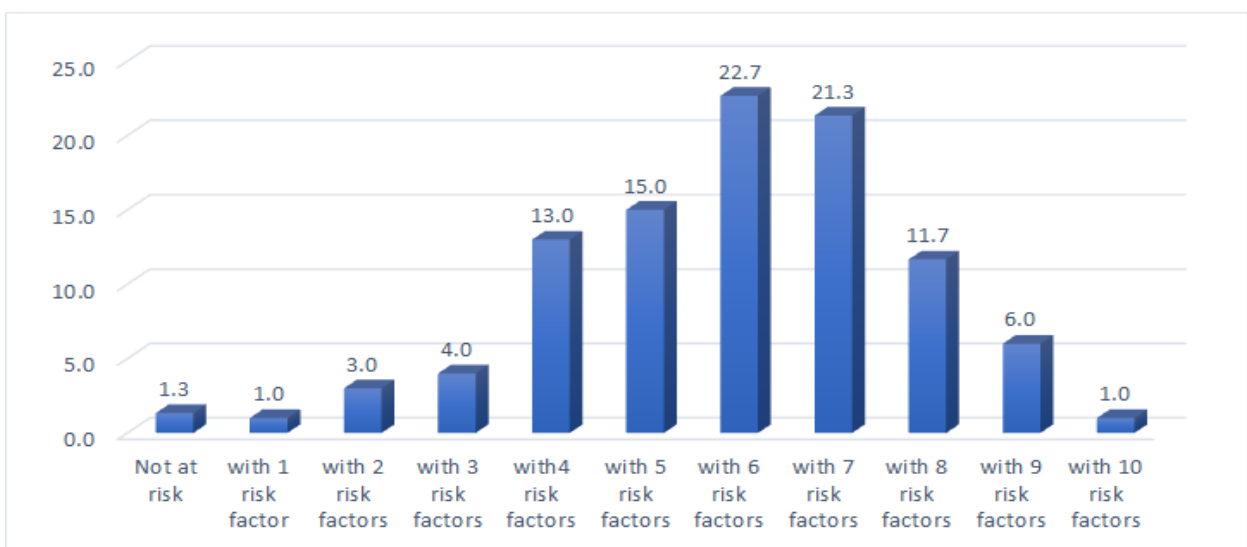


Fig 7 Frequency and Percentage on the basis of Number of Risk Factors 1.3% of the Students are Risk Free, 233(90.7%) Students are with 5 or more risk Factors. Maximum Students are having (22.7%) are having g 6 Risk Factors

Table 8 Showing the Statistically Significant Difference in Level of Risk

	Frequency	Percent	Chi square	p value
No	4	1.3%	207.947	p<0.001
Low	24	8.3%		
Moderate	152	50.5%		
High	120	39.9		

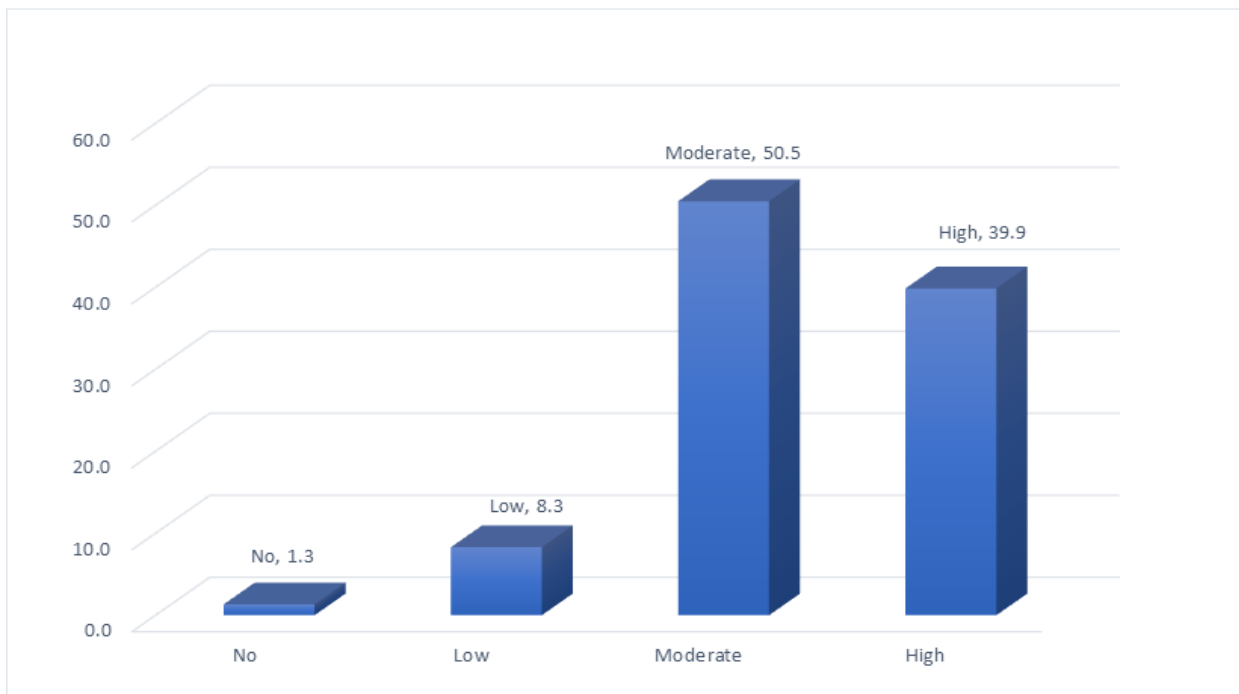


Fig 8 There is Statistically Significant Difference in Level of Risk with p<0. 001.Majority of them are at Moderate Risk (50.5%)

IV. DISCUSSION

The current research study is screening of PCOD in mid adolescent females and the research goal was early symptomatic detection of PCOD in mid adolescence school going girls, in early detection leads to prevention and management of PCOD. In this study 300 mid adolescent girls participated between the age group of 15-18 years girls, according to the standards for inclusion and exclusion. All the participants are from different schools of Bangalore participated in the study in each school the written approval was obtained from the principal as well as consent was signed by study participants which was collected before research data. A self-made questionnaire was used to collect 300 samples, there was no proper questionnaire were available so the self-made questionnaire was made based on the symptoms of PCOD, and the questionnaires was verified and approved by the gynecologist it consist of demographic data, Waist Hip Ratio (WHR) and Body Mass Index (BMI) and preliminary question regarding if the girls heard about the term PCOD or not, and followed by the 11 questions which are based on most common symptoms of Anovulation, which includes irregular heavy menstruation, oligomenorrhea, and amenorrhea, to hyperandrogenemia, which manifests as hirsutism, acne, abnormal unintentional weight gain, and male pattern alopecia¹⁰fatigue, mood swings etc. Each 11 question was given options of yes or no, to relate their symptoms and to choose the answer, and while filling the questionnaires the student’s height, weight

was measured to calculate the BMI and calculated using BMI calculator and waist hip circumference was also measured using inch tape for WHR ratio and calculated using ,WHR calculator and was instructed not to copy any answers and raise hand in case of doubt and confusion will be cleared. The students were not aware about the term PCOD in starting of screening of PCOD. After the screening of PCOD in mid adolescent girls using the self-made questionnaire, students were asked what did they learn and was there any doubts and the basic education of PCOD was given, many students were aware about the symptoms and risk factors after the screening process.

Over 116 million women (3.4%) are estimated by the World Health Organization (WHO) to be impacted by PCOD worldwide the data on the prevalence of PCOS are rare in India. The World Health Organization (WHO) estimated that between 4% and 20% of people worldwide have PCOD ¹⁰ In the past ten years, more women have developed PCOD than ever before.

According to the Indian National Health Portal, Maharashtra has a 22.5% PCOD prevalence rate. Previous studies conducted in South India that included teenagers found an incidence of 9.13%. ³

The result of our study conducted in Bangalore proved that the 77% of students were not aware of the term PCOD. according to statistical analysis which was based the

symptomatic question for screening of PCOD (39.9%) are at high risk, (50.5%) are at moderate risk and (8.3%) are at low risk.

➤ *Study Limitation:*

No proper PCOD questionnaires were available.

➤ *Recommendation:*

Screening of PCOD in rural schools.

V. CONCLUSION

The conclusion of the study based on screening of PCOD in mid adolescent girls concludes that the awareness of PCOD is 22.3% and the majority of the students i.e., 77.7% out of 300 are unaware of the PCOD. Out of 300 participants according to the data analysis there are High risk (39.9%), Moderate risk (50.5%), Low risk (8.3%) for PCOD was seen using as self-made questionnaire. In metropolitan city like Bangalore school going girls are still not aware about the PCOD. Resulting in the lack of awareness and sedentary lifestyle as the result of risk of PCOD is increasing.

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