A Study to Assess the Knowledge and Risk Factors of Polycystic Ovarian Disease (PCOD) among Young Girls in Selected College of the City with a View to Prepare an Information Booklet

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Abstract: *The aim of this study to help a study to assess the knowledge and risk factors of polycystic ovarian disease (PCOD) among young girls. Material and Methods: The researched adopted the descriptive approach with cross-sectional Descriptive research design in which investigator evaluate the knowledge and risk factors of Polycystic ovarian disease (PCOD) among young girls in selected college of the city. The sample size comprised of 140 young girls who met with the inclusion criteria. Data were collected structured knowledge questionnaire regarding PCOD and checklist related to risk factors of PCOD. Data were analyzed using descriptive and inferential statistics. In that Chi-square test for association of knowledge and risk factors with their demographic variables. Result: The results of this study showed that,the majority of 98(70%) samples had inadequate knowledge followed by 37(26.42%) had moderate level of knowledge and 5(3.5%) had adequate knowledge regarding PCOD. The majority of samples 79(56.42%) had mild risk of PCOD followed by 43(30.71%) had severe risk of PCOD and 18(12.85%) had mild risk of PCOD.there was no significant association between age, religion, marital status, type of family, Mothers occupation, Family income, Dietary pattern, Place of residence and source of previous information regarding PCOD. There was significant association between type of family (15.6), Mothers occupation (33.7), Family income (17.0), Dietary pattern (17.8), Source of previous information regarding polycystic ovarian disease (20.2) and there was non-significant association between age, religion, marital status, place of residence. Conclusion: The findings were concluded that majority of respondents inadequate level of knowledge regarding PCOD and majority of respondents had mild risk of PCOD.*

Keywords: knowledge, risk factors, Polycystic Ovarian disease (PCOD)

1. Introduction

Polycystic ovarian disease (PCOD) is a complicated ailment characterised by a constellation of symptoms that appear as a consequence of hormonal imbalance. There are around 5 percent to 10 percent of women of reproductive age who suffer from this endocrinopathy, making it one of the most frequent in the world. Because the true aetiology of PCOD has not yet been determined, people may present with a variety of symptoms when they are diagnosed. Early detection of illness is critical in order to avoid disease consequences. Premenstrual dysphoric disorder (PCOD) is characterised by monthly irregularity, hirsutism, acne, infertility, and central obesity as the primary symptoms. Following a recent review, the European Society of Human Reproductive and Embryology/American Society for Reproductive Medicine criteria, also known as the Rotterdam Criteria, were determined to be the most effective diagnostic criteria for PCOD, with PCOD being diagnosed when at least two of three criteria were present (presence of polycystic ovaries in ultrasonography, chronic anovulation, and hyperandrogenism). PCOD raises the chance of developing the metabolic syndrome, which includes diabetes, hypertension, and cardiovascular disease. A high amount of insulin, or insulin resistance, as well as a high level of cholesterol, are also connected with the condition. It has a negative impact on the quality of life and exacerbates anxiety and sadness, either as a result of its symptoms or as a result of the chronic disease with which it is connected. Additionally, there are long-term morbidities linked with PCOD, such as malignancies, since the combination of hyperinsulinemia, hyperandrogenism, and anovulation increases the risk of endometrial cancer in women. In addition, PCOD may result in reproductive issues such as infertility, miscarriage, and difficulties throughout the pregnancy. In contrast, making the commitment to a healthy lifestyle, which includes eating a healthy diet, engaging in regular exercise, and maintaining a healthy weight, is an effective method of management and should be recommended as an important first step before beginning drug therapy in order to achieve positive outcomes and improve the quality of life.[1]

Among the research participants, 21 percent had PCOD, according to the findings. Lack of physical exercise, an irregular menstrual cycle, a body mass index more than 25, and a waist hip ratio greater than 0.86 are all risk factors for PCOS. Although the frequency of polycystic ovarian disease is steadily growing, public knowledge of the condition is still low, and as a consequence, many women go untreated. The purpose of this research was to urge women of reproductive age to seek therapy as soon as possible in order to avoid long-term complications. The prevalence of PCOD was determined to be 21 percent in the study population, according to the findings. Lack of physical exercise, an irregular menstrual cycle, a body mass index more than 25, and a waist-hip ratio greater than 0.86 are all risk factors for PCOS.[2]

According to the findings of the study, young girls with PCOD are at risk for developing mental health problems such as sadness, anxiety, eating disorders, low self-esteem, and a diminished quality of life. According to a research conducted by Hollinrake (2007), depression affects 35 percent of women who suffer from PCOD. Management of PCOD should place a strong emphasis on education and support, while also emphasising a healthy lifestyle in order to control and avoid the most severe negative effects of PCOD from occurring. A beneficial influence on young girls with PCOD may be achieved by counselling and education. Nurses can also assist in the development of positive self-image in young girls who are experiencing negative feelings as a consequence of their physical manifestation of PCOD. By providing information, nurses may assist young girls in understanding the condition and the risk factors linked with it, therefore avoiding long-term negative and unhealthy life style changes. Nurses can also improve their ability to cope with stressful situations.[3]

When a young girl is transitioning from infancy to maturity, she goes through a period of physiological, psychological, social, and emotional adaptation that is unlike any other moment in her life. Individuals reach physical and sexual maturity throughout this time period, but their emotional maturity will be out of balance during this time period. In order to comprehend the health hazards connected with this condition, it is critical to understand the changes that occur in the early stages of life.[4]

Objectives:
1) To assess the knowledge regarding polycystic ovarian disease among young girls in selected college of the city.
2) To assess the risk factors regarding polycystic ovarian disease among young girls in selected college of the city.
3) To find out the association between the knowledge regarding polycystic ovarian disease with their selected demographic variables.
4) To find out the association between the risk factors regarding polycystic ovarian disease with their selected demographic variables.

Assumptions
1) There may not be adequate knowledge regarding Polycystic ovarian disease (PCOD) among young girls.
2) There may not be positive attitude regarding Polycystic ovarian disease (PCOD) among young girls.

2. Material and Methods

Research Approach
The present study the descriptive approach was intended to assess the knowledge and risk factors of Polycystic ovarian disease (PCOD) among young girls

Research Design
The research design is a Cross-Sectional Descriptive research design use to assess the knowledge and risk factors of Polycystic ovarian disease (PCOD) among young girls

Setting of the Study
The investigator conducted the study in selected college of the city.

Population
Targeted population: young girls of in selected college of the city.

Accessible population: The population of the study will be young girls aged 18-25 years studying at selected college of the city.

Sample and Sampling Technique
In the present study the sampling technique use in this study is purposive sampling technique.

Sample Size
The sample size comprised of **140** young girls who met with the inclusion criteria.

Sampling Criteria

Inclusion criteria:
- Young girls in selected college of the city.
- Young girls who are present at the time of data Collection.
- Age group of (18-24).
- Only computer engineering students

Exclusion criteria:
- Young girls not willing to participate in the study.
- Young girls absent during the study.

Description of the tool
The tool or the study instrument is divided into 3 parts.
Part A:-Socio-demographic variables
Part B:-Structured knowledge questionnaire regarding PCOD.
Part C:-checklist related to risk factors of PCOD.

Statistics

Descriptive statistics
Frequency and percentage distribution are used to analyzed the demographic data

Inferential statistics
Chi-square test used to assess the association of knowledge and the risk factors of PCOD with their demographic variables.

3. Results

The data were entered into master sheet for tabulation and statistical processing the obtained data were analyzed, organized, and presented under the following headings:

Section A: Distribution of samples according to demographic variables
Section B: distribution of samples according to knowledge regarding polycystic ovarian disease.

Section C: Distribution of samples according to risk factors of polycystic ovarian disease.

Section D: Distribution of samples according to association between the knowledge regarding polycystic ovarian disease and the demographic variables among young girls in selected college of city.

Section E: Distribution of samples according to association between the risk factors regarding PCOD with their selected demographic variables among young girls in selected college of the city.

Section A: Distribution of samples according to demographic variables

Table 1: Distribution of samples according to demographic variables, n=140

Characteristics	Category	Samples	
		Frequency	Percentage (%)
Age	18-19 years	39	27.85%
	20-21 years	23	16.42%
	22-23 years	47	33.57%
	24-25 years	31	22.14%
Religion	Hindu	71	50.71%
	Muslim	25	17.85%
	Christian	35	25%
	Others	9	6.42%
Marital Status	Married	9	6.42%
	Unmarried	131	93.57%
Type of family	Nuclear Family	63	45%
	Joint family	77	55%
Mother's occupation	Private Job	40	28.57%
	Government job	18	12.85%
	Housewife	43	30.71%
	Business	19	13.57%
	Any other specify….	20	14.28%
Family income	Below 15,000 Rs	41	29.28%
	15,001-25,000 Rs	62	44.28%
	25,001-35,000 Rs	26	18.57%
	Above 35,000 Rs	11	7.85%
Dietary pattern	Vegetarian	61	43.57%
	Non-vegetarian	89	63.57%
Place of residence	Hostel	27	19.28%
	Home	81	57.85%
	Room	32	22.85%
Source of previous information regarding polycystic ovarian disease	Family and Friends	23	16.42%
	Mass media	79	56.42%
	Health personnel's	12	8.57%
	Any other-specify	26	18.57%

Table no.1 depicts that:
- The majority of the samples47(33.57%) were in the age group of 22-23 years followed by 39(27.85%) in the age group of 18-19 yrs, 31(22.14%) in the age group of 24-25 years and 23(16.42%) in the age group of 50 yrs andabove.
- The majority of the samples 71(50.71%) belongs to Hindu religion followed by 35(25%) were Christian, 25(17.85%) were Muslim and 9(6.42%) were belongs to other religions.

- The majority of the samples 131(93.57%) were unmarried and 9(6.42%) were married.
- The majority of the samples 77(55%) were belongs to joint family and 63(45%) belongs to nuclear family.
- The majority of the samples 43(30.71%) were housewife followed by 40(28.57%) were doing private job, 20(14.28%) were doing other job, 19(13.57%) doing business and 18(12.85%) were doing government job.
- The majority of the samples 62(44.28%) having income between 15,001-25,000 Rs followed by 41(29.28%) having below 15,000 Rs, 26(18.57%) having 25,001-35,000 Rs and 11(7.85%) having above 35,000 Rs.
- The majority of samples 89(63.57%) were non-vegetarian and 61(43.57%) were vegetarian.
- The majority of samples 81(57.85%) were living at home followed by 32(22.85%) living in room and 27(19.28%) living in hostel.
- The majority of samples 79(56.42%) had information form mass media followed by 26(18.57%) had from any other sources, 23(16.42%) had from family and friends and 12(8.57%) had from the health personnel. **(Table no 1)**

Section B: Distribution of samples according to knowledge regarding polycystic ovarian disease.

Table 2: Knowledge level of young girls regarding polycystic ovarian disease, n=140

Total Score	Frequency	Percentage (%)
0-10 (Inadequate)	98	70%
11-20 (Moderate)	37	26.42%
21-30 (Adequate)	5	3.57%

The data presented in Table no 2 depicts that in the majority of 98(70%) samples had inadequate knowledge followed by 37(26.42%) had moderate level of knowledge and 5(3.5%) had adequate knowledge regarding PCOD.(Table no 2)

Section C: Distribution of samples according to risk factors of polycystic ovarian disease**.**

Table 3: Distribution of samples according to risk factors of polycystic ovarian disease, n=140

Total Score	Frequency	Percentage (%)
0-3(Mild)	79	56.42%
4-7(Moderate)	43	30.71%
8-12(Severe)	18	12.85%

The data presented in table no 3 depicts that in the majority of samples 79(56.42%) had mild risk of PCOD followed by 43(30.71%) had severe risk of PCOD and 18(12.85%) had mild risk of PCOD. (Table no 3)

Section D: Distribution of Samples according to Association between the Knowledge Regarding polycystic ovarian disease and the Demographic Variables among young girls in selected colleges of city.

Table 4: Chi square value showing association of knowledge score with demographic variables

Socio-demographic variables	Total no. of samples	Level of knowledge score			Df	P. Value	χ^2 value	Result
		Inadequate	Moderate	Adequate				

		N	N	N				
Age					6	0.770	3.30	**NS**
18-19 years	39	27	11	1				
20-21 years	23	13	9	1				
22-23 years	47	34	11	2				
24-25 years	31	24	6	1				
Religion					6	0.923	1.97	NS
Hindu	71	52	16	3				
Muslim	25	16	8	1				
Christian	35	23	11	1				
Others	9	7	2	0				
Marital Status					2	0.44	1.97	**NS**
Married	9	6	2	1				
Unmarried	131	92	35	4				
Type of Family					2	0.861	0.299	**NS**
Nuclear Family	63	43	18	2				
Joint Family	77	55	19	3				
Mothers occupation					8	0.516	7.19	**NS**
Private Job	40	30	8	2				
Government job	18	11	7	0				
Housewife	43	32	9	2				
Business	19	10	8	1				
Any other specify….	20	15	5	0				
Family income					6	0.903	2.18	**NS**
Below 15,000 Rs	41	29	11	1				
15,001-25,000 Rs	62	45	14	3				
25,001-35,000 Rs	26	16	9	1				
Above 35,000 Rs	11	8	3	0				
Dietary pattern					2	0.585	1.07	**NS**
Vegetarian	61	38	12	1				
Non-vegetarian	89	60	25	4				
Place of residence					4	0.987	0.325	**NS**
Hostel	27	20	6	1				
Home	81	56	22	3				
Room	32	22	9	1				
Source of previous information regarding polycystic ovarian disease					6	0.144	9.57	**NS**
Family & Friends	23	11	11	1				
Mass media	79	62	15	2				
Health personnel's	12	7	4	1				
Any other-specify	26	18	7	1				

Table 4 depicts that there was no significant association between age, religion, marital status, type of family, Mothers occupation, Family income, Dietary pattern, Place of residence and source of previous information regarding PCOD.[(Table no 4)]

Section E: Distribution of Samples according to Association between the Risk factors regarding PCOD with their selected Demographic Variables among young girls in selected college of the city.

Table 5: Chi square value showing association of risk factors with demographic variables

Socio-demographic variables	Total no. of samples	Level of knowledge score			Df	P. Value	χ^2 value	Result
		Mild	Moderate	Severe				
		N79	N43	N18				
Age					6	0.231	8.10	NS
18-19 years	39	22	12	5				
20-21 years	23	13	9	1				
22-23 years	47	23	18	6				
24-25 years	31	21	4	6				
Religion					6	0.990	0.870	NS
Hindu	71	38	23	10				
Muslim	25	14	8	3				
Christian	35	21	10	4				
Others	9	6	2	1				
Marital Status					2	0.808	0.427	NS

Married	9	6	2	1				
Unmarried	131	73	41	17				
Type of Family					2	0.000	15.6	**S**
Nuclear Family	63	47	12	4				
Joint Family	77	32	31	14				
Mothers occupation					8	0.000	33.7	**S**
Private Job	40	19	15	6				
Government job	18	17	1	0				
Housewife	43	13	21	9				
Business	19	17	2	0				
Any other specify….	20	13	4	3				
Family income					6	0.009	17.0	**S**
Below 15,000 Rs	41	24	13	4				
15,001-25,000 Rs	62	25	25	12				
25,001-35,000 Rs	26	20	4	2				
Above 35,000 Rs	11	10	1	0				
Dietary pattern					2	0.000	17.8	**S**
Vegetarian	61	46	11	4				
Non-vegetarian	89	30	32	14				
Place of residence					4	0.164	6.51	**NS**
Hostel	27	15	12	0				
Home	81	45	23	13				
Room	32	19	8	5				
Source of previous information regarding polycystic ovarian disease					6	0.003	20.2	**S**
Family and Friends	23	17	3	3				
Mass media	79	32	34	13				
Health personnel's	12	10	2	0				
Any other-specify	26	20	4	2				

Table 5 depicts that there was **significant association** between type of family (**15.6**), Mothers occupation (**33.7**), Family income (**17.0**), Dietary pattern (**17.8**), Source of previous information regarding polycystic ovarian disease (**20.2**) and there was non-significant association between age, religion, marital status, place of residence.[(Table no 5)]

4. Discussion

According to Sunanda B. and SabithaNayak, the research was carried out to determine the level of awareness of polycystic ovarian syndrome among student nurses. The average level of knowledge on polycystic ovarian syndrome was found in 76 percent of the samples, with high knowledge found in 10.7 percent of the samples.[5]

Similarly, the Sheelamma M.A. did a research in which the goal of the study was to examine the knowledge of nursing students about polycystic ovarian syndrome and to increase their knowledge about polycystic ovarian syndrome via a structured training programme on PCOD. Poor knowledge was shown by 33.3 percent of individuals, moderate knowledge by 56.6 percent, and strong knowledge by just ten percent of those who participated in the study.[6]

The findings of this research were corroborated by a study done by Sunanada B and Sabitta Nayak (2016), who conducted a descriptive study to examine the knowledge of 150 student nurses in Mangalore about polycystic ovarian syndrome. Following the study's findings, it was discovered that 76 percent of the samples had average awareness about polycystic ovarian syndrome and 10.7 percent had strong understanding of the condition.[7]

According to the findings of a similar research study carried out by NomanuiHaq et al. (2016), the mixed methodology research was carried out in order to measure the awareness of polycystic ovarian syndrome among the general public. Following the educational intervention, the research found that 90.2 percent of the subjects had appropriate understanding about polycystic ovarian syndrome.[8]

The authors of a similar research, Khushboo S. Shinde and Sunil S. Patil, undertook an investigation on the incidence and risk factors of polycystic ovary syndrome in women of reproductive age who attended a tertiary health care facility in Western Maharashtra. The prevalence of PCOS was determined to be 21 percent in the study population, according to the findings. Lack of physical exercise, an irregular menstrual cycle, a body mass index more than 25, and a waist-hip ratio greater than 0.86 are all risk factors for PCOS.[9]

5. Conclusion

According to the results of the current research, young girls lacked basic awareness about PCOD while also exhibiting Moderate to Severe risk factors for PCOD. Following the distribution of the information booklet on PCOD risk factors, the level of understanding will be raised.

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