

# A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME (PTP) ON POLYCYSTIC OVARIAN SYNDROME (PCOS) AMONG ADOLESCENT GIRLS IN SELECTED HIGH SCHOOLS AT MANGALORE

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## Abstract :

A study was done to assess the effectiveness of planned teaching programme (PTP) on polycystic ovarian syndrome (PCOS) among adolescent girls in selected high schools at Mangalore. The main objectives of the study were

1. To assess the pre-test level of knowledge regarding PCOS among adolescent girls in Selected high schools at Mangalore.
2. To evaluate the effectiveness of Planned Teaching Programme on knowledge regarding Polycystic Ovarian Syndrome among adolescent girls in selected high schools at Mangalore.
3. To find the association between the pre-test knowledge score of adolescent girls and selected variables.

An evaluatory approach with pre-experimental one group pre-test post-test design was used for the study. The subjects were 100 adolescent girls selected by convenience sampling technique. PTP was administered after the assessment of pre-intervention knowledge on PCOS. Post intervention knowledge was assessed on the 7<sup>th</sup> day of the administration of PTP through the same structured knowledge questionnaire. The results of this study in general showed, the significant difference between the mean pre-test and post-test knowledge score ( $t_{99}=7.02, p<0.05$ ). The significant difference was found in between all the areas. There was no association between the pre-test knowledge score and selected demographic variables. Hence it can be concluded that PTP was effective in gaining knowledge of adolescent girls on PCOS. which was evident in post-test knowledge score.

Keywords : Knowledge; Effectiveness; Adolescent girls; Planned Teaching Programme (PTP).

## Introduction :

Puberty is a period of several years in which rapid physical growth and psychological changes occur, culminating in sexual maturity. It is important for both teen and for their family to understand what is happening to the teen physically, cognitively, and socially and what support resources are available

Polycystic ovary syndrome (PCOS) is a common endocrine disorder affecting about 6% of women of reproductive age, characterized by gynaecologic and endocrine symptoms including chronic

an ovulation, infertility and hyperandrogenism. The prevalence of PCOS in the general population has been estimated to be 5-10% of women of reproductive age. In India 26,626,765 population is affected with polycystic ovarian disease. Even in developed country like USA, PCOS is a common problem and is one of the most prevalent endocrine system diseases, affecting as many as 7 to 10 out of 100 (or 7 to 10 percent) of women of childbearing age (15 to 45 years). Unfortunately, this disorder often goes undiagnosed because of its many baffling and seemingly unrelated symptoms. The highest reported prevalence of PCO is 52% among South Asian Women.

PCOS cannot only be on the radar of family and adult healthcare providers. There is growing evidence that PCOS is also a paediatric syndrome. Because some females reach

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menarche as early as 8-9 years, PCOS needs to be a topic of concern for health care providers early in a child or adolescent's reproductive health. According to the Centres for Disease Control and Prevention (CDC) -2011, number of obese children in the U.S. has tripled since 1980.

PCOS is a frustrating experience for women, often complex for managing clinicians and is a scientific challenge for researchers. As research in PCOS is rapidly advancing, it is vital that research evidence is translated to knowledge and action among women, healthcare professionals and policy makers. Management should focus on support, education, addressing psychological factors and strongly emphasizing healthy lifestyle with targeted medical therapy as required. Treatment for the large majority is lifestyle focused, and an aggressive lifestyle-based multidisciplinary approach is optimal in most cases to manage the features of PCOS and prevent long-term complications

Nurses are in a critical position to provide comprehensive care to adolescents afflicted with the syndrome. Depending upon where these young females are encountered (in-patient hospital unit, school nurse's office, or outpatient clinic), the nurse's role and her approaches to care may be different. Regardless of the setting or role, essential elements of nursing practice should always include education and emotional support.

Though a wide scope of treatment is available for PCOS women in our society, they approach medical care only when they end-up with complication or the health problem interrupts their physical and psychological well being.

"Prevention is better than cure". Therefore as a nurse, the researcher has a pivotal role in creating awareness among adolescents about the modification of lifestyle and prevention of future complications, which can help to improve the quality of life by providing education and support.

**Methods :**

One group pre-test post-test research design used for the study .The population of the study were adolescent girl's between the age group of 14 to 16 years. Total 100 subjects

were selected from St. Agnes and Gerosa English Medium school by using convenient sampling. Data collection done on 9<sup>th</sup> September 2011 and post-test on 16<sup>th</sup> September 2011. Written permission was obtained from the concerned authorities before the data collection. and the investigator familiarized herself with her subjects and explained the purpose of the study to them. After giving necessary instructions to the subjects, the baseline information was collected. Pre-test knowledge level was assessed by using Structured Knowledge Questionnaire. Time taken for the Pre-test was 20 minutes. Immediately after the pre-test, PTP on PCOS was administered to the subjects. Post-test was conducted on the 7<sup>th</sup> day using the same Structured Knowledge Questionnaire.

**Results :**

Main findings are discussed under the following headings

**1. Base line characteristics of the adolescent girls**

Table 1: Frequency and Percentage distribution of subjects according to their baseline characteristics N=100

Sl.No	Variables	f	%
1.	Age		
	a. 14-15 years	14	14.0
	b. 15-16 years	86	86.0
2.	Religion		
	a. Hindu	59	59.0
	b. Christian	3	3.0
	c. Muslim	38	38.0
3.	Birth order of the child		
	a. First	53	53.0
	b. Second	40	40.0
	c. Third	7	7.0
4.	Family history of PCOS		
	a. Yes	8	8.0
	b. No	92	92.0
5.	Weight (kg)		
	a. 35-45kg	46	46.0
	b. 46-55kg	40	40.0
	c. 56-65kg	14	14.0

Table 2 : Frequency, cumulative frequency and percentage distribution of subjects according to their pre-test and post-test knowledge score N=100

Knowledge scores	Pre-test			Post-test		
	f	cf	%	f	cf	%
3-5	3	3	3	-	-	-
6-7	7	10	7	-	-	-
8-9	19	29	19	-	-	-
10-11	16	45	16	-	-	-
12-13	22	67	15	-	-	-
14-15	19	86	19	1	1	1
16-17	9	95	9	1	2	1
18-19	5	100	5	15	17	15
20-21	-	-	-	25	42	25
22-23	-	-	-	28	70	28
24-25	-	-	-	30	100	30

Maximum score = 25

Table 3 : Distribution of subjects according to the grading of pre-test and post test knowledge score regarding PCOS N=100

Range of knowledge score	Range of percentage	Category	Pre-test		Post-test	
			f	%	f	%
21-25	81-100	Very good	-	-	69	69
16-20	61-80	Good	14	14	30	30
11-15	41-60	Average	50	50	1	1
0-10	0-40	Poor	36	36	-	-

Maximum Score: 25

Table 4 : Area-wise mean, standard deviation and mean percentage of subjects pre-test and post-test knowledge score regarding PCOS N=100

Areas of knowledge	Max. score	Pre-test			Post-test		
		Mean	SD	Mean %	Mean	SD	Mean%
Anatomy & physiology	5	2.84	1.169	56.80	4.95	.219	99
Concep & causes	3	2.36	.772	78.67	2.7	.460	90
Signs & symptoms, pregnancy & complications	7	1.950	1.274	27.86	5.73	1.406	81.86
Diagnosis, prevention treatment	10	4.69	1.95	46.90	8.36	1.480	83.60
Overall	25	11.86	3.428	47.36	21.74	2.246	86.96

Maximum score= 25

Table 5 : Mean, Mean difference, Standard deviation and Paired 't' test value Between Pre-test and Post-test Knowledge Score of Adolescent girls regarding PCOS N=100

Group	Mean knowledge score		Mean difference	Standard deviation		't' value
	Pre-test	Post-test		Pre-test	Post-test	
Adolescent girls	11.86	21.74	9.90	3.428	2.246	27.61

$t_{(99)}=1.66, p<0.05$

\*=Significant

The data in table 4 shows that the mean Post-test knowledge score ( $x_2=21.74$ ) is higher than the mean pre-test knowledge score ( $x_1=11.86$ ). It is evident that the calculated 't' value ( $t_{99}=27.61$ ) was greater than table value ( $t_{99}$  at 0.05 level=1.66). Hence the null hypothesis was rejected and the research hypothesis was accepted. The mean difference between pre-test and post-test knowledge score was a true difference and not a chance. This indicates that PTP was effective in increasing the knowledge of adolescent girls.

Table 6 : Area wise mean, standard deviation, mean difference and Paired 't' value of pre-test and post-test knowledge score of adolescent girls regarding PCOS N=100

Area	Pre-test		Post-test		Mean Difference	Paired 't' value
	Mean	SD	Mean	SD		
Anatomy & physiology	2.840	1.169	4.95	0.219	2.11	17.27*
Concept & causes	2.360	0.770	2.700	0.460	0.34	4.35*
Signs & symptoms, pregnancy & complications	1.950	1.270	5.730	1.406	3.78	20.42*
Diagnosis, prevention treatment	4.690	1.952	8.360	1.480	3.64	17.65*

$t_{99}=1.66$  at 0.05 level  $p<0.05, df=99$  \*=Significance

The data presented in table 6 shows computed paired 't' test values between the pre-test and post-test is higher than the table value ( $t=1.66, p<0.05$ ). The data is statistically significant in all the areas. Hence it is inferred that the PTP was effective in increasing the knowledge of subjects regarding PCOS.

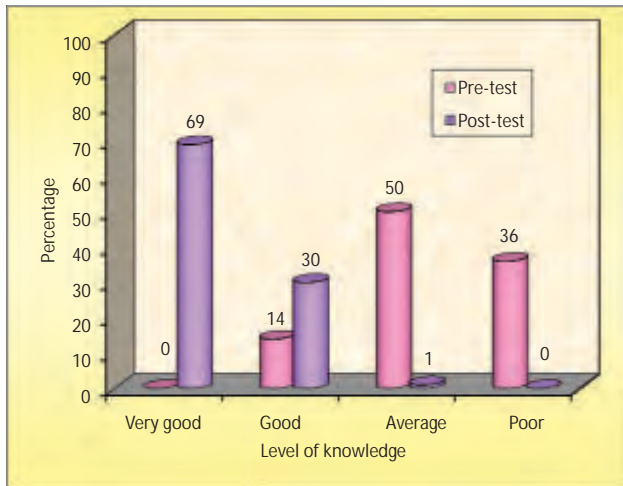
Table 7: Association between selected variables and pre-test knowledge score of adolescent girls regarding PCOS N=100

Sl. No.	Variable	Pre-test knowledge score		$\chi^2$	Inference
		mean	> mean		
1.	Age				
	14-15 years	7	7	0.164	Not significant
	15-16 years	38	48		
2.	Religion			0.034	Not significant
	Hindu	27	32		
	Others	18	23		
3.	Birth order of the child			0.117	Not significant
	First	23	30		
	Other	22	25		
4.	Family history of PCOS			1.982	Not significant
	Yes	6	2		
	No	39	53		
5.	Weight (kg)			0.935	Not significant
	35-45 kg	20	26		
	46-55 kg	20	20		
	56-65 kg	5	9		

$\chi^2_1=3.84, \chi^2_2=5.99; P<0.05$

The above table shows that Chi-square test value computed between pre-test knowledge score and demographic variables was not significant at 0.05 levels. Therefore there is no association between knowledge score of subjects and above listed selected demographic variables. Hence null hypothesis is accepted and research hypothesis is rejected. Thus it is inferred that gain in knowledge score was due to the administration of PTP.

Figure 1: Distribution of subjects according to their level of knowledge.



Discussion:

The aim of the study was to develop and implement a PTP to improve the knowledge of adolescent girls on PCOS. This study findings revealed that the PTP is an one of the effective strategy to improve the knowledge of people. A similar study conducted in Udipi taluk to determine the effectiveness of planned teaching programme on environmental health showed the following findings , there is no association found between the pre-test knowledge score and baseline variable. The calculated Chi-square test values were 0.08, 3.37, 0.73, 2.33, which is less than the table value ( $\chi^2=3.841, \chi^2=5.99$ ) at 0.05 level. Hence null hypothesis is accepted and research hypothesis is rejected. Thus it is inferred that gain in knowledge score was due to the administration of PTP. The present study also showed that there is no association between the pre-test knowledge score of adolescent girls and demographic variables. The Chi-square test values were 0.164, 0.034, 0.117, 1.982, 0.935, which was less than the table value ( $\chi^2=3.84, \chi^2=5.99$ ) at 0.05 level. Hence the null hypothesis is accepted and research hypothesis is rejected. Thus it is inferred that gain in knowledge score was due to the

administration of PTP.

Conclusion :

India is the second most populated country in the world with total population of over 1081 million. Adolescents (10-19 years) are living in diverse circumstances and have diverse health needs. Absence of friendly staff, working hours that are inconvenient to adolescents and lack of privacy and confidentiality have been identified as important barriers in accessing health services by adolescents and young people. The health sector needs to respond by offering services to adolescents in a friendly manner and in a non-threatening environment. The present study was done to evaluate the effectiveness of PTP on PCOS among adolescent girls in selected high schools at Mangalore.

After the administration of PTP the post-test measures showed that there was an overall gain in knowledge score, and significant increase in knowledge in the areas. Indeed it can be conclude that the PTP is effective strategy to improve the knowledge of the people.

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