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Effectiveness of Educational Intervention on Knowledge Regarding Polycystic Ovarian Syndrome Among Nursing Students

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ABSTRACT

Background: As polycystic Ovarian Syndrome is the most common endocrine disorder among women between the age group of 18-44 years. Therefore, present study aims to improve knowledge of nursing students by giving them educational intervention regarding polycystic Ovarian Syndrome. Method: Quantitative pre experimental research design was used to conduct study. A sample of 60 nursing students was selected for the study by through non probability convenient sampling technique. Results: The mean pre test knowledge score was 6.8 ± 3.4, whereas mean post test knowledge score was 21.3 ± 3. The postetst mean value knowledge score among nursing students was significantly higher than the pre test knowledge score. The mean difference was 14.8. The paired student "t" test value was 56.5 which was significant at P=0.05 level. The findings revealed that there was significant association between knowledge score with selected demographic variables of the nursing students like BMI, junk food liking and rest of demographic variables were not associated with knowledge score. Conclusion: Study concluded that knowledge regarding polycystic ovarian syndrome is much needed among nursing students for prevention of future problems related to polycystic ovarian syndrome.

Keywords: polycystic ovarian syndrome, nursing students, knowledge, educational intervention, planned teaching program

INTRODUCTION

Infertility, enlarged ovaries, menstrual problems, high levels of male hormones, excess hair on the face and body, acne, and obesity are all symptoms of polycystic ovary syndrome. Women with PCOS have an increased risk of diabetes, high blood pressure, heart disease, and endometrial cancer.[1] Polycystic ovary syndrome (PCOS), a heterogeneous syndrome of unknown aetiology, is the leading cause of anovulation, hirsutism and infertility in women. This multifactorial syndrome emerges at puberty and has cardiovascular and metabolic sequelae through menopause. Menstrual irregularities and insulin resistance, which are common features of normal puberty, obscure the diagnosis of adolescent PCOS, and there are no recognized screening criteria for PCOS in this age group.[2] PCOS is common diagnosis in women presenting with infertility. PCOS prevalence is highly unpredictable ranging from 2.2% to 26% internationally. In few Asian countries prevalence figures are ranging from 2% to 7.5% in China and 6.3% in Srilanka. Incidence of PCOS stated as 9.13% and 22.5% by studies done in South

India and Maharashtra. Polycystic means "many cysts," and PCOS often causes clusters of small, pearl-sized cysts in the ovaries. The cysts are fluid-filled and contain immature eggs. [3] Adolescence is a period of rapid development that begins with puberty and lasts until the mid-20s. Consider how different a person is at the age of 12 versus the age of 24. The trajectory between those two ages involves a profound amount of change in all domains of development- biological, cognitive, psychosocial, and emotional. Individual relationships and settings also alter during this time, as friends and romantic partners become more important, and as the adolescent come in and then leaves secondary school or gains earning source.[4] The term adolescence comes from the Latin word adolescer, which means "to grow into adulthood," and it lasts from around ten to twenty years. This phase is characterised by biological, psychosocial, and cognitive changes. Adolescence is divided into three stages: early adolescence (between the ages of 11 and 13), middle adolescence (between the ages of 14 and 17), and late adolescence (between the ages of 17 and 19).[5] The prevalence of PCOS is estimated to be between 5.5% and 12.6% in women in the age group of 17–45 years at international level. In India, the prevalence estimates are between 8.2% and 22.5% based on the screeing criteria used.[6] In spite of high prevalence, PCOS is usually misdiagnosed and requires more than one visit. or different physicians to get identified, and these usually occur in more than a one-year timeframe. For the patient, it is a very annoying process. Delays in diagnosis can cause comorbidities to worsen, making it more difficult to implement lifestyle interventions, which are critical for improving PCOS symptoms and quality of life.[7] According to Patel, J., and Rai, S. (2018), only 41 percent of the women were aware of the term PCOS, 49 percent of the women were aware of the various signs and symptoms associated with PCOS, and the majority of the girls consider menstrual pain and irregularities to be a normal physiological process and do not consider consulting a doctor.[8] Because of the high prevalence of Polycystic Ovarian Syndrome problems among adolescents, we chose the following topic for the study.

Statement of Problem

A study to assess the Effectiveness of planned teaching Program on knowledge regarding polycystic ovarian syndrome among fourth year nursing students in selected nursing college in Udaipur city, Rajasthan.

Objectives

1. To assess the level of knowledge regarding polycystic ovarian syndrome among fourth year nursing students.
2. To determine the effectiveness of planned teaching program regarding polycystic ovarian syndrome among fourth year nursing students.
3. To associate the pre-test knowledge score regarding polycystic ovarian syndrome among fourth year nursing students with selected socio-demographic variables.

MATERIAL AND METHODS

Research approach: - Quantitative approach

Research Design: - Pre experimental one group pretest post-test research design.

Research Setting: Study was conducted in nursing college of Udaipur, Rajasthan.

Population: - Study population consisted nursing students studying in nursing college of Udaipur, Rajasthan.

Sampling technique and sample: 60 fourth year nursing students selected through non probability convenient sampling technique.

Research Tool: The tools selected for the present study divided in two sections.

Section I: - Socio-demographic variables included 10 items such as age in years, marital status, religion, type of family, dietary pattern, menstrual cycle pattern, BMI, junk food liking, knowledge regarding PCOS and source of information.

Section II: - Structured knowledge questionnaire consists of 30 questions to assess the level of knowledge regarding PCOS. The area included were knowledge on anatomy and Physiology of ovary, definition, risk factors, signs and symptoms, diagnosis, management, prevention, complication, effects of polycystic ovarian syndrome in pregnancy.

Prior to tool administration all subjects were given an information sheet, explaining the purpose and outcome of study. Informed consent was taken from participants and self explanatory tools were administered to participants. Permission for study was taken from concerned authorities

RESULTS

According to table 1, majority of fourth year nursing students 36 (60%) were in the age group of 18-19 years, 24(40%) were in the age group of 20-21 years. With regard to marital status, majority of fourth year nursing students 48 (80%) were unmarried and 12(20%) were married. Regarding religion, majority of fourth year nursing students 32 (53.33%) were Hindu, 16(26.67%) were Christian and 12 (20%) were Muslim. Regarding types of family, majority of fourth year nursing students 43(71.67%) live in nuclear family and 17 (28.33%) in joint family. Regarding dietary pattern, majority of fourth year nursing students 39(65%) are non-vegetarian and 21(35%) are vegetarian. With regards to menstrual cycle pattern, majority of fourth year nursing students 41(68.33%) had regular cycle, 19(31.67%) had irregular cycle. Regarding BMI, majority of fourth year nursing students 27(45%) were between 18-21 score, 11(18.33%) were between 22-25 score, 12(20%) were between 26-29 score, 10(16.67%) were between 30 -33 score. With regards to junk food liking, majority of fourth year nursing students like junk foods 51(85%) and 9(15%) of girls do not like junk foods. With regards to any knowledge regarding Polycystic Ovarian syndrome 29(48.33%) had knowledge and 31(51.67%) do not had any knowledge regarding Polycystic Ovarian syndrome. Regarding source information about Polycystic Ovarian Syndrome, majority of fourth year nursing students 32(53.33%) got from mass media, 12(20%) got from health personal, 11(18.33%) from teacher and 5(8.33%) got information from parents.

Table 2, reveals that among 60 fourth year nursing students, most of them 52 (86.7%) had inadequate knowledge level, 8 (13.3%) had moderate knowledge level and no one had adequate knowledge level in pre-test regarding polycystic ovarian syndrome. While in post test 52(86.7%) fourth year nursing students had adequate knowledge level, 7(11.7%) had moderate knowledge level and only 1(1.7%) had inadequate knowledge level regarding polycystic ovarian syndrome. From the above findings, it was inferred that, most of the fourth year nursing students had inadequate and moderate knowledge level in pre-test and most of the fourth year nursing students had adequate knowledge level in post-test regarding polycystic ovarian syndrome.

Table 3, reveals that among fourth year nursing students, the mean pre-test score was 6.8 with the standard deviation 3.4 and post-test score was 21.3 with the standard deviation 3. The mean difference was 14.8. The obtained ‘t’ value 56.5 was statistically significant at $p<0.05$ level. Hence the stated hypothesis (H1) was accepted. It was inferred that the mean post-test level of knowledge score was more than the pre-test level of knowledge score. There is a significant difference between the mean pre and post-test level of Knowledge among fourth year nursing students. Thus Planned Teaching Program regarding polycystic ovarian syndrome was proven to be effective on the level of knowledge among fourth year nursing students.

On the basis of chi square test there was significant association found between the knowledge score regarding polycystic ovarian syndrome among fourth year nursing students with demographic variables like BMI, junk food liking. While rest of

demographic variables were not associated with knowledge score regarding polycystic ovarian syndrome among fourth year nursing students.

Table: 1. Distribution of samples according to socio demographic variables (N=60)

S.No.	Demographic Variables	Frequency	Percentage
1	Age (in years)		
	a) 18-19	36	60
	b) 20-21	24	40
	c) 21-22	0	0
	d) 22-23	0	0
2	Marital status		
	a) unmarried	48	80
	b) married	12	20
	c) divorced	0	0
	d) widow	0	0
3	Religion		
	a) Hindu	32	53
	b) Muslim	16	27
	c) Christian	12	20
	d) other	0	0
4	Type of family		
	a) joint family	17	29
	b) nuclear family	43	71
5	Dietary Pattern		
	a) vegetarian	21	35
	b) Non –vegetarian	39	65
6	Menstrual cycle Pattern		
	a) Regular	41	68
	b) Irregular	19	32
7	BMI		
	a) 18-21	27	45
	b) 22-25	11	18
	c) 26=29	12	20
	d) 30-33	10	17
8	Like junk food		
	a) yes	51	85
	b) no	9	15
9	Knowledge regarding Polycystic Ovarian Syndrome		
	a) yes	29	48
	b) no	31	52
10	Source of in information		
	a) health personal	12	20
	b) Parents	5	8
	c) Teacher	11	18
	d) Mass Media	32	54

Table: 2- Pre test and post test level of knowledge among nursing students regarding polycystic ovarian syndrome.

S.NO	Level of Knowledge	Score	Pre-Test		Post-Test	
			Frequency	Percentage	Frequency	Percentage
1	Inadequate knowledge	0-10	52	86.6	1	1.7
2	Moderate Knowledge	11-20	8	13.3	7	11.7
3	Adequate knowledge	21-30	0	0	52	86.7
	TOTAL		60	100	60	100

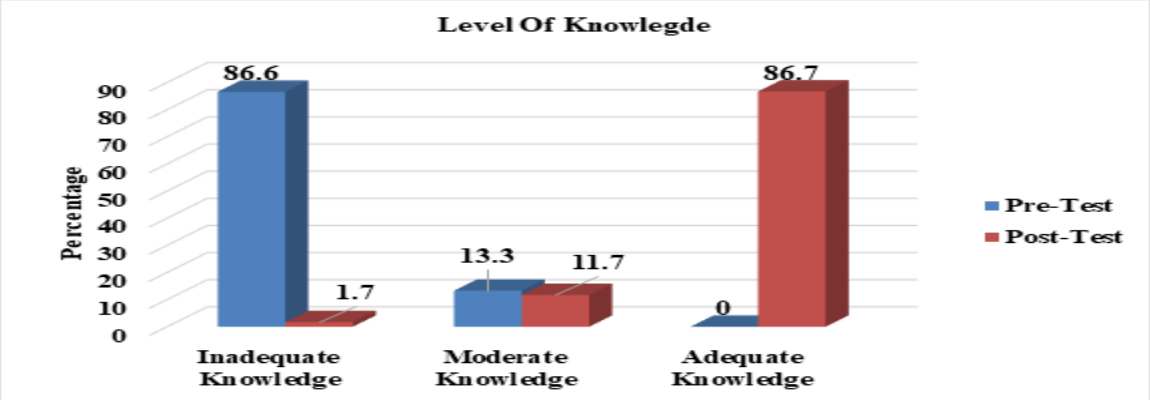

Figure1. Percentage Distribution of Pre-test and Post-Test Level of Knowledge among fourth year nursing students

Table: 3 Comparison of Pre test and post test level of knowledge among nursing students regarding polycystic ovarian syndrome

S.NO	Level of Knowledge	Mean	Standard Deviation	Mean Difference	't' Value
1	Pre-Test	6.8	3.4		
2	Post-Test	21.3	3	14.8	56.5*

DISCUSSION

Our study findings revealed that among 60 fourth year nursing students most of them 52 (86.7%) had inadequate knowledge level, 8 (13.3%) had moderate knowledge level in pre-test. Our result supported by Sunanada B et al (2016)[9], her descriptive study also revealed that 76% of the samples were with average knowledge and 10.7% with good knowledge regarding polycystic ovarian syndrome. Our result also supported by, Khushboo Brar, et al (2016)[10] with similar finding in assessing knowledge level regarding polycystic ovarian syndrome. Studies conducted by Jena, S. K et al (2020)[11], Chainani, E. (2019)[12] and Haseena Begum (2019)[13] also revealed similar findings regarding knowledge assessment about polycystic ovarian syndrome

Our study revealed in post test, 52(86.7%) fourth year nursing students had adequate knowledge level, 7(11.7%) had moderate knowledge level and only 1(1.7%) had inadequate knowledge level regarding polycystic ovarian syndrome. There was enhancement in knowledge level in post test due to educational intervention. The mean pre-test score was 6.8 with the standard deviation 3.4 and post-test score was 21.3 with the standard deviation 3. The mean difference was 14.8. The obtained 't' value 56.5 was statistically significant at $p<0.05$ level. It was inferred that the mean post-test level of knowledge score was more than the pre-test level of knowledge score. Our findings supported by Varughese AK, Tauro VG (2018)[14] with similar findings in their study to improve the knowledge level of adolescent girls regarding polycystic ovarian syndrome and its management through educational intervention. Thakre PP, Wasnik A (2019)[15] also revealed similar findings in which, mean percentage of post-test knowledge score of adolescent girls 62% was apparently higher than the overall mean percentage of pre-test knowledge score 39.21 %. And it was significant at 0.1% level. Paired t'= 9.61, $p<0.05$ indicating that planned teaching was effective in gaining knowledge of adolescent girls on polycystic ovarian syndrome. Amarja Anil Gosavi (2019)[16] also found similar result indicating the information booklet was effective in increasing the knowledge of the subjects regarding lifestyle modifications in polycystic ovarian disease in her study. Tak HK, Chaturvedi D (2022)[17] also revealed similar findings while assessing effectiveness of learning package. Our study revealed that there is a significant association between post-test level of knowledge among fourth year nursing students with their BMI, liking of junk food. These results were similar with study conducted by Yashoda Shrivastava, Parvati Jagdev (2019)[18].

CONCLUSION

Findings of our study strongly recommend the need for conducting education program to increase the knowledge regarding polycystic ovarian syndrome among nursing students. Nursing students are the future nurses and key factor to spread authentic health education among adolescent girls who have more chances to get problems like polycystic ovarian syndrome.

Limitations

The small size (60) of the sample made it difficult to draw generalization. A structured questionnaire was used for data collection which restricts the amount of information that can be obtained from the respondents, only knowledge was assessed; no attempt was made to assess their attitudes due to time shortage and less resources.

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Conflict of Interest: There was no conflict of interest involved while conducting the present study.

Source of Funding: None

Ethical Approval: Approved

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