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A study to assess the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among adolescent girls of Teerthanker Mahaveer College of Nursing Moradabad (U.P.)

Indresh Gupta and Anindita Mandal

Abstract

Background: PCOS is one of the most common endocrine diseases in women of reproductive age. PCOS typically develops during adolescence and in heterogeneous syndrome classically characterized by features of an ovulation with signs of Androgen excess (Hirsutism, Acne) Modern life style that include poor nutrition, smoking, unmanageable stress and other factors are set to be behind a new figure stating that 25% of married couples in Kolkata (India) are new infertile.

Methods: A pre-experimental (one group pre-test –post-test design) Research Design. In this study, and sampling technique non probability purposive technique or judgemental sampling was used. study was conducted on 40 Adolescent girls. Interview Schedule was conducted to assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding PCOS. Knowledge score of Adolescent girls has been computed on the basis of correct response to consists of 30 multiple choice questions where total score is 30. For right answer score “1” (one) and for wrong answer score “0” (zero).and by converting it to percentage score.

Results: After the completion of the study, we find out that The analysis reveals that in the pre-test knowledge score 07 (17.5%) adolescent girls had inadequate knowledge score, 32 adolescent girls had moderate knowledge score followed as only 1 adolescent girl (2.5%) adolescent girl had adequate knowledge score .In other ways, the post-test knowledge score 13 adolescent girls (32.5%) had moderate knowledge score while remaining adolescent girls 27 (67.5%) had adequate knowledge. regarding POSA The post mean knowledge score of adolescent girls was 21.37 with the standard deviation 3.88 which is higher than the pre-test. the pre-test knowledge score i.e. Mean is 13.3 and standard deviation is 3.7. the obtained mean difference is 8.07, while the “t” found 9.72 which is significant at 0.05 level at table value. Based on the statistical analysis using chi-square test significant association was found only between knowledge score with days of menstrual cycle among adolescent girls regarding PCOS.

Conclusions: Therefore it is concluded that the structured teaching programme regarding polycystic ovarian syndrome was effective in enhancing the knowledge score of adolescent girls.

Keywords: adolescent girls, effectiveness, structured teaching programme, knowledge, polycystic ovarian syndrome among

Introduction

PCOS is one of the most common endocrine diseases in women of reproductive age. PCOS typically develops during adolescence and in heterogeneous syndrome classically characterized by features of an ovulation with signs of Androgen excess (Hirsutism, Acne) [1].

Modern life style that include poor nutrition, smoking, unmanageable stress and other factors are set to be behind a new figure stating that 25% of married couples in Kolkata (India) are new infertile. A related article also in newspaper quotes, doctor’s saying that 60% of their female patient has PCOS [2].

Polycystic Ovarian Syndrome was formally called Stein-Levinthal syndrome. In 1935 Dr. Stein and Leviathan described a syndrome in which women suffered from irregular and usually rare period, hirsutism (hair growth) and varying degree of infertility. Polycystic Ovarian Syndrome is a common health problem among teenage girls and young’s. It affects 5%-10% of women in their reproductive year.

Increasing evidence suggests that PCOS arises as a complex trait with contribution from both heritable and non-heritable factors, central obesity and insulin resistance seems to play important role in PCOS perhaps accentuating steriogenic deregulation but more fundamentally because PCOS is closely related to these features in pores. Gestational factors have also been incriminated.

Objectives

- 1) To assess the pre-test and post-test knowledge regarding polycystic ovarian syndrome among adolescent girls.
- 2) To determine the association between pre-test knowledge regarding polycystic ovarian syndrome among adolescent girls with the selected demographic variables.

Methods

Study design

In this study, Pre Experimental Design was adopted.

Study population

The Target population of the study includes the Adolescent Girls of B.sc Nursing 1st Year.

Study area

The study was conducted in Teerthanker Mahaveer University Moradabad (U.P.)

Sample size

As documented in different literature, the proportion of various heterogeneous (10% - 65%) pattern in knowledge level of adolescent girls. Therefore a sample size is thought to be maximum by assuming the prevalence of 50%. Therefore by adapting the expected 50% of prevalence at 5% of absolute precision and 95% of desired confidence level, the require sample size is 40.

Sampling method

Non - Probability Purposive Sampling Technique was adopted to select antenatal mother.

Inclusion criteria

- Adolescent girls who are studying in Teerthanker Mahaveer College of Nursing Moradabad (U.P.).
- Adolescent girls who are willing to participate in the study.
- Adolescent girls who can read and write Hindi and or English.

Exclusion criteria

- Adolescent girls who are not available at the time of data collection
- Adolescent girls whose age is less than 14 years.

Data collection tool

The study tool considered of two section,

Section I: Demographic Variables Consist Of Baseline Information of Age At Puberty, Menstrual Cycle, Days Of Menstrual Cycle, Family History Of PCOS, Food Habits, Source Of Information

Section II: Self Structured knowledge questionnaire regarding selected aspects of Polycystic Ovarian Syndrome among Adolescent Girls.

Development of tool

A structural questionnaire was used to assess The Effectiveness of Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Syndrome Among Adolescent Girls of Teerthanker Mahaveer College of Nursing Moradabad (U.P.)”

Data collection

Data was collected by the investigator after obtaining permission from the concerned authorities of selected college .Prior to the data collection, the Adolescent Girls were seated comfortably in a quiet environment. The investigator was introducing himself, explain the objectives of the study, and obtain consent from the Adolescent Girls for maximum cooperation. Each day around 3-4 antenatal mother was interviewed using the closed-ended structured interview schedule.

Statistical analysis

Data entered in Microsoft excel and analysis was done. knowledge score of Adolescent Girls and their selected socio-demographic variables was done by mean median and standard deviation.

Ethical clearance and informed consent

The study was carried out after obtaining approval from the institutional Ethical Committee of. Teerthanker Mahaveer College of Nursing Moradabad (U.P.).The participants were briefed about the purpose of the study and informed consent was obtained prior to the data collection.

Results

1. Analysis of Pre-test and Post-test Knowledge Score Regarding Polycystic Ovarian Syndrome Among Adolescent:

The analysis reveals that in the pre-test knowledge score 07 (17.5%) adolescent girls had inadequate knowledge score, 32 (80%) adolescent girls had moderate knowledge score followed as only 1 adolescent girl (2.5%) adolescent girl had adequate knowledge score regarding PCOD. Structured teaching programme regarding polycystic ovarian syndrome was effective in enhancing the knowledge score of adolescent girls.

After intervention the post-test knowledge score 13 adolescent girls (67.5%) had moderate knowledge score while remaining adolescent girls 27 (67.5%) had adequate knowledge.

The post mean knowledge score of adolescent girls was 21.37 with the standard deviation 3.88 which is higher than the pre-test knowledge score of 13.3 with the standard deviation 3.7. The obtained mean difference is 8.07, while, the “t” found 9.72 which is significant at 0.05 level at the table value. This indicated that there is significant difference between pre-test and post-test knowledge score, Hence H1 is accepted. Therefore it is established that the structured teaching programme regarding polycystic ovarian syndrome was effective in enhancing the knowledge score of adolescent girl.

2. Association between pre-test knowledge score among adolescent girls regarding polycystic ovarian syndrome with selected demographic variables

There is no significant influence of age with knowledge score among adolescent girls regarding PCOS with 6.19 chi square value which is less than table value (0.05, 12.59 at 6 degree of freedom) so it is indicate that age is not influence the knowledge score regarding PCOS among adolescent girls. and With the chi square value 0.0436 which is less than table value (0.05, 5.99 at 2 degree of freedom), so the menstrual cycle not influenced to knowledge score regarding PCOS among adolescent girls. Knowledge score among adolescent girls with chi square 24.69 which is more than table value (0.05, 9.49 at degree of freedom). Hence H2 accepted only for days of menstrual cycle. With the chi-square value 0.01 which is less than table value (0.05, 5.99 at 2 degree of freedom), so it indicates family history of PCOS not influences knowledge score of PCOS. With the chi-square value 1.84 which is less than table value (0.05, 9.46 at 4 degree of freedom), so it indicates food habits of adolescent girls not influences knowledge score. With the chi-square value 0.059 which is less than table value (0.05, 12.59 at 6 degree of freedom), so it indicates that source of previous information regarding PCOS not influences knowledge score

media and publishing media is also helpful for gain knowledge.

Discussion

The 1st objective of the study was, to assess the pre-test and post-test knowledge regarding polycystic ovarian syndrome among adolescent girls. Majority 57.5% of adolescent girls were within 14-15 year at puberty.

97.5% adolescent girls were having regular menstrual cycle. and 80% adolescent girls were having 28 days of menstrual cycle. 92.5% adolescent girls not having family history of PCOS. Mostly 55% adolescent girls were vegetarian. Majority 62.5% adolescent girls got previous information from friends.

The post mean knowledge score of adolescent girls was 21.37 with the standard deviation 3.88 which is higher than the pre-test. The pre-test knowledge score Mean is 13.3 and standard deviation is 3.7. the obtained mean difference is 8.07, while the “t” found 9.72 which is significant at 0.05 level at table value. All adolescent girls achieved higher score in the post-test as compare to the pre-test score.

Based on the statistical analysis using chi-square test significant association was found only between knowledge score with days of menstrual cycle among adolescent girls regarding PCOS.

Table 1: Mean, standard deviation and paired ‘t’ value of pre-test and post-test knowledge score of structured teaching programme regarding polycystic ovarian syndrome.

N=40

Knowledge score	Mean	Standard deviation	Mean difference	“t” Test
Pre-test	13.3	3.7	8.07	9.72
Post-test	21.37	3.88		

Table 2: Difference between pre-test and post-test knowledge score regarding polycystic ovarian syndrome.

N=40

Knowledge level	Range of knowledge score	Pre-test		Post-test	
		Knowledge Score	%	Knowledge score	%
Adequate knowledge score	20-30	1	2.5%	27	67.5%
Moderate knowledge score	10-19	32	80%	13	32.5%
Inadequate Knowledge score	0-9	7	17.5%	0	0%

Description of Demographic Variables

Table 3: Frequency and percentage distribution among adolescent girls with selected demographic variables.

N=40

Si no.	Demographic data	Frequency	Percentage
Age At Puberty			
1.	1. 10-11 years	0	0%
	2. 12-13 years	12	30%
	3. 14-15 years	23	57.5%
	4. Above 15 years	5	12.5%
Menstrual Cycle			
2.	1. Regular	39	97.5%
	2. Irregular	1	2.5%
Days of Menstrual Cycle			
3.	1. 32 Days	8	20%
	2. 28 Days	32	80%
	3. >32 Days	0	0%
Family History of PCOS			
4.	1. Yes	3	7.5%
	2. No	37	92.5%
Food Habits			
5.	1. Vegetarian	22	55%
	2. Non-vegetarian	3	7.5%
	3. Mixed	15	37.5%

Source of Information			
6.	1. T.V	7	17.5%
	2. Newspaper	8	20%
	3. Friend	25	62.5%
	4. Radio	0	0%

Table 4: Association between pre-test knowledge score among adolescent girls regarding polycystic ovarian syndrome with selected demographic variables

N=40

Demographic variable	Knowledge level			df	Chi square	P value
	Adequate	Moderate	Inadequate			
Age						
10-11 year	0	0	0	6	6.19	12.59
12-13 year	1	9	2			
14-15 year	0	17	6			
Above 15 year	0	3	2			
Menstrual cycle						
Regular	1	30	8	2	0.04	5.99
Irregular	1	0	0			
Days of menstrual cycle						
32 days	1	5	2	4	24.69	9.49
28 days	1	26	5			
>32 days	0	0	0			
Family history of PCOS						
Yes	0	2	1	4	1.84	9.46
No	1	30	6			
Food habit						
Vegetarian	1	17	4	4	1.84	9.46
Non -vegetarian	0	2	1			
Mixed	0	14	1			

Source of information

Source of information	adequate knowledge	Moderate knowledge	Inadequate knowledge	df	Chi square	P value
T.V.	1	6	0	6	0.059	12.59
Newspaper	0	7	1			
Friend	0	21	4			
Radio	0	0	0			

Conclusion

The present study To Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Syndrome Among Adolescent Girls Therefore it is concluded that the structured teaching programme regarding polycystic ovarian syndrome was effective in enhancing the knowledge score of adolescent girls.

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Declarations

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Conflict of interest: None

Ethical approval: The study was carried out after obtaining approval from the institutional Ethical Committee of Teerthanker Mahaveer College of Nursing Moradabad (U.P.)”

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