"A Study to Assess the Knowledge Regarding Polycystic Ovarian Syndrome among B.Sc. Nursing 5th Semester Students at Era College of Nursing, Lucknow".

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Abstract— Polycystic ovarian syndrome (PCOS) is the most common endocrine pathology in females of reproductive worldwide. Stein and Leventhal initially described it in 1935. The prevalence ranges between 5% and 15%, depending on the diagnostic criteria applied.

Despite its high prevalence, PCOS is underdiagnosed and frequently takes more than I visit or different physicians to get identified, and these usually occur in more than a 1-year timeframe. It is a very frustrating process for the patient. Multiple morbidities are associated with PCOS, including infertility, metabolic syndrome, obesity, impaired glucose tolerance, type 2 diabetes mellitus, cardiovascular risk, depression, obstructive sleep apnea (OSA), endometrial cancer, and non-alcoholic fatty liver disease/non-alcoholic steatohepatitis (NAFLD/NASH). This study was conducted by using qualitative research approach at Era College of Nursing, Lucknow. In the present study, descriptive research design was used to achieve the objectives of the study. The total sample size was 70 as calculated statistically. Before conducting the study, informed consent was obtained from the sample. Simple random sampling technique was used. Data collection was done by using Self-structured knowledge questionnaire to assess the knowledge regarding polycystic ovarian syndrome among B.Sc. nursing students. The result of the study was as follows-

The data obtained are tabulated and analysed by using descriptive and inferential statistics. The statistical analysis of 70 sample shows that 24 (34.3%) samples had adequate knowledge, 40 (57.1%) sample had moderate knowledge, 6 (8.6%) sample had inadequate knowledge.

Keywords--Assess, B.Sc. Nursing 5th Semester Students, Knowledge, Polycystic Ovarian Syndrome

I. INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the most common endocrine pathology in females of reproductive worldwide.

It is characterized by two or more of the following: irregular menstrual periods, hyperandrogenism, and polycystic ovaries.

Stein and Leventhal initially described it in 1935. The prevalence ranges between 5% and 15%, depending on the diagnostic criteria applied. PCOS is underdiagnosed despite its high incidence, and it sometimes requires multiple visits or various doctors to be diagnosed, usually over a period of more than a year. The patient finds the process to be quite frustrating. Comorbidities might worsen because of delayed diagnosis, making lifestyle interventions—which are essential for improving PCOS symptoms and quality of life—more challenging to carry out. Obstructive sleep apnea (OSA), endometrial cancer, obesity, metabolic syndrome, infertility, impaired glucose tolerance, type 2 diabetes mellitus, cardiovascular risk, depression, and non-alcoholic fatty liver disease/non-alcoholic steatohepatitis (NAFLD/NASH) are among the numerous morbidities linked to PCOS.

II. BACKGROUND

The illness known as PCOS is complex. The pathogenesis of the disease has been linked to a number of vulnerable genes. These genes participate in androgenic pathways and steroidogenesis at different levels. About 70% heritability has been estimated by twin studies. Furthermore, the expression of these genes as well as the onset and course of the disease are significantly influenced by the environment. The two most prevalent environmental factors are insulin resistance and obesity. Fetal androgen exposure is another theory.

An estimated 5 million females in the United States who are of reproductive age suffer from PCOS, according to the NIH 2012 workshop report. Not considering the expense of severe comorbidities linked to PCOS, the annual cost of diagnosing and treating PCOS to the healthcare system is about $4 billion. Premature adrenarche, congenital virilizing diseases, prepubertal obesity, above average or low birth weight for gestational age, first-degree relatives with PCOS, and the use of valproic acid as an antiepileptic medication have all been linked to higher prevalence.

Additionally, research has indicated that Mexican Americans are more likely to have it than non-Hispanic whites and African Americans.

III. Methodology

Research design can be defined as the blueprint to conduct a research study, which involves the description of research approach, study setting, sampling size, sampling technique, tools and method of data collection and analysis to answer specific research questions or for testing hypothesis.

The descriptive survey research design was used in this study.

A total of 70 participants were chosen using a probability sampling technique. Data was gathered through a self-structured questionnaire that included demographic information and questions related to PCOS. Ethical approval was obtained from the concerned authorities, and informed consent was secured from all participants prior to data collection. The data collection was done on 3rd July, 2025.

SECTION-1
Description Of Demographic Profile

Table No. 01:
Demographic Profile of the Subjects

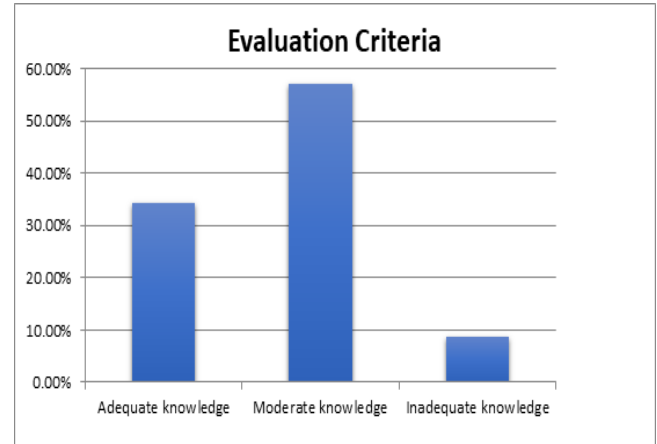| Demographic variables	Options	Percentage (%)	Frequency
Age	18-19 years	3%	2
	20-21 years	43%	30
	22-23 years	50%	35
	24 years and above	4%	3
Menstrual cycle	21-24 days	29%	20
	25-28 days	34%	24
	29-32 days	24%	17
	Above 32 days	13%	9
Marital status	Married	7%	5
	Unmarried	93%	65
Monthly Income	Below 25000	24%	17
	25000-35000	27%	19
	35000-45000	19%	13
	More than 45000	30%	21
Previous knowledge	Yes	57%	40
	No	43%	30
Seminar	Yes	46%	32
	No	54%	38
Family history	Yes	13%	9
	No	87%	61

The demographic profile shows that the majority of participants were aged 20–21 years (50%), followed by those aged 22–23 years (43%), with smaller proportions aged 18–19 years (3%) and above 24 years (4%). Regarding menstrual cycle length, most participants reported cycles of 21–24 days (29%) and 25–28 days (24%), while 34% had cycles of 29–32 days and 13% had cycles longer than 32 days. In terms of family monthly income, 24% of participants earned below ₹ 25,000, 27% earned between ₹ 25,000–35,000, 19% between ₹ 35,000–45,000, and 30% reported an income above ₹ 45,000, indicating that the majority belonged to a middle socioeconomic background.

SECTION-2
Knowledge Regarding Polycystic Ovarian Syndrome

Table No. 02:
Frequency and Percentage distribution of level of knowledge

CRITERIA MEASURE OF KNOWLEDGE SCORE		
LEVEL OF SCORES	PERCENTAGE	FREQUENCY
ADEQUATE KNOWLEDGE (14-25)	34.3%	24
MODERATE KNOWLEDGE (7-13)	57.1%	40
INADEQUATE KNOWLEDGE (0-6)	8.6%	6

The findings reveal that the majority of participants had a moderate level of knowledge (57.1%), indicating basic but not strong awareness of the subject. A smaller proportion demonstrated adequate knowledge (34.3%), suggesting that only a few participants had a strong understanding. Meanwhile, 8.6% of participants had inadequate knowledge, highlighting a lack of sufficient awareness among a minority. Overall, the results suggest a need for targeted education and awareness programs to improve knowledge levels, especially among those with moderate and inadequate knowledge.

SECTION-3
Association Between Demographic Variables And Knowledge Level

Table No. 03:
Table showing Association of Scores and Demographic Variables

Demographic Variables		Inadequate	Moderately adequate	Adequate	Chi-Square	df	p-value	Result
Marital status	married	0	2	3	1.414	2	0.593	Not Significant
	unmarried	6	38	21				
Monthly income	25000-35000	4	7	8	10.576	6	0.068	Borderline
	35000-45000	1	6	6				
	above 45000	0	17	4				
	below 25000	1	10	6				
Previous Knowledge	no	1	22	7	5.648	2	0.059	Borderline
	yes	5	18	17				
seminar	no	2	25	11	2.815	2	0.220	Not Significant
	yes	4	15	13				
Family history	no	6	36	19	1.928	2	0.384	Not Significant
	yes	0	4	5				
Menstrual cycle	21-24 days	1	11	8	17.854	6	0.002	Significant
	25-28 days	5	7	12				
	29-32 days	0	13	4				
	above 32 days	0	9	0				

The analysis of demographic variables and knowledge level reveals that marital status, seminar attendance, and family history do not significantly influence knowledge (p > 0.05). Monthly income and previous knowledge show a borderline association (p near 0.05), suggesting a possible weak effect. Menstrual cycle is the only variable with a significant relationship to knowledge level (p = 0.002), indicating it strongly affects knowledge scores.

IV. DISCUSSION

This study assesses the knowledge regarding polycystic ovarian syndrome among B.Sc. nursing 5th semester students at Era College of Nursing in Lucknow, Uttar Pradesh. Polycystic ovarian syndrome (PCOS) is the most common endocrine pathology in females of reproductive worldwide. It is characterized by two or more of the following: irregular menstrual periods, hyperandrogenism, and polycystic ovaries.

Stein and Leventhal initially described it in 1935. The prevalence ranges between 5% and 15%, depending on the diagnostic criteria applied.

V. CONCLUSION

Based on the findings of the study, it can be concluded that the overall knowledge regarding polycystic ovarian syndrome among B.Sc. nursing 5th semester students at Era College of Nursing was moderate. While a small proportion of participants had adequate knowledge, the majority demonstrated only moderate understanding, and a notable portion had inadequate knowledge. There was a significant association between knowledge scores and demographic variable like monthly family income while there was no association with age, previous knowledge, menstrual cycle, family history of polycystic ovarian syndrome.

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