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A Study to Assess the Effectiveness of Planned Teaching Program on Polycystic Ovarian Syndrome in Terms of Knowledge and Attitude among Adolescent Girls in Selected Higher Secondary Schools of Ahmedabad City

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ABSTRACT

A study to assess the effectiveness of planned teaching program on Polycystic ovarian syndrome in terms of knowledge and attitude among adolescent girls in selected higher secondary schools of Ahmedabad city. Sixty Adolescent girls were selected by using simple random sampling techniques. The pre-test was conducted using a structured knowledge questionnaire and summated Likert's attitude scale, planned teaching program was conducted. Seven days later post-test was conducted using same structured knowledge questionnaire and summated Likert's attitude scale. Most of Adolescent girls had inadequate knowledge (76.67 %) and (23.33%) had moderately adequate knowledge in pre-test after planned teaching program 48.33 % had moderately adequate knowledge, 50.00% had adequate knowledge and 1.66% had inadequate knowledge. Regarding the attitude level 80% of Adolescent girls had unfavourable attitude and 20 % had favourable attitude in pre-test. In post-test 55% had favourable attitude and 45 % had unfavourable attitude. Paired't' test was applied to compare pre-test and post-test mean and standard deviation. Knowledge and attitude level of Adolescent girls on Polycystic ovarian syndrome was statistically significant (p<0.05). There was significant association between pre-test knowledge and attitude with demographic variables such as Age, Age of menarche, Stream of study and family income per month (p<0.05) which was statistically confirmed with chi-square test. This study demonstrated that planned teaching program on Polycystic ovarian syndrome is effective in improving the knowledge and attitude level of Adolescent girls.

KEYWORDS

Knowledge, Attitude, Polycystic ovarian syndrome(PCOS), Planned teaching programme(PTP)

INTRODUCTION

"You can tell the condition of a nation by looking at the status of its women"- Jawaharlal Nehru

Adolescence is the most pivotal period of life, yet one of the most vulnerable times for physical ailments. Adolescents (13-19 years) form a large section of population – about 22.5 percent, that is, about 225 million. According to recent statistics more than 50% of the world's population are below the age of 25 and one fifth are adolescents (WHO1995).In India one third of the population are between the ages of 10 and 24. Today we are living in a period of modernization. The effect of modernization and technological advancement reflects in everyday life. Our lifestyle also has changed as foodintake is becoming more concentrated on sugar, fast food, and soft drinks and less on healthy, traditional fare. This unhealthy food habits and lack of exercise leads to many diseases in adolescents like Polycystic Ovarian Syndrome.

Teenagers may experience the full range of PCOS often seen in more mature women including irregular or completely absent periods, heavier than normal menstrual bleeding, ovarian cysts, Hirsutism (excessive facial or body hair) and alopecia (male pattern

baldness). Other symptoms range from acne, skin tags (growths on the skin) and brown skin patches to reduced sex drive, exhaustion oroverweight are increasingly being linked with Polycystic Ovarian Syndrome.48.

lack of mental alertness, depression anxiety, sleep apnoea (trouble breathing during sleeping) and thyroid problems. Teens that are Polycystic Ovary Syndrome (PCOS), a disorder that is one of the most common causes of infertility in women. So far, it was common among young women.

In India it is estimated that the incidence is higher and probably three times more than that found in the western world. Although most of the present patients are in their 20s or 30s, polycystic ovarian disease can affect females of any age, from menarche to menopause. In India 26,626,765 people are affected with polycystic ovarian disease.Based on the above research studies it can be concluded that the burden of PCOS is likely to expand So Efforts should be made to diagnose and treat PCOS to minimize the development of symptoms and prevent the onset of cardiovascular and metabolic disturbances.

STATEMENT OF THE PROBLEM

"A Study to assess the Effectiveness of Planned Teaching Programme on Polycystic Ovarian Syndrome in Terms of Knowledge and Attitude among Adolescent Girls of Selected Higher Secondary Schools of Ahmedabad City**."**

OBJECTIVES

1) To assess the knowledge of adolescent girls before & after administration of PTP on PCOS in a selected higher secondary schools of Ahmadabad city.

2) To assess the attitude of adolescent girls before & after administration of PTP on PCOS in a selected higher secondary schools of Ahmadabad city.

3) To find out association between pre-test knowledge score of adolescent girls on PCOS with their selected demographic variables.

4) To find out association between pre-test Attitude score of adolescent girls on PCOS with their selected demographic variables.

HYPOTHESES

H_1: The mean post test knowledge score of the adolescent girls will be significantly higher than their mean pre test knowledge score after administration of PTP on PCOSas evidence by structured knowledge questionnaire at 0.05 level of significance.

H_2: The mean post test attitude score of the adolescents' girls will be significantly higher than their mean pre test attitude score after administration of PTP on PCOS as evidence by attitude scale at0.05 level of significance.

H_3: There will be significant association between pre-test knowledge score of adolescent girls on PCOS with selected demographic variables.

H_4: There will be significant association between pre-test attitude score of adolescent girls on PCOS with selected demographic variables.

RESEARCH APPROACH: Theresearchstudyapproach is pre experimental research approach

RESEARCHDESIGN: The research design selected for the study is pre experimental study on one group pre-test/ post-test design.

RESEARCH SETTING: This study was conducted in the selected higher secondary schools of Ahmadabad city. The investigator had divided Ahmadabad in six zones (north, east, west, south, central and new west zone) out of six zone the investigator had selected one zone for pilot study From remaining 5 zones investigator have selected one schools from each zone by simple random sampling using lottery method .The selected zone for pilot study was west zone .Investigator had collected information about total no. of higher secondary schools in each zone and had selected one school for study by simple random sampling using lottery method.

TARGET POPULATION

All girls studying in selected higher secondary schools of Ahmadabad city.

SAMPLE SIZEAND SAMPLING TECHNIQUE

Total 60 adolescent (16-18 years) girls studying in selected higher secondary schools of Ahmadabad city were selected by multi stage simple random sampling with lottery methodSampling technique. The steps of the sampling technique that the investigator adopted were as follow:

From Each Schools the investigator Selected 12 samples and taken samples from 5 schools in disproportionate way .

SELECTION OF TOOLS FOR DATA COLLECTION

1. Structured knowledge questionnaire

The investigator reviewing the literature pertaining to assess knowledge of adolescent girls, investigator had prepared knowledge questioners by using multiple choice question method for collection of data regarding PCOS.

2. Summative Likert's Attitude Scale for measurement of Attitude

The investigator reviewing the literature pertaining to measure Attitude found that structured summative likert scale was appropriate for collection of data regarding attitude of adolescent girls on PCOS.

DEVELOPMENTOFTHE TOOLS:

Development of Planned Teaching Program on polycystic ovarian syndrome: PTP was developed by the investigator using the steps

given below to provide knowledge and favorable attitude towards PCOS

Development of Structured Knowledge questionnaire:

Knowledge questioner tool is used to assess Knowledge on PCOS by using multiple choice question method.

Development of Summative Likert's attitude scale:

Five point Summative likert's Attitude Scales is used to assess attitude on PCOS among Adolescent girls.

DESCRIPTION OF THE TOOLS:

The final tool consisted of following three sections:

Section –I: This section consisted 6 items for obtaining information regarding Demographic data such as age, age of menarche, Type of family, family income per month, Menstrual cycle, stream of study.

Section –II: This section consisted of structured multiple – choice questionnaire on PCOS. There were total 30 multiple choice items having one correct answer. Total items were 30 and total maximum score was 30.

Section III: This section consisted of Summated Likert's Attitude Scale assessing attitude of Adolescent girls about PCOS. It consists of total 20 statements. Among that 10 statements have positive attitude and 10 statements have negative attitude.

RELIABILITY

The reliability of structured knowledge questionnaire was determined by test retest method using Spearman's rank correlation Formula**.**

Spearman's rank correlation Formula:

$$r_s = 1 - \frac{6(\Sigma d^2)}{n(n^2-1)}$$

d= RX- RY (RX &RY = Rank)

X = pre-test score

Y= post test score

n= no of sample

The reliability of structured knowledge questionnaire was 0.85 which is more than 0.5; hence the questionnaire was determined by Spearman's rank correlation formula found to be reliable. The reliability was of the Summated Likert's Attitude Scale was 0.87 which is more than 0.5. Hence the Summated Likert's Attitude Scale was found to be reliable.

PROCEDURE FOR DATA COLLECTION

Formal permission had obtained from District Education officer for the selected higher secondary schools of Ahmedabad city. The Investigator than taken Permission from Principal of Each Selected Schools of Ahmedabad city &collected data. The data collection procedure was started from 30th September; 2013.An informed written consent from all the participants were taken before starting the study. The investigator approached the sample individually, discussed the objectives of the study and obtained consent

for participation in the study. The investigator administered pre test on 1st day and then administered PTP on the same day. The post test was taken after 7 days. All samples gave good co-operation during data collection procedure and no problem was faced during data collection.

PLAN OF DATA ANALYSIS:

The investigator analyzed the data in the following manner:

Demographic Data analyzed by using frequency and percentage and had presented in the form of the table.

The data from the Structured Knowledge Questionnaire before and after administration of PTP analyzed by using mean, standard deviation (SD) and 't-test' and had presented in the form of table.

The data from the Summative Likert's Attitude Scale before and after administration of PTP analyzed by using mean, standard deviation (SD) and 't-test' and had presented in the form of table.

Chi-square was applied to find the association with demographic data & the findings documented in tables and graphs.

ANALYSIS AND INTERPRETATION OF DEMOGRAPHIC DATA OF THE SAMPLES

Table-1 Frequency and Percentage Distribution of Samples by their Demographic variable:
[N=60]

Demographic Variables	Frequency(f)	Percentage (%)
Age (in years)		
a.16 to 17 Years	44	73.33%
b.17 to 18 Years	16	26.67%
1) Age of menarche in years		
a.≤ 11	8	13.3%
b.12	9	15%
c. Above 13	43	72%
2) Family income per month in Rs.		
a.≤ 5,000/-	19	31.7
b.5, 001-10,000/-	13	21.7%
c.10, 001-15000/-	09	15%
d. Above 15000	19	31.7%
Type of family		
a. Nuclear	34	56.67%
b. Joint	21	35%
c. Extended	05	8.3%
Stream of Study		
a. Science	29	48%
b. Commerce	23	38.3%
c. Arts	08	13%
Menstruation Cycle		
a. Regular	52	86.667%
b. Irregular	08	13.33%

ANALYSIS AND INTERPRETATION OF THE DATA RELATED TO THE KNOWLEDGE OF THE SAMPLES BEFORE AND AFTER ADMINISTRATION OF A PLANNED TEACHING PROGRAMME.

Table 2 Area-Wise Mean, Mean Percentage, Standard deviation (SD), Mean difference and Percentage Gain of pre test and post test Knowledge of samples on polycystic ovarian syndrome.
[N=60]

Area of Content	Max. Score	Pre-Test Knowledge			Post-Test Knowledge			% Gain	Mean difference
		Mean Score	Mean Percentage (%)	SD	Mean Score	Mean Percentage (%)	SD		
Introduction	5	2.17	43..33	0.58	4.41	88.3	0.71	44.97	2.24
Causes & Risk factors	3	0.717	23.89	0.73	1.9833	80.56	0.69	56.67	1.26
Sign & Symptoms	6	1.88	31.38	0.92	4.4667	75.83	1.17	44.45	2.58
Diagnosis or investigation	1	0.35	35	0.48	0.75	76.7	0.43	41.7	0.4
Mechanism of PCOS due to Hormonal Imbalance	3	0.67	22.22	0.65	2.0833	72.22	0.81	50	1.41
Prevention & Management	10	3.716	37.16	1.23	6.7667	83	1.47	45.84	3.05
Complication	2	0.52	25.83	0.59	1.6	60.8	0.69	34.97	1.08
TOTAL	**30**	**10.02**			**22.05**				**12.03**

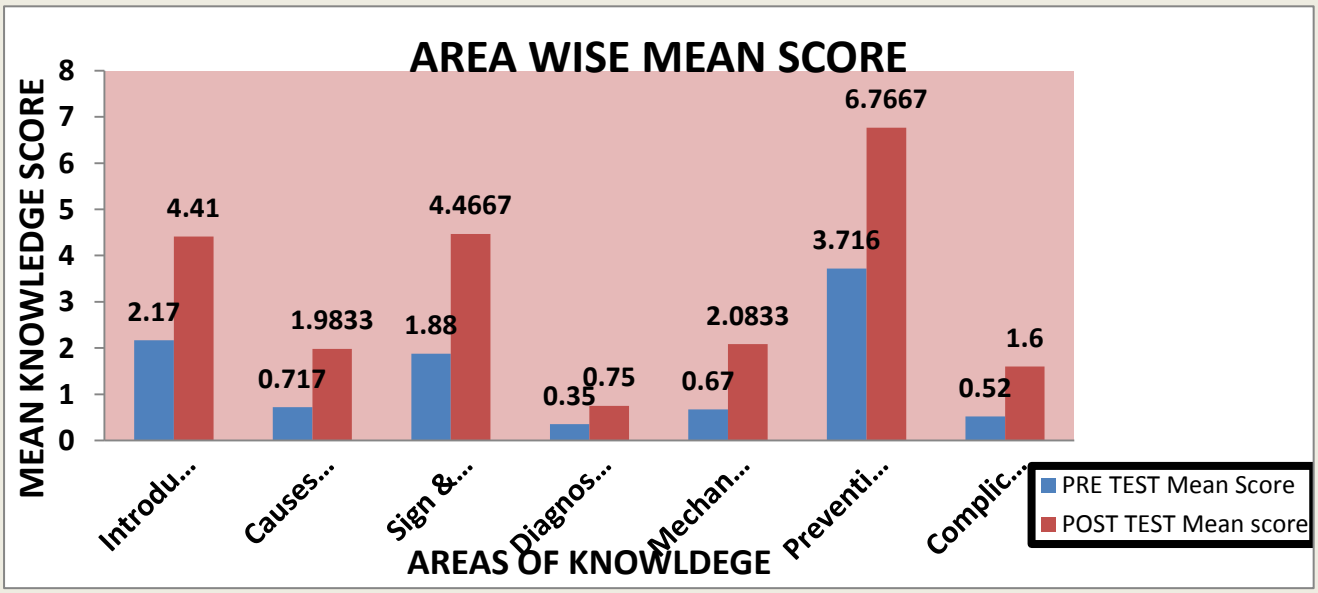

Figure 1 Bar Graph showing the Comparison of Area Wise mean score of Pre test and Post test Knowledge Scores of Samples on Polycystic ovarian syndrome.

Table 3 Mean, Mean Difference, Standard Deviation (SD) and 't' test value of the Pre-test and Post-test Knowledge scores of samples on Polycystic ovarian syndrome**.**
[N=60]

Knowledge test	Mean	Mean difference	SD	Calculated 't' value	df	Table 't' value
Pre-test	10.02	12.03	1.93	21.079*	59	2.00
Post-test	22.05		4.18			

*significance at the level of 0.05

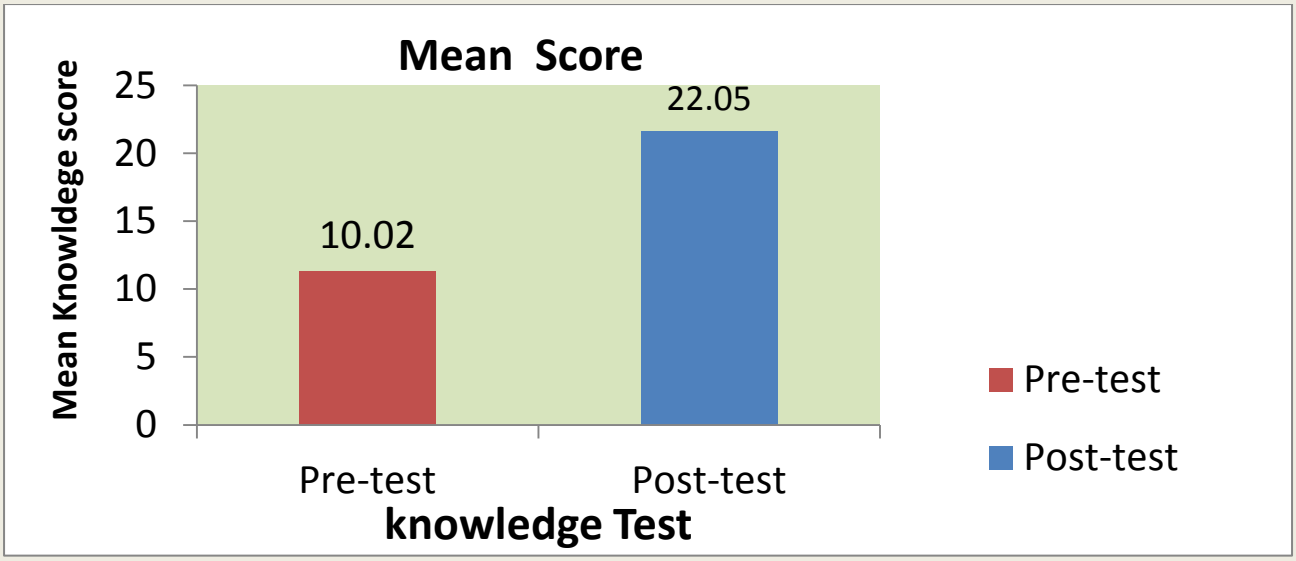

Figure2 Bar Graph Showing Comparison of Mean Pre Test and Mean Post Test Knowledge Scores of Samples on Polycystic ovarian syndrome

ANALYSIS AND INTERPRETATION OF THE DATA RELATED TO THE ATTITUDE OF THE SAMPLES BEFORE AND AFTER ADMINISTRATION OF A PLANNED TEACHING PROGRAMME.

Table 4 Distribution of Favorable & Unfavourable attitude based on pre-test and post test attitude score of samples **[N=60]**

Sr. No.	Level of Attitude	Classification	Pre-test		Post-test	
			Frequency	Percentage (%)	Frequency	Percentage (%)
1	61 to 100	Favorable	12	20%	19	31.66%
2	20 to 60	Unfavourable	48	80%	41	68.33%
	Total		60	100 %	8	100%

TABLE 5 Mean, Mean Difference, Standard Deviation (SD) and 't' value of the Pre- test and Post test Attitude scores of samples **[N=60]**

Attitude Score	Mean	Mean difference	SD	Calculated 't' value	df	Table 't' value
Pre-test	57.11	3.19	4.29	7.083*	59	2.00
Post-test	60.3		3.31			

*significance at the level of 0.05

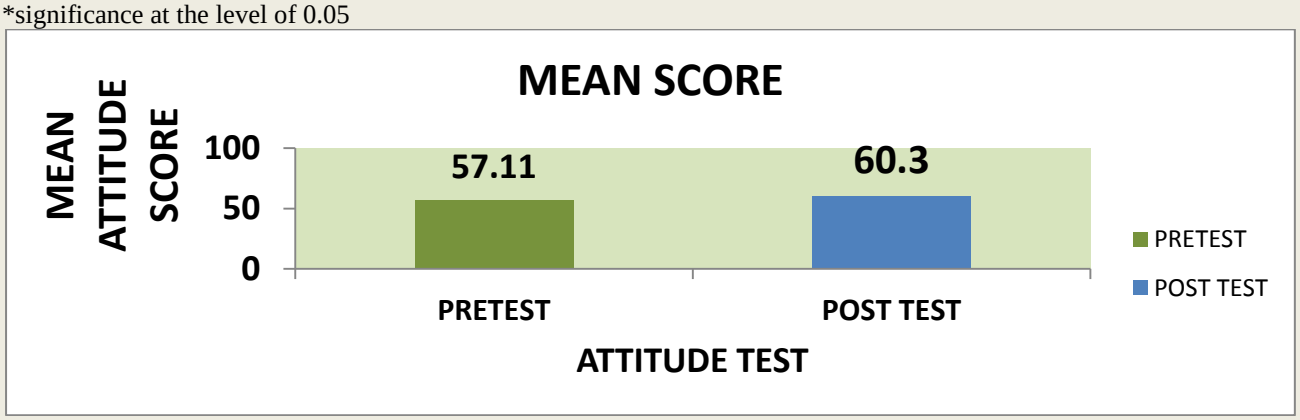

Figure 3 Bar graph showing Comparison of Mean Pre Test and Mean Post Test attitude Scores of Samples on Polycystic ovarian syndrome

ANALYSIS AND INTERPRETATION OF THE DATA RELATED TO ASSOCIATION OF PRE-TEST KNOWLEDGE SCORE WITH SELECTED DEMOGRAPHIC VARIABLES

Table 6 Association of Pre-test Knowledge scores of samples with the selected demographic variables such as Age, Age of menarche, Family income per month, Type of family, Stream of study and menstruation cycle

[N=60]

Demographic variables	**Frequency**	(χ^2)		**df**
		Calculated value	**Table value**	
Age (in years)				
a.16 to 17 Years	44	8.675*	5.99	2
b.17 to 18 Years	16			
3) Age of menarche in years				
a. ≤ 11	8			
b. 12	9	13.636*	9.49	4
d. Above 13	43			
Family income per month in Rs.				
a.≤ 5,000/-				
b.5, 001-10,000/-	19	3.199	12.59	6
c.10, 001-15000/-	13			
d. Above 15000	09			
	19			
Type of family				
a. Nuclear	34	3.364	9.49	4
b .Joint	21			
c. Extended	05			
Stream of Study				
a. Science	29	10.468*	9.49	4
b. Commerce	23			
c. Arts	08			
Menstruation Cycle				
a. Regular	52	3.669	5.99	2
b. Irregular	08			

*Significance at the level of 0.05

ANALYSIS AND INTERPRETATION OF THE DATA RELATED TO ASSOCIATION OF PRE-TEST ATTITUDE SCORE WITH SELECTED DEMOGRAPHIC VARIABLES

Table-7 Association of Pre-test Attitude scores of samples with the selected demographic variables such as Age, Age of menarche, Family income per month, Type of family, Stream of study and menstruation cycle.

[N=60]

Demographic variables	**Frequency**	(χ^2)		**df**
		Calculated value	**Table value**	
Age (in years)				
a.16 to 17 Years	44	4.176*	3.84	1
b.17 to 18 Years	16			
Age of menarche in years				
a.≤ 11	8			
b. 12	9	10.94*	5.99	2
c. Above 13	43			
Family income per month in Rs.				
a.≤ 5,000/-	19			
b.5, 001-10,000/-	13	9.27*	7.82	3
c.10, 001-15000/-	09			
d. Above 15000	19			
Type of family				
a. Nuclear	34			
b .Joint	21	4.928	5.99	2
c. Extended	05			
Stream of Study				

a. Science	29			
b. Commerce	23	2.018	5.99	2
c. Arts	08			
Menstruation Cycle				
a. Regular	52	1.766	3.84	1
b. Irregular	08			

*significance at the level of 0.05

MAJOR FINDINGS OF THE STUDY:

Knowledge & Attitude of samples regarding polycystic ovarian syndrome

The mean pre-test knowledge score of samples about polycystic ovarian syndrome was 10.02 where as post-test knowledge score was 22.05.The mean difference between Pre-test and post-test Knowledge score was 12.3. The mean Pre-test Attitude score was 57.11and the mean post test Attitude score was 60.3 the mean difference between Pre-test and post test Attitude score was 3.19. It revealed that the PTP was effective in increasing knowledge and gaining favourable attitude among the samples.

Association of pre test knowledge scores of Samples with selected demographic variables.

The findings of the study reveals that there was significant association with pre-test knowledge scores and selected demographic variables such as age (χ^2= calculated value 8.67> table value 5.99, age of menarche (χ^2= calculated value 13.63> table value 9.49; and stream of study (χ^2= calculated value 10.46> table value 9.49 at 0.05 level of significance);. Therefore age, age of menarche and stream of study were significant with knowledge of samples.

Association of pre test attitude scores of Samples with selected demographic variables.

The findings of the study reveals that there was significant association between pre-test Attitude score with the demographic variables age (χ^2= calculated value 4.17> table value 3.84), age of menarche (χ^2= calculated value 10.94> table value 5.99), and family income per month (χ^2= calculated value 9.27> table value 7.82 at 0.05 level of significance),Therefore age, age of menarche and family income per month were significant with attitude of samples.

CONCLUSIONS

PCOS is a condition which can lead to severe health related problems and affects the productive youth of the country if not treated properly. Teaching adolescent girls on PCOS helps them to gain knowledge, hence helps to early detect and prevent the PCOS. The present study assessed the knowledge & attitude of adolescent girls regarding polycystic ovarian syndrome before and after the PTP. The study results revealed that adolescents have lack in knowledge about

PCOS & unfavorable attitude and the knowledge level increased & Gain favorable attitude after the PTP. So the study concluded that PTP is effective in improving the knowledge & attitude of adolescent girls.

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