

A STUDY TO ASSESS THE EFFECTIVENESS OF AN INTERACTIVE SESSION ON KNOWLEDGE REGARDING POLYCYSTIC OVARIAN DISEASE (PCOD) AND RISK ASSESSMENT AMONG ADOLESCENT GIRLS IN SELECTED COLLEGES OF BIKANER

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Introduction:

Adolescence is the development period of the child transformation from childhood to adult period. Adolescence' is defined as the age group between 10 to 19 years. Adolescence life is a pleasant period of life, in which child prospers with developmental needs and rights. It is the period of the individual to enhance their knowledge and skills, handle the emotions, relationships and gain quality and potentialities that are essential to adore the adolescence life and suppose to adopt the role of adult.¹

The women in the reproductive age have 5 – 10% of chance for the disease. Studies shows in India, 20 – 25 % of the women in the childbearing age are suffering by the disease. In which 60 % of women with PCOS were obese, 35 – 50 per cent of women had fatty liver, 70 % had insulin resistance, 60 – 70 % had a high level of androgen and 40 – 60% of the women had glucose intolerance. In India every ten women is diagnosed with the disease, out of the 10 women 6 were adolescent girls.²

The studies reviews the prevalence of the disease across the world may vary from 2.2% to 26%, in china the rate was 2% to 7.5% and in Srilanka 6.3%. The recent studies conducted in India has reported that the disease prevalence in India was 9.13% to 22.5% (10.7% by androgen excess society criteria).³

Polycystic ovarian syndrome (PCOS) has drawn a lot of women's attention in recent years because of being the leading cause of infertility among women. The PCOS' incidences are more among adolescents who are suffering from physical and psychological morbidities. Assessing the adolescents about the polycystic ovarian syndrome (PCOS) is desirable for the understanding of this upcoming health issue and for formulating an effective programme to enhance the quality of adolescents' life. Improving the adolescents' knowledge regarding the prevention and the early detection of the polycystic ovarian syndrome (PCOS) can go a long way in reducing the disease.

OBJECTIVES:

1. To assess the pre-test knowledge regarding Polycystic Ovarian Disease (PCOD) among adolescent girls in selected colleges of Bikaner.
2. To assess the risk of PCOD among Adolescent Girls in Selected Colleges of Bikaner.
3. To assess the effectiveness of an interactive session on knowledge regarding Polycystic Ovarian Disease (PCOD) among adolescent girls in selected colleges of Bikaner.
4. To find an association between the knowledge scores and selected demographic variables Of Adolescent Girls in Selected Colleges of Bikaner.
5. To find an association between the Risk of PCOD and selected demographic variables Of Adolescent Girls in Selected Colleges of Bikaner.

HYPOTHESES

H₁: There will be a significant difference between the pre-test knowledge scores and the post-test knowledge scores regarding PCOD among adolescent girls.

H₂: There will be a significant association between knowledge scores and selected demographic variables of Adolescent Girls in Selected Colleges of Bikaner.

H₃: There will be significant association between Risk of PCOD and selected demographic variables of Adolescent Girls in Selected Colleges of Bikaner.

METHODOLOGY

RESEARCH APPROACH

Quantitative research approach is used to objectively measure and analyze the Effectiveness of a interactive session on Knowledge Regarding Polycystic Ovarian Disease (PCOD) using structured tools.

RESEARCH DESIGN

In this study, Pre-experimental design (One group pre-test post-test design) study design will be adopted to measure and analyze the Effectiveness of a interactive session on Knowledge Regarding Polycystic Ovarian Disease (PCOD).

VARIABLES:

Independent variable: Interactive session on knowledge regarding PCOD.

Dependent Variable: knowledge regarding PCOD and risk assessment.

SETTING: The study was conducted in selected colleges of Bikaner, Rajasthan, which comprise undergraduate programs such as Arts, Science, and Commerce streams.

POPULATION : In this study, population includes adolescent girls (aged 17–19 years) studying in selected colleges of Bikaner.

SAMPLE AND SAMPLE SIZE: In the present study, sample consists of 80 adolescent girls (aged 17–19 years) studying in selected colleges of Bikaner.

SAMPLING TECHNIQUE: Simple random sampling was adopted in this study.

Inclusion criteria

- Adolescent girls aged 17–19 years.
- Studying in the selected colleges of Bikaner
- Available at the time of data collection.
- Willing to participate in the study.

DATA COLLECTION TOOLS AND TECHNIQUES

After an extensive review of literature, discussion with experts and with the investigators personal experience, structured knowledge questionnaire were developed. It consists of three sections:

Section A: Socio demographic Performa which include Age , Weight(in kg), Height(in feet), Class/Stream, Type of Residence, Family history of PCOD , Source of previous knowledge on PCOD , Presence any of chronic illness.

Section B: Structured knowledge questionnaire for knowledge assessment on PCOD.

Section C: PCOD Risk assessment scale.

VALIDITY OF THE TOOL

The content validity was obtained from various experts in field of medicine and nursing.

RELIABILITY OF THE TOOL

In order to establish the reliability, Cronbach's alpha was used to test the reliability of the tool. The reliability coefficient obtained for tool is 0.72, found to be internally consistent and reliable for the study.

PILOT STUDY:

A small version of a proposed study conducted to develop and/or refine the methodology, such as the data collection process. Pilot study was conducted to find the practicability and feasibility of the study.

DATA ANALYSIS:

The data obtained was tabulated and analyzed in terms of the objectives of the study.

Descriptive statistics :Frequency and percentage distribution were used to describe the socio-demographic data. Mean, Median & standard deviation and t-test were used to assess Effectiveness of a interactive session on Knowledge Regarding Polycystic Ovarian Disease (PCOD) and risk assessment Among Adolescent Girls. Chi square test was used to find association between demographic variable and pre-test knowledge .

ETHICAL CONSIDERATIONS:

Permission was obtained from appropriate authorities and informed consent obtained from subjects.

Results:

Table 1: Frequency and percentage distribution of samples (n=80)

S. N.	Socio-demographic variables	Categories	Frequency	Percentage
1	Age (yrs)	17 years	23	28.75
		18 years	27	33.75
		19 years	30	37.5
2	Weight in Kg.	40-50	25	31.25
		51-60	45	56.25
		61-70	9	11.25
		71 & Above	1	1.25
3	Height in Feet	4.5-5.0	33	41.25
		5.1-5.5	37	46.25
		5.6 & Above	10	12.5
4	Class/ Stream	B.A.	29	36.25
		B.Sc.	43	53.75
		B.Com.	8	10
5	Type of Residence	Urban	46	57.5
		Rural	34	42.5
6	Family history of PCOD	Yes	10	12.5
		No	41	51.25
		Not Sure	29	36.25
7	Sources of Previous Knowledge on PCOD	Teachers	22	27.5
		Internet	36	45
		Friends	2	2.5
		Family	20	25
8	Presence of any chronic illness	Yes	3	3.75
		No	77	96.25

Table 2: Frequency, percentage and cumulative frequency distribution of pre-test and post-test knowledge scores N= 80

Knowledge scores	PRE-TEST			POST-TEST		
	Frequency	%	Cumulative frequency %	Frequency	%	Cumulative frequency %
0-13	17	21.25	21.25	0	0	0
14-19	44	55	76.25	20	25	25
20-25	19	23.75	100	60	75	100
Total	80	100	100	80	100	100

Majority of the respondents (76.25%) had scores below 20 and only 23.25% had scores between 20-25 in pre-test. In the post-test, none of them had scores below 13. On comparing the pre-test scores with the post-test scores, it was found that all the subjects scored higher in post-test than the pre-test. This indicates that interactive session was effective in increasing the knowledge scores of Subjects regarding Polycystic Ovarian Disease (PCOD) and Risk Assessment.

The total knowledge scores obtained by the subjects were arbitrarily graded as –

LEVEL OF KNOWLEDGE	SCORING RANGE
POOR (<50%)	13-Jan
MODERATE (51-75%)	14-19
GOOD (>75%)	20-25
TOTAL	25

Table 3: Grading of pre-test and post-test knowledge scores among subjects regarding Polycystic Ovarian Disease (PCOD) and Risk Assessment N=80

Grade	Range	Pre-test		Post-test	
		Frequency	%	Frequency	%
High Risk	20-25	19	23.75	60	75.00
Moderate Risk	14-19	44	55.00	20	25.00
Low Risk	1-13	17	21.25	00	00

Table shows that majority of subjects (75.00%) had scores ranging between 20-25 in post-test whereas in the pre-test majority of subjects (76.25%) had scores below 20.

TABLE 4 COMPARISON OF MEAN & S.D. FOR PRE-TEST, POST-TEST SCORES:

	Mean	N	S.D.	Std. Error mean
Pre-Test Knowledge	13.58	80	4.5253	0.5095
Post-Test Knowledge	18.04	80	2.0751	0.2320

The table presents a comparison of the mean and standard deviation (S.D.) for pre-test and post-test scores in a paired sample analysis among a group of 80 adolescent girls regarding Polycystic Ovarian Disease (PCOD) and Risk Assessment.

For the pretest knowledge scores, the mean was 13.58, with a standard deviation of 4.5253 and a standard error mean of 0.5095. In contrast, for the post-test knowledge scores, the mean increased to 18.04, with a standard deviation of 2.0751 and a standard error mean of 0.2320.

During paired sample T-test researcher evaluate paired difference between pre-test and post-test knowledge score. At 95% Confidence Interval of Difference t value was -8.712.

This data reflects a noticeable improvement in knowledge from the pretest to the post-test. The mean post-test score is higher than the mean pretest score, indicating that the interactive session had a positive impact on the girls understanding of Polycystic Ovarian Disease (PCOD) and Risk Assessment.

Table-5 Mean and Percentage Pre and Post-test risk assessment score regarding Polycystic Ovarian Disease (PCOD) N= 80

Risk Assessment Score	Study group			
	Mean score	% Score	sd.	Std. Error Mean
PRE-TEST	11.05	36.83%	5.50926	0.6159
POST-TEST	23.68	78.93%	3.1726	0.354

PAIRED SAMPLE T-TEST

Pair	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of Difference		t value	df
				Lower	Upper		
Pre-Post Risk Assessment	-12.637	6.1299	0.6853	-14.001	-11.273	-18.440	79

Table shows that the Mean and Percentage Pre-test and Post-test risk assessment score regarding Polycystic Ovarian Disease (PCOD) among adolescent girls. For the pretest Risk Assessment scores, the mean was 11.05, with a standard deviation of 5.509 and a standard error mean of 0.6159. In contrast, for the post-test Risk Assessment scores, the mean increased to 23.68, with a standard deviation of 3.1726 and a standard

error mean of 0.354.

During paired sample T-test researcher evaluate paired difference between pre-test and post-test Risk Assessment score. At 95% Confidence Interval of Difference t value was -18.440.

It shows that attitude towards risk assessment is favorable in girls after post-test.

Table 6 Chi-square test showing the association between pre-test Knowledge scores and selected demographic variables N=80

S.No		Variables	Pre-test knowledge scores		χ^2 (Chi-Square)	df	Level of significance	Sign/ Non Sign
			< mean	> mean				
1	Age (in years)	17 years	11	12	15.5825	2	P= .00041	S*
		18 years	5	22				
		19 years	1	29				
2	Weight (in kg)	40-50	10	15	8.2913	2	P= 0.0404	S*
		51-60	5	40				
		61-70	2	7				
		71 & above	1	0				
3	Height (in feet)	4.5-5.0	10	23	2.9327	2	P= 0.2307	NS*
		5.1-5.5	6	31				
		5.6 & above	1	9				
4	Class / Stream	B.A.	11	18	7.5671	2	P= 0.2274	S*
		B.Sc.	5	38				
		B.Com.	1	7				
5	Type of residence	Urban	15	31	8.3448	1	P= 0.0038	S*
		Rural	2	32				
6	Family history of PCOD	Yes	1	9	12.009	2	P= 0.0024	S*
		No	15	26				
		Not Sure	1	28				
7	Presence of any chronic illness	Yes	2	1	3.8419	1	P= 0.0499	S*
		No	15	62				
8	Sources of Previous knowledge	Teacher	2	20	26.176	3	P= 0.00001	S*
		Internet	2	34				
		Friends	1	1				
		Family	12	8				

From table 6 it is evident that the demographic variables such as age, weight, Class, Type of residence, family history of PCOD, presence of any chronic illness and Sources of previous information, the calculated p-value is less than 0.05 (typically ≤ 0.05) at $p < 0.05$ level of significance. It indicates evidence for the research hypothesis.

DISCUSSION,

Majority of the respondents (76.25%) had scores below 20 and only 23.25% had scores between 20-25 in pre-test. In the post-test, none of them had scores below

13. On comparing the pre-test scores with the post-test scores, it was found that all the subjects scored higher in post-test than the pre-test. This indicates that interactive session was effective in increasing the knowledge scores of Subjects regarding Polycystic Ovarian Disease (PCOD) and Risk Assessment.

The knowledge pre-test median was 11.25 whereas the post-test median score was 21.50. It shows a difference of 10.25 in knowledge. The Ogives plotted shows that the first quartile score of post-tests is higher than third quartile score of pre-tests. This indicates that there is a significant increase in the knowledge of subjects on Polycystic Ovarian Disease (PCOD) and Risk Assessment.

Majority of subjects (75.00%) had scores ranging between 20-25 in post-test whereas in the pre-test majority of subjects (76.25%) had scores below 20.

For the pretest knowledge scores, the mean was 13.58, with a standard deviation of 6.221 and a standard error mean of 0.696. In contrast, for the post-test knowledge scores, the mean increased to 18.04, with a standard deviation of 6.431 and a standard error mean of 0.719.

REFERENCES

1. Abraham, M. (2017). Effectiveness of Planned Teaching Programme regarding Polycystic Ovarian Disease among Adolescent Girls. *International Journal of Advances in Nursing Management*, 5(2), 143-145.
2. Begum, G. S., Shariff, A., Ayman, G., Mohammad, B., Housam, R., & Khaled, N. (2017). Assessment of risk factors for development of polycystic ovarian syndrome. *Diabetes*, 1, 2.
3. Bazarganipour, F., Taghavi, S. A., Montazeri, A., Ahmadi, F., Chaman, R., & Khosravi, A. (2015). The impact of polycystic ovary syndrome on the health-related quality of life: A systematic review and meta-analysis. *Iranian journal of reproductive medicine*, 13(2), 61.

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