

Original Research Article

A study to assess the knowledge regarding polycystic ovarian syndrome among the high school girls in a selected high school, Siliguri, West Bengal

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ABSTRACT

Background: Polycystic ovarian syndrome is a common reproductive and endocrine disorder found in 6-10% of the female population. The global prevalence of PCOS is estimated between 4% and 20%. The world Health Organization data suggest that approximately 116million women (3.45%) are affected by PCOS globally. The age standardized incidence rate of PCOS in women of reproductive age was 82.44 per 100000 in 2017, 1.45% higher than in 2007.

Methods: There are many research designs, but among them we have chosen non-experimental research design for this study. Sample of this research study was 105 high school students of Little Angels' Senior Secondary School, Siliguri through consecutive sampling technique. The instrument used to assess level of knowledge among high school girls was self-structured questionnaire.

Results: Findings revealed that among high school girls 7.62% had poor knowledge, 26.67% had average knowledge, 64.76% had good knowledge and 0.95% had excellent knowledge about polycystic ovarian syndrome.

Conclusions: The study concluded that the selected variables namely age, religion, educational class, exercise has significant impact on the knowledge regarding polycystic ovarian syndrome among high school girls. The study can be replicated with a larger sample to the findings can be generalized to a larger population.

Keywords: Amenorrhea, Hirsutism, Leventhal syndrome, Polycystic ovarian syndrome

INTRODUCTION

Polycystic ovary syndrome (PCOS) is a common hormonal condition that affects women of reproductive age.¹ It is a complex condition characterized by elevated androgen levels, menstrual irregularities, and/or small cysts on one or both ovaries.² It usually starts during adolescence, but symptoms may fluctuate over time. Irregular periods and lack of ovulation both can make

difficult to become pregnant. Polycystic ovarian syndrome is a leading cause of infertility.¹ The reproductive and metabolic features of PCOS are sometimes reversible with lifestyle modifications such as weight loss and exercise.²

Socio-cultural determinants play a predominant role in the health outcomes of women in general, and the rising prevalence of polycystic ovarian syndrome in particular.

Lack of preventive measures as well as low awareness about polycystic ovarian syndrome has given rise to the exponential increase in polycystic ovarian syndrome all over the world.³ It is the most prevailing female endocrine disorder and the pre-eminent cause of infertility with the worldwide range of 6-26%, and in India it is 3.7-22.5% in 2023.⁴ The age-standardized incidence rate of PCOS in women of reproductive age was 82.44 per 100000 in 2017, 1.45% higher than in 2007.⁵

Background

According to World Health Organization (WHO), there are 116 million women affected world-wide in 2012 (3.4% of women). Globally, prevalence estimates of polycystic ovarian syndrome are highly variable, ranging from 2.2% to as high as 26%. According to National Institute of Health (NIH) criteria prevalence rate of PCOS is high among Indian women. By using Rotterdam's criteria and advanced encryption standard (AES) criteria shows that pooled prevalence of polycystic ovarian syndrome was closed to 10%, while it was 5.8% in 2022.³

In West Bengal, a prospective single-center study reported the percentage of PCOS patients was 75.47% among the age group of 13 to 45 year in 2023.⁴

There is a need to increase awareness among women so as to prevent the occurrence of this disease.

Objectives of the study

To assess the knowledge regarding polycystic ovarian syndrome among high school girls in a selected high school, Siliguri, West Bengal. To find out the association between the knowledge regarding polycystic ovarian syndrome among high school girls in a selected high school, Siliguri, West Bengal with selected demographic variables.

METHODS

A non-experimental research design was acquired for this study. The research variable was knowledge regarding polycystic ovarian syndrome among high school girls. The target population was class 10, 11, and 12 girls of Little Angels' Senior Secondary School and study period was July 2023 to June 2024.

The sample size of this research study was 105. The sample was chosen through consecutive sampling technique. The tool used to assess the level of knowledge was self-structured questionnaire.

Ethical clearance was obtained from the principal of Little Angels' Senior Secondary School, Siliguri. A written informed consent was developed for participants briefing objectives to each respondent.

RESULTS

Characteristics of study population is shown in Table 1.

Table 1: Distribution of the sample characteristics.

Demographic variables	Characteristics	N	%
Age (years)	16-17	91	86
	18-19	40	14
Religion	Hindu	88	84
	Muslim	10	9
	Christian	3	3
	Others	4	4
Education	Class X	43	40.95
	Class XI	50	47.61
	Class XII	12	11.42
Resident	Urban	67	64
	Rural	38	36
Menarche	Below 10 years	5	4.76
	10-13 years	70	66.66
	Above 13 years	30	28.57
Menstrual cycle	Regular	72	69
	Irregular	33	31
Sanitary napkin	Below 3	36	32.28
	3-5	63	60
	Above 5	6	5.71
Type of family	Nuclear	73	69
	Joint	29	27
	Extended	3	3
Body weight (kg)	Below 40	21	21
	40-50	49	46.6
	50-60	26	24.7
	Above 60	9	8.5
Sleep	Below 5 hours	5	5
	5-6 hours	55	52
	7-8 hours	42	40
	Above 8 hours	3	3
Stream	Science	22	20.95
	Arts	30	28.57
	Commerce	10	9.52
	General	43	40.95
Menstrual cramp	Yes	90	90
	No	15	15
Exercise	Yes	8	7.6
	No	18	17.14
	Sometimes	79	75.23

Description of knowledge score

The data presented in Table 2 shows that 0.95% of the high school girls had excellent, 64.76% had good, 26.67% had average and 7.62% had poor knowledge about polycystic ovarian syndrome. The minimum score 5 and maximum score was 21, the mean knowledge regarding polycystic ovarian score was 13 and the median knowledge 13 and the standard deviation was 0.68.

Table 2: Frequency and percentage of knowledge score.

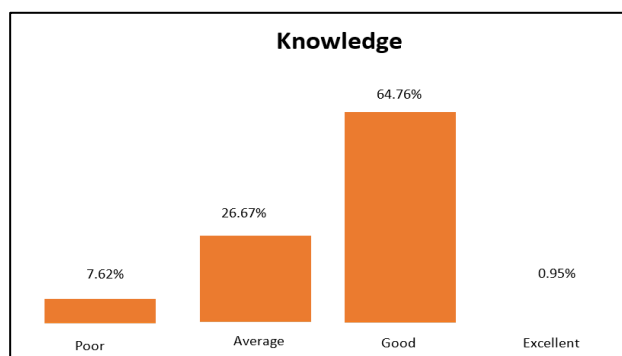
Level of knowledge score	Range	Knowledge score	
		N	%
Poor	0-9	8	7.62
Average	10-14	28	26.67
Good	15-20	68	64.76
Excellent	21-25	1	0.95

The results show that out of 105 high school girls, 68 high school girls have gained good knowledge.

It revealed that 64.76% of high school girls had good knowledge about polycystic ovarian syndrome.

Findings related to knowledge regarding polycystic ovarian syndrome among high school girls

Figure 1 shows that 0.95% of the high school girls had excellent, 64.76% had good, 26.67% had average and 7.62% had poor knowledge regarding polycystic ovarian syndrome.

**Figure 1: Bar diagram showing percentage distribution of knowledge score.****Table 3: Mean, median and standard deviation score of knowledge regarding polycystic ovarian syndrome among high school girls.**

Mean score	13
Median score	13
Standard deviation score	0.68

DISCUSSION

Knowledge regarding polycystic ovarian syndrome has very significant role in health maintenance of the age group of 16-19 as a huge number of girls come into this age group. In West Bengal, a prospective single-centre study reported the percentage of PCOS patients was 75.47% among the age group of 13 to 45 year in 2023.⁵ The global prevalence of PCOS is estimated between 4% and 20%. The world Health Organization data suggest that approximately 116 million women (3.45%) are affected by PCOS globally.⁵ The age standardized

incidence rate of PCOS in women of reproductive age was 82.44 per 100000 in 2017, 1.45% higher than in 2007.⁶

In present situation inadequate knowledge regarding polycystic ovarian syndrome which is considered as one of the most leading changes in the menstrual cycle, cyst in ovary, failure to conceive and other health problems among high school girl can cause serious damage to the health of the high school girl. Sample was limited to only one high school. Sample number of subjects (105) was used to conduct this study thus limiting generalization of the findings. Polycystic ovarian syndrome is the most prevailing female endocrine disorder and the pre-eminent cause of infertility with the worldwide range of 6-26%, and in India it is 3.7-22.5% in 2023. So, through this study we assess the knowledge regarding polycystic ovarian syndrome among the high school girls age group between 16-19 years.

This research result shows that 0.95% of the high school girls had excellent knowledge, 64.76% had good knowledge, 26.67% had average knowledge and 7.62% had poor knowledge regarding polycystic ovarian syndrome.

CONCLUSION

The present study shows the knowledge level of polycystic ovarian syndrome among high school girls some of them good knowledge and some of them average knowledge.

We assume that the high school girls may not have adequate knowledge regarding polycystic ovarian syndrome but based upon the observation of our study, it can be concluded that the selected variables namely age, religion, educational class, exercise has significant impact on the knowledge regarding polycystic ovarian syndrome among high school girl. The present study revealed that 7.62% girl had poor knowledge, 26.67% had average knowledge, 64.76% had good knowledge and 0.95% had excellent knowledge.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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