

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Lifestyle Modification on Prevention of Polycystic Ovarian Disease among Adolescent Girls at Selected School, Lucknow

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ABSTRACT

Title: Effectiveness of structured teaching programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls at selected school, Lucknow.

Objectives: Assess the level of knowledge regarding lifestyle modification on prevention of polycystic ovarian disease among adolescent girls. Evaluate the effectiveness of structured teaching programme on knowledge regarding lifestyle modification on prevention of polycystic ovarian disease among adolescent girls. Compare the pre-test and post-test level of knowledge among adolescent girls. Associate between level of knowledge among adolescent girls with selected demographic variables. **Hypothesis:**

H1- There is a significant difference between pre test and post test knowledge regarding lifestyle modification on prevention of Polycystic Ovarian disease. H2- There is a significant association between pre- test knowledge with selected demographic variable. **Conceptual framework:** MODIFIED LUDWIG VON BERTALANFFY'S OPEN SYSTEM THEORY was used for this study. **Approach and design:** This study was conducted using quantitative research approach. A pre-experimental one group pre-test post-test design was used. The total sample size 60 were selected by simple random sampling technique. The data was collected using structured knowledge questionnaire followed by Structured Teaching Program. **Findings:** Results revealed that mean post-test score of knowledge (17.65) was significantly greater than the mean pre-test score (11.07) with p value <0.05. Therefore, it indicates that there was a significant improvement in knowledge of adolescent girls after giving Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease. **Conclusion:** The findings revealed that there was a significant improvement in knowledge of adolescent girls in post- test after giving structured teaching programme. It also showed that there was an association with pre-test knowledge and selected demographic variables like source of information.

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KEYWORD: Effect, Structured Teaching Program, Lifestyle modification

BACKGROUND OF THE STUDY

Adolescent is a stage of transition from childhood to adulthood. Adolescence are undergoing several physiological changes which include body growth, hormonal changes, and sudden development of primary and secondary sex characteristics. Adolescent

are more prone to health risk due to hormonal changes, lifestyle changes and lack of knowledge. so, it is important to minimize the complication in later adolescent or health is maintained by the healthy lifestyles, early recognition of health problems.

In adolescent period many diseases affecting adolescent girls like menstrual irregularities, dysmenorrhea, menorrhagia, premenstrual syndrome, amenorrhea, oligoamenorrhea, premature ovarian failure or polycystic ovarian disease. Now a day's polycystic ovarian disease is considered as a widespread problem among adolescent girls.^[4] Polycystic ovarian disease is a common adolescence health problem and one of the leading causes of infertility. Polycystic disease is a most common female endocrine disorder which occurs in 4-18% of women in their reproductive age worldwide.

NEED FOR THE STUDY:

Adolescents form a large section of population of India, about 22.5%. Adolescent girls have to be focused more as it is a period of rapid physical growth, sexual, physiological, and psychological changes. Habits and behaviour picked up during adolescence have lifelong impact. ^[2] According to WHO adolescent are young people along with the period of 10- 19 years are often believed of as a strong and healthy group. This period is the development period between babyhood and adolescence. Also many fatal disease in maturity have their cause in teenage years.

Now a day's adolescent girls are unaware about Polycystic Ovarian Disease which is more prevalent. A substantial proportion of the worldwide burden of Polycystic Ovarian Disease could be prevented through the application of existing knowledge and by implementing programs for control and early detection and treatment is important to prevent long term sequel and to develop a positive attitude and follow healthy life style, as well as public health campaigns promoting physical activity and a healthier dietary intake.

STATEMENT OF THE PROBLEM

“A study to assess the effectiveness of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls at selected school, Lucknow.”

AIM OF THE STUDY

At the end of this study the adolescence girls will be able to identify the benefits of Structured Teaching Programme regarding prevention of Polycystic Ovarian Disease and will be able to adapt the lifestyle modifications in their daily activities.

OBJECTIVES OF THE STUDY

1. Assess the level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

2. Evaluate the effectiveness of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.
3. Compare the pre test and post test level of knowledge among adolescent girls.
4. Associate between level of knowledge among adolescent girls with selected demographic variables.

RESEARCH VARIABLES

Independent variable:-

Structured Teaching Programme on lifestyle modification on prevention of Polycystic Ovarian Disease.

Dependent variable:-

Level of knowledge of adolescent girls regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

Demographic variable:-

In this study includes Age (in years) , Age of menarche, Source of information, Physical Activity , Menstruation History.

INCLUSION CRITERIA

- Adolescent girls who were studying at selected school Lucknow
- Girls who comes under the age between (15 to 19) years.

EXCLUSION CRITERIA

- Those who are not available at the time of data collection.

HYPOTHESIS

H₁:- There is a significant difference between pre test and post test knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

H₂:- There is a significant association between level of knowledge with selected demographic variable.

CONCEPTUAL FRAME WORK

The present study aims to assess the effectiveness of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian disease among adolescent girls. The conceptual frame work for this study was based on Modified Ludwig Von Bertalanffy's open system theory (1968).

There are two types of system

A closed system

A closed system does no exchange energy, matter or information with its environment. It receives no input

from environment and gives no output to the environment.

A open system

Energy, matter and information move into and out of the system through the system boundary. All living systems such as plants, animals, people, families, and communities are open system, since their survival depends on a continuous exchange of energy. they are therefore, in a constant state of change. For its functioning an open system depends on the quality and the quantity of its input, output and feedback.

In the present study the concepts can be interpreted as follows,

Open system

In the present study individual is considered as open system.

Input

It refers to learners or targeted group with their characteristics, level of competence, learning needs and interest

In this present study input is the assessment on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls by using multiple choice questionnaire with an effect of demographic variables and the Structured Teaching Programme.

Through put

It denotes to different operational procedure in the overall programme implementation.

In this Present study through put is the process of gaining knowledge regarding lifestyle modification on prevention of polycystic ovarian disease among adolescent girls.

Development of structured teaching programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease its administration.

Output

Here, the output is improvement in level of knowledge, which is reassessed by using same questionnaire, after 7 days of Structured Teaching Programme.

➤ **SECTION -1**

➤ **PART 1: Distribution of demographic characteristics of Adolescent girl**

Table 1: Distribution of samples according to their socio demographic variable n=60

S. No.	Demographic Data	Category	Frequency (f)	Percentage (%)
1.	Age (in years)	a) 15 years	08	13.3
		b) 16 years	17	28.3
		c) 17 years	14	23.3
		d) 18 years	15	25
		e) 19 years	06	10

Feedback

feedback refers to the adolescent girls those who have improvement in knowledge, is given Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

DATA ANALYSIS AND INTERPRETATION

Analysis and interpretation of data is the most important phase of research process, which involves the computation of the certain measure along with searching for patterns of relationship that exists among data groups. Analysis and interpretation of data includes compilation, editing, coding, classification and presentation of data. Analysis is the process of organizing and synthesizing the data so as to answer research questions and test hypothesis.

The results are presented in following sections:

- **Part I:** Distribution of demographic characteristics of Adolescent girls.
- **Part II:** Assessment of level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

Section A: Assessment of pre-test level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

Section B: Assessment of post-test level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

Section C: Classification wise mean SD and mean percentage of pre-test and post-test knowledge score.

- **Part III:** Analysis of effect of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.
- **Part IV:** Analysis of comparison of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.
- **Part V:** Association of level of knowledge among adolescent girls with selected demographic variables.

2.	Age of menarche	a) 9 - 10 years	11	18.3
		b) 11 – 12 years	22	36.7
		c) 13 - 14 years	22	36.7
		d) 15 - 16 years	05	8.3
3.	Source of information regarding PCOD	a) Mass media	02	3.3
		b) Health Professionals	02	3.3
		c) Friends / Relative	11	18.3
		d) No information	45	75
4.	Physical Activity	a) Running	15	25
		b) Swimming	1	1.7
		c) Walking	34	56.7
		d) Bicycling	10	16.7
5.	Menstruation history	a) Regular	56	93.3
		b) Irregular	04	6.7

Table 1:- Reveals the frequency and percentage distribution of Adolescent girls according to the demographic variables such as Age (in years), Age of menarche, Source of information regarding Polycystic Ovarian Disease, Physical Activity, Menstruation history

Result shows, out of 60 samples majority of samples belonged to the age group 16 years 28.3%, followed by 13.3% belonged to age group 15 years, 23.3% belonged to age group 17 years, 25% belonged to age group 18 years, 10% belonged to age group 19 years old.

Result shows, out of 60 samples majority of samples achieved the age of menarche between 11-12 years 36.7% and age group between 13-14 years 36.7%, followed by the age group between 9-10 years 18.3%, age group between 15-16 years 8.3%.

Result shows, out of 60 samples majority of samples 75% don't have information related to PCOD, followed by 3.3% samples were having information through Mass media, 3.3% samples were having information through Health Professionals, 18.3% samples were having information given by friends/ Relative.

Result shows that majority of samples 56.7% preferred walking as their physical activity, followed by 25% preferred running physical activity, 1.7% preferred swimming physical activity, 16.7% preferred Bicycling physical activity.

Result shows that majority of samples had menstruation history, 93.3% were having Regular menstruation, followed by 6.7% were having Irregular menstruation history.

PART II: Assessment of level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

SECTION A: Assessment of pre-test level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

TABLE 2:-

Category	Score	Frequency	Percentage
Inadequate	0 -9	20	33.3%
Moderate	10 - 17	38	63.3%
Adequate	18- 25	2	3.3%

The table above shows the pre-test knowledge score of 60 subjects, 20 (33.3%) had Inadequate knowledge, 38 (63.3%) had Moderate knowledge and 2 (3.3%) had Adequate knowledge.

SECTION B: Assessment of post- test level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

TABLE 3: Assessment of post- test level of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls. **n = 60**

Category	Score	Frequency	Percentage
Inadequate	0 -9	0	0%
Moderate	10 - 17	25	41.7%
Adequate	18- 25	35	58.3%

The above descriptive table shows that the post- test knowledge score of 60 subjects, 25(41.6%) had Moderate knowledge and 35 (58.3%) had Adequate knowledge.

Section C: Classification wise mean, SD and mean percentage of pre-test and post- test knowledge score.

TABLE 4: Classification wise mean, SD and mean percentage of pre- test and post- test knowledge score.

S. No.	Sections	Min- Max Score	Pre- Test Knowledge			Post- Test Knowledge		
			Mean Score	Percentage	SD	Mean Score	Percentage	SD
1.	Question related to PCOD	0-6	2	33.3	1.314	4.35	72.5	1.19
2.	Question related to Life style modification	0-19	9.07	47.68	2.321	13.3	70	1.61

The above table displays the classification wise Mean, SD and Percentage of the pre-test and post-test knowledge scores about lifestyle modification on prevention of Polycystic Ovarian Disease.

In the classification of ‘Question related to Polycystic Ovarian Disease’ it reveals that mean percentage of pre-test score was 33.3% with the total mean and SD 2 ± 1.314 which was increased in post-test to 72.5% with total Mean and SD 4.35 ± 1.19 .

In the classification of ‘Question related to Life style modification’ it shows that the mean percentage of pre-test knowledge score was 47.68% with total mean and SD 9.06 ± 2.32 and after giving Structured Teaching Programme the mean percentage of post-test score was increased to 70% with total mean and SD 13.3 ± 1.61 .

PART III: Analysis of effect of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

TABLE 5: Determine the effect of pre-test and post-test knowledge scores among adolescent girls about knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

Category	Mean	SD	Mean difference
Pre- test	11.07	3.007	-6.58
Post-test	17.65	2.313	

Part IV: Analysis of comparison of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

TABLE 6: Comparison of pre- test and post- test knowledge scores among adolescent girls about knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

Category	Mean	SD	Mean difference	df	Paired t value	P value	Table value at 0.05
Pre-test	11.07	3.007	-6.583	59	-16.091	.000**	2.00
Post -test	17.65	2.313					

****Significance at 0.05 level**

The above table shows the comparison of knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls at selected school before and after Structured Teaching Programme. The mean pre-test knowledge score regarding Polycystic Ovarian Disease was 11.067 with a standard deviation of 3.007. After giving Structured Teaching Programme the mean score was increased to 17.65 with a standard deviation of 2.313. Increased in knowledge score was statistically tested by Paired ‘t’ test. The calculated ‘t’ value -16.091 is highly significant with the degree of freedom of 59 at $p < 0.05$ which shows that Structured Teaching Programme was effective for improving the knowledge among adolescent girls studying in selected school.

PART V: Association of pre-test knowledge among Adolescent girls with selected demographic variables.

TABLE7: Association of pre-test knowledge score of Adolescent girls with selected demographic variables.

S.N	Demographic data	Category	Frequency	Inadequate	Moderate	Adequate	Chi Square	df	Table value	Remarks
1.	Age(in years)	15 years	8	3	5	0	6.376	8	15.51	NS
		16 years	17	7	9	1				
		17 years	14	6	8	0				
		18 years	15	4	10	1				
		19 years	06	0	6	0				
2.	Age of menarche	9-10 years	11	5	6	0	4.212	6	12.59	NS
		11-12 years	22	8	13	1				
		13-14 years	22	7	14	1				
		15-16 years	05	0	5	0				
3.	Source of Information	Mass Media	2	0	1	1	31.782	6	12.59	S
		Health Professionals	2	1	0	1				
		Friends/Relatives	11	2	9	0				
		No Information	45	17	28	0				
4.	Physical Activity	Running	15	5	9	1	8.676	6	12.59	NS
		Swimming	1	0	1	0				
		Walking	34	15	18	1				
		Bicycling	10	0	10	0				
5.	Menstruation History	Regular	56	17	37	2	8.676	2	5.99	NS
		Irregular	4	3	1	0				

*NS-Not Significant

**S- Significant

The above table discloses the association of pre-test knowledge score of Adolescent girls with selected demographic variables like Age (in years), Age of menarche, Source of information, Physical Activity, Menstruation History. The association was statistically tested by Chi-Square. It indicated that the Chi-Square values computed between the pre-test knowledge score and Age ($\chi^2 = 6.376$), Age of menarche ($\chi^2 = 4.212$), Physical Activity ($\chi^2 = 8.676$), Menstruation History ($\chi^2 = 3.369$) were found to be non-significant. Source of Information ($\chi^2 = 31.782$) found to be highly significant at 0.05 level of significance.

Hypothesis testing:

This section deals with the testing of the hypothesis put forward by the investigator in the beginning of the study with sound support of the statistical analysis. The data of the study are based on the hypothesis listed below.

H1:-The finding of the study revealed that the post-test mean and SD score (17.65 ± 2.31) was greater than the Pre-test score (11.06 ± 3.00), with the calculated paired 't' value was -16.091 with P Value < 0.05 . Hence, H1 is accepted.

H2:- The finding of the study revealed that there is significant association of level of knowledge with source of information with chi square value (χ^2) of 31.78 is greater than the table value 12.59. Hence, H2 is accepted.

Results:

For the above objectives, the results are summarized under the following section:

PART I:- Description of sample according to their socio-demographic variable.

Result shows, out of 60 samples majority of samples belonged to the age group 16 years 28.3%, followed by 13.3% belonged to age group 15 years, 23.3% belonged to age group 17 years, 25% belonged to age group 18 years, 10% belonged to age group 19 years old.

Result shows, out of 60 samples majority of samples achieved the age of menarche between 11-12 years 36.7% and age group between 13-14 years 36.7%, followed by the age group between 9-10 years 18.3%, age group between 15-16 years 8.3%.

Result shows, out of 60 samples majority of samples 75% don't have information related to PCOD, followed by 3.3% samples were having information through Mass media, 3.3% samples were having information through Health Professionals, 18.3% samples were having information given by friends/Relative.

Result shows that majority of samples 56.7% preferred walking as their physical activity, followed by 25% preferred running physical activity, 1.7% preferred swimming physical activity, 16.7% preferred Bicycling physical activity.

Result shows that majority of samples had menstruation history, 93.3% were having Regular menstruation, followed by 6.7% were having Irregular menstruation history. .

PART II: Evaluate the effectiveness of structured teaching programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease among adolescent girls.

The finding revealed that the post test mean score was 17.65 and pre-test score was 11.067 with the mean difference of -6.58, the calculated paired 't' value was -16.091 with P Value is .000. this signifies that there is statistical significant difference in pre-test and post-test level of knowledge. Hence, it clearly indicated that after administration of STP there is increase in the level of knowledge. Therefore, H1 is accepted.

Part III: Analysis of comparison of Structured Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease.

The mean Pre-test knowledge score regarding Polycystic Ovarian Disease was 11.067 with a standard deviation of 3.007. After giving Structure Teaching Programme the mean score was increased to 17.65 with a standard deviation of 2.313. The significance of Structure Teaching Programme on knowledge regarding lifestyle modification on prevention of Polycystic Ovarian Disease was assessed using the paired t test (dependent t test). The calculated t value for knowledge regarding life style modification on prevention of Polycystic Ovarian Disease is -16.091 and P Value is .000 which is highly significant at 0.05 level. As the calculated value of "t" at 59 degree of freedom was greater than the table value at 0.05 level of significant.

knowledge. Structured Teaching Programme was significantly effective in increasing the knowledge of Polycystic Ovarian Disease. The most important role of the nurse is to provide awareness on prevention and health promotion.

Part IV: Association between level of knowledge among adolescent girls with selected demographic variables.

The finding of the study revealed that there is significant association of level of knowledge with source of information with chi square value (χ^2) of

31.78 is greater than the table value 12.59 . Hence, H2 is accepted.

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