The Effectiveness of a Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Syndrome (PCOS) among Adolescent Girls at a Selected School of Raipur

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Abstract

Polycystic ovary syndrome (PCOS) is one of the most common female endocrine disorders. PCOS is a complex, heterogeneous disorder of uncertain etiology. PCOS produces symptoms in approximately 5% to 10% of women of reproductive age (12–45 years old). It is thought to be one of the leading causes of female infertility and the most frequent endocrine problem in women of reproductive age. Adolescents aged between 10-19 years account for more than one fifth of the world's population. In India, this age group forms 21.4 percent of the total population. Menstrual abnormalities are one of the common problems of adolescents. Polycystic ovary syndrome (PCOS) is the commonest cause of an-ovulatory infertility. This study was carried out to evaluate the effectiveness of a structured teaching programme on knowledge regarding polycystic ovarian syndrome (PCOS) among adolescent girls at a selected school of Raipur.

Quantitative research approach with pre-experimental design (one group pretest- posttest design) was adopted for this study. The study was conducted in a selected school at Raipur i.e. Maharshi Vidya Mandir. The sample size was 100. Adolescent girls between the age of 13-17 years were selected. Non probability convenient sampling was used. The Structured Teaching Programme was effective for adolescent girls according to the level of knowledge before and after the intervention. The obtained t- value (24.92) was statistically highly significant at 0.05 levels.

Keywords: *Polycystic Ovarian Syndrome (PCOS) and Structured Teaching Programme*

Introduction

PCOS is a complex endocrine disorder which is most common in women of reproductive age.[1] It affects 2.2 to 20% of reproductive-aged women[2]. It begins as early as in teenagers and mostly affect adult girls at childbearing age. The primary underlying defect in PCOS remains unknown, but key features include insulin resistance, impaired gonadotropin dynamics, and androgen excess. Polycystic ovarian syndrome (PCOS) is a syndrome manifested by amenorrhea, hirsutism and obesity associated with enlarged polycystic ovaries. Some risk factors of PCOS are family history, lack of exercise, obesity, consumption of junk food etc. [1, 2]

India has witnessed about 30% rise in polycystic ovarian syndrome (PCOS) cases in the last couple of years. Two main reasons for the increase of PCOS diagnoses in Indian women are unhealthy eating habits and a sedentary lifestyle. [3] Due to lack of awareness and proper guidance, a number of cases remain undiagnosed.

Polycystic ovarian syndrome (PCOS) has a wide spectrum of consequences in adolescent girls and thus

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needed to be treated completely and as soon as possible. The prevalence has been increasing in the adolescent population.[4] In more than 40% of cases, PCOS is associated with obesity, as well as impaired glucose tolerance, type 2 diabetes, and the metabolic syndrome.[5] Several articles have been published on the short- and long-term effects of PCOS on the women's health due to an increased incidence of early complications such as a worsening of fertility and obstetric outcomes and to an increased rate of late complications as well as enhanced cardiovascular, metabolic, and oncology risks.[6]

Although there is no cure for PCOS, there are several ways to treat and manage the condition. If a girl is overweight, weight loss can be very effective in lessening many of the health conditions associated with PCOS. Sometimes weight loss alone can restore hormone level to normal, causes many of the symptoms to disappear or become less severe. Healthy food habits and exercise helps to combat the weight gain. Lifestyle modifications are vital for treating PCOS.[7, 8]

The study was conducted to assess the knowledge on the polycystic ovarian syndrome (PCOS) among adolescent girls and to educate them about polycystic ovarian syndrome.

Materials & Methods

Quantitative research approach with pre-experimental design (one group pretest- posttest design) was adopted for this study. The study was conducted in a selected school at Raipur i.e. Maharshi Vidya Mandir. The sample size was 100. Adolescent girls between the age of 13-17 years were selected. Non probability convenient sampling was used. Prior to the data collection, the permission from the ethical committee & from the head of the institutions were obtained. The objectives were explained and an informed consent was taken from the participants. The tools were constructed to obtain the data included a demographic proforma, a clinical proforma and a structured knowledge questionnaire.

Demographic proforma was intended to identify the baseline information of the samples. It comprises of seven items such as age, religion, mother's occupation and education status, type of family, area of residence and previous information about PCOS. Clinical proforma was developed to collect information regarding aspects that predisposes adolescent girls to develop PCOS like lifestyle, diet pattern, exercise habits, etc. Information pertaining to menstrual history, physical features suspicious of PCOS were also included in this proforma. Structured knowledge questionnaire was designed to assess the adolescent girl's knowledge regarding PCOS. It consisted of 10 yes/no questions & 20 multiple choices questions. Total score was 30. A score of 16-30 was considered as having good/ adequate knowledge. A score of 0-15 was considered poor /inadequate knowledge.

Structured teaching programme was designed to enhance the knowledge of adolescent girls regarding Polycystic Ovarian Syndrome. The content validity of the tools and the structured teaching module was established by the suggestion of five experts from the field of psychiatric nursing, community health nursing, obstetrical and gynecological nursing. The reliability of the tool was found out by split half method and was 0.8. Pilot study was conducted in another selected school on10 adolescent girls. Pretest was done followed by administering the structured teaching program on the same day by dividing the samples into two groups of 50 each. The post – test was conducted by using the same questionnaire on 7th day.

Results

In present study, 91% of the girls were girls in the age group of 13-15 years. 98% of the samples were Hindus and more than half of the mother's of the adolescent girls (65%) had higher secondary education and above. (77%) of the adolescent girls were living in rural areas.94% of the samples were not having any previous knowledge about PCOS at all.

Table 1: Weight & BMI Distribution of adolescent girls

BMI	No. of samples (N=100)
<18.5 kg/m^2 (Underweight)	42
18.5-24.9 kg/m^2 (Normal)	54
>24.9 kg/m^2 (Overweight)	4
WEIGHT	
35-55 kg	77
55-75 kg	21
>75 kg	2

In present study, 54% girls had normal BMI and 77 % belongs to the weight range of 35-55 kg.

Table 2: Menstrual History of adolescent girls

Menstrual History	No. of samples (N=100)
Age of Menarche (10-14 years)	92
Irregular Menstrual Cycle	23
Abnormal Hair Growth	28
Frequent Acne/Pimples	43
Duration of menstrual flow (>5 days)	28
Frequency of cycles (>30 days)	27

60% of samples reported the consumption of some sort of junk foods on daily/ weekly basis. 70 % of girls reported that they are not doing any sort of exercises or involved in any sort of physical activity.

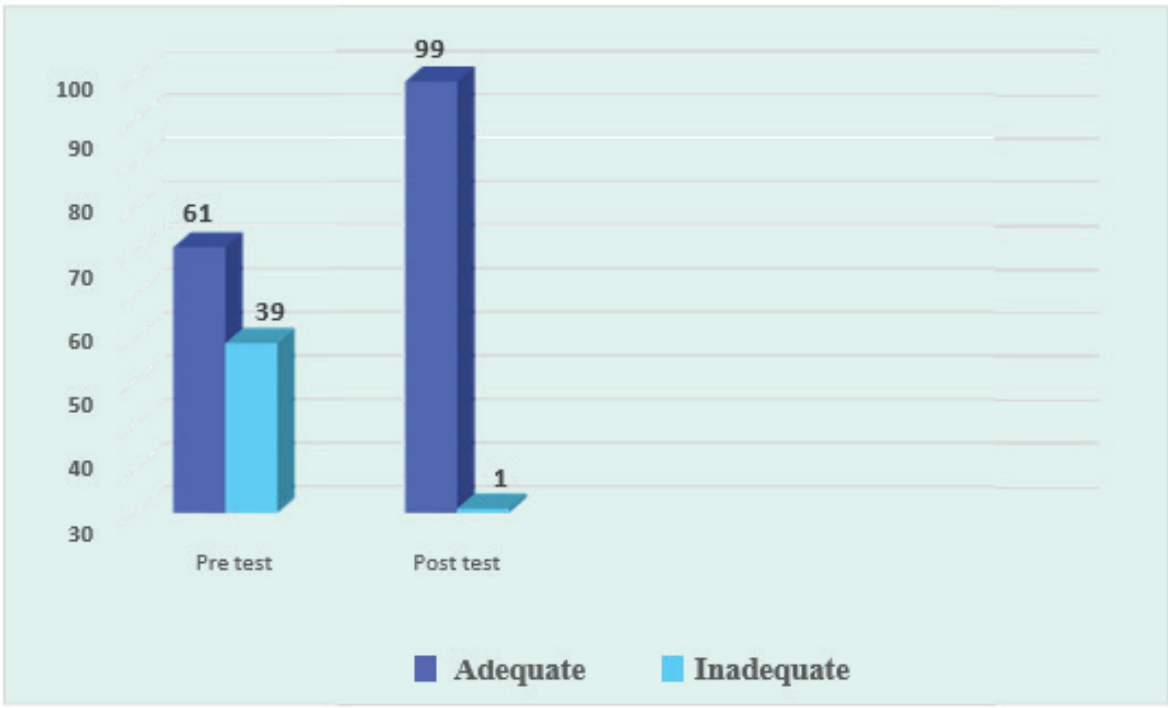

Fig 1: Frequency distribution of pretest and posttest knowledge scores of adolescent girls on PCOS.

In the pretest, 61 samples were having adequate knowledge about PCOS. After the structured teaching programme,99 samples reported to have adequate knowledge about PCOS.

Table 3: Comparison of pre-test and post-test knowledge level of adolescent girls on PCOS.

Level of knowledge	Mean	Mean difference	SD	t – value
Pre test	16.28	9.97	4.23	24.92*
Post test	26.25		2.7	

*Significant at 0.05 level

The above table depicts comparison of mean pre-test and post-test knowledge level on PCOS among adolescent girls. The post test mean score (26.25) was high when compared to the pre test mean (16.28) score on knowledge. The obtained t value (24.92) was greater than table value at 0.05 level of significance, which shows that there was a significant difference between pre test and post test level of knowledge regarding PCOS among adolescent girls.

Discussion

Several studies had been conducted in India & abroad about the effectiveness of different educational interventions in increasing the awareness of women about PCOS, since it is a clinical and public health issue that adversely affects women's health and health-related quality of life and puts a significant strain even on healthcare resources. This study has proved the effectiveness of a structured teaching programme on improving the level of knowledge

regarding PCOS among adolescent girls.

Sivasankari K, Vanitha Jain, conducted a quasi experimental study to evaluate the effectiveness of planned teaching programme on PCOS towards improving knowledge among adolescent girls and the sample size consists of 50 adolescent girls. The study results revealed that the comparison of mean value depicted that post test mean value (10.3) is greater than the pre test mean value (5.8). The paired t test value showed 16.36 which was highly significant at P< 0.0001 level.[9]

Sowmiya et.al, conducted a experimental study to assess the effectiveness of structured teaching programme on knowledge of polycystic ovarian syndrome among adolescent girls. A significant difference between pre test and post test knowledge was found (t 2.0 79=p<0.05).The study findings showed that the structured teaching programme was effective in improving knowledge of adolescent girls regarding polycystic ovarian syndrome.[10]

An Interventional Study on Effectiveness of Structured Education Programme in Improving the Knowledge of Polycystic Ovarian Syndrome among Female Students of Ras Al Khaimah Medical & Health Sciences University, UAE was carried out. Study results showed that the mean pre and post intervention knowledge scores of participants were 7.59 ± 2.64 and 12.77 ± 1.13 respectively. A statistically significant difference was observed between these scores with p value 0.000. A statistically significant difference was also observed between pre and posts intervention knowledge scores.[11]

Conclusion

The study shows an improvement in knowledge of participants on PCOS and its management through structured education programme. Provision of structured education to the target population can play a vital role in prevention and early diagnosis of PCOS. Also, structured education programmes on strategies for effective management of disease will help in preventing many long term complications such as obesity, diabetes mellitus and cardiovascular diseases in patients diagnosed with PCOS.

Ethical Clearnace: Ethical clearance for the study is obtained from Institutional Ethics Committee of AIIMS, Raipur

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