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Impact of Clinical Pharmacist Driven Counseling Towards Polycystic Ovarian Disease Among College Students

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ABSTRACT

Aim: A questionnaire based study to assess the knowledge of girls on PCOD and to create awareness in girls and to evaluate the effect of counseling program on the level of knowledge regarding PCOD among girls and to evaluate girls at risk.

Subject&Methods: Observational prospective longitudinal survey carried out in 3 stages. Questionnaire consist of 30 questions in which 17 questions are used to evaluate knowledge & remaining 13 questions are used to evaluate the girls at risk by using Rotterdam criteria. Descriptive statistics were used.

Results: The study was conducted in a population of 550 females of age group of 16- 24. The mean age of the students is 18.8 ± 1.9.Only 9% of girls are having good knowledge regarding PCOD before the counseling, which was improved to 85.8% after counseling. This result shows the effectiveness of educational program which helps them to prevent infertility problems and helps in management of PCOD.

Conclusion: It is important to create awareness about PCOD to the population, so that the future generation will be aware about PCOD and will be safe and stay healthy and educational program is effective in improving the knowledge of college girls. Furthermore efforts have to be developed to create the awareness.

Key words:
PCOD,
Counseling,
Awareness, Rotterdam criteria.

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INTRODUCTION

Polycystic ovary syndrome (PCOS) is a disorder in the function of an endocrine gland that affects the ovaries involves hyperandrogenism and diminishes the reproductive function. The disease affects around 1 in 10 women, making it the most common endocrine disorder amongst women of reproductive age. Some of the clinical manifestations of this disorder are irregular menstruation, infertility, weight gain, hirsutism and acne. It is associated not only with reproductive and cosmetic sequelae, but also with significantly increased risk of metabolic dysfunction including insulin resistance with consequent compensatory hyperinsulinaemia, dyslipidemia, systemic inflammation, increased oxidative stress and endothelial dysfunction [1].

Worldwide 5-10%of women of childbearing age are affected by PCOS with <50% ofwomen diagnosed. PCOS is only responsible for 70% of infertility issues in women who have difficulty ovulating. Post-menopausal women can also suffer from PCOS. Some studies have shown that approximately 40% of patients with diabetes between the ages of 20-50 have PCOS. In addition, some studies have found that if a mother has PCOS, there is a 50% chance that her daughter will have this syndrome. According to the U.S. Department of Health and Human Services, between 1 in 10 and 1 in 20 women of child bearing age suffers from PCOS. The condition currently affects up to 5 million women in the United States [2]. The old National Institute of Health (NIH) criteria included both oligo-amenorrhea and chronic anovulation in addition to the presence of either clinical or biochemical hyperandrogenism [3]. Individuals with PCOS showed a greater prevalence of anxiety and depressive symptoms [4]. Management of PCOS

should be emphasis on education and provide support with focusing on healthy lifestyle in order to manage and prevent major negative consequences of PCOS [2]. Health education is one of the effective health promotion strategies used with adolescent [5].

METHODOLOGY

STUDY DESIGN

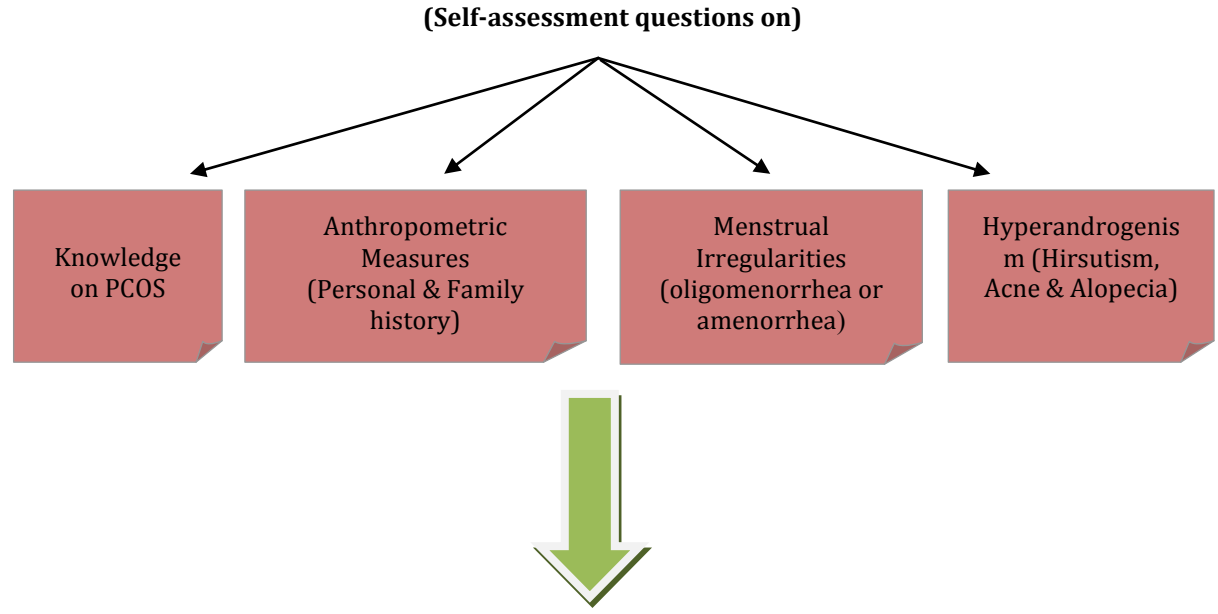
Observational prospective longitudinal study was conducted in various colleges of Kadapa district on reproductive age women to assess and understand their knowledge, perspectives and provided with effective counseling in prevention of PCOD and improving their life style.

Methods

The study was conducted in three stages:

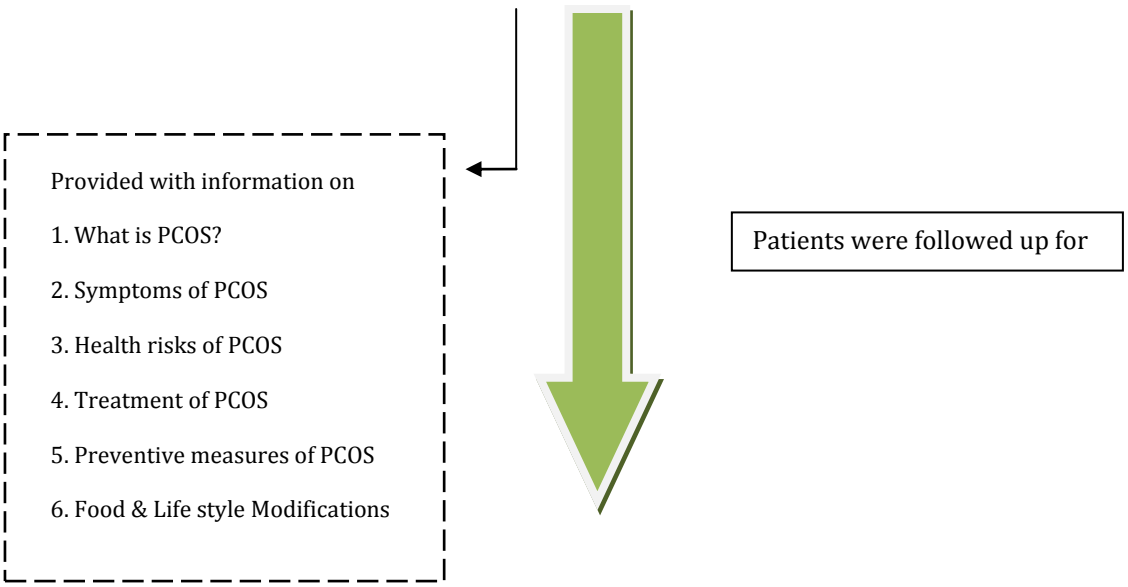
Stage 1:

Participants were asked to fill the self-assessment questionnaire



Stage 2- Health education provided by Clinical Pharmacist on PCOD

(Participants were provided with Disease Handouts along with Oral counseling)



Stage 3- Participants were reviewed after 41 days

SAMPLE SIZE

550 respondents

DATA COLLECTIVE INSTRUMENT

Questionnaire consist of 30 questions in which 17 questions are used to evaluate knowledge and remaining 13 questions are used to evaluate the girls at risk by using Rotterdam criteria

STATISTICAL ANALYSIS

Descriptive statistics in the form of frequencies and percentages were used for qualitative data, while mean and standard deviations were used for quantitative data.

RESULTS

The study was conducted in a population of 550 females of age group of 16- 24. In present study 49.8% of girls were in the age group of 16-18 years, 44% of girls were in age group of 19-21 years and 6.1% of girls were in the age group of 22-24 years. The mean age of the students is 18.8 $\pm$ 1.9.

In present study, 48.3% girls had normal BMI, 3.6% were overweight and 0.90% was obese while 47.2% were underweight. Overweight and obese girls are more prone for PCOS. Those who are overweight and obese proper counseling provided regarding weight reduction. Also, hormonal profile for thyroid, hyperandrogenism was suggested. The age of menarche was categorized, according to our study 19.2% of girls have their menarche at the age group of 11-12, 65.4% of girls have their menarche at age group of 13-14, and 13.2% of girls have their menarche at age group of 15-16.

Table I: Demographic details

DEMOGRAPHIC CHARACTERISTICS	TOTAL NUMBER OF GIRLS (N=550)
AGE	
16-18	274 (49.81%)
19-21	242 (44%)
22-24	34 (6.18%)
16-18	274 (49.81%)
Mean Age(Mean ± SD)	18.8 ± 1.9
BMI(kg/m2)	
underweight (<18.5 kg/m2)	260 (47.2)
Normal (18.5-25 kg/m2)	266 (48.3%)
Overweight (25-30 kg/m2)	20 (3.6%)
Obese (>30 kg/m2)	5 (0.90%)
Age of first period category	
11-12	106 (19.2%)
13-14	360 (65.4%)
15-16	73 (13.2%)
17-18	11 (2.1%)

The knowledge of the participants regarding the definition, causes, symptoms, diagnosis, complications, treatment and management of PCOD is assessed by using the questionnaire. Our results shows that only 18.7% of participants have knowledge on the definition of PCOD, 11.8% participants have knowledge about the causes of PCOD, 9.2% of participants have knowledge risk factors of PCOD, 14.1% of participants have knowledge on symptoms of PCOD, 8.7% of participants have knowledge about diagnosis of PCOD,6.9% of participants have knowledge about complications of PCOD and only 15.09% of participants have knowledge about treatment and management of PCOD. However the knowledge of participants regarding PCOD is considerably low.

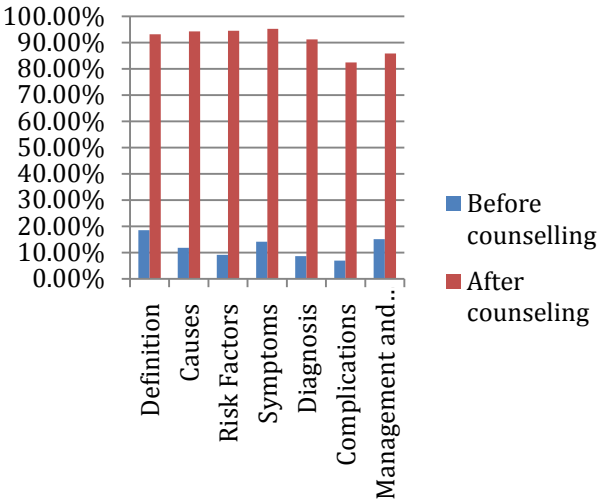


Figure 01: Knowledge Regarding PCOD

In our study 82.4% of girls having the poor knowledge regarding the PCOD, 8.36% of girls having the average knowledge regarding the PCOD, and only 9% of girls are having good knowledge regarding PCOD before the counseling. After the counseling 4% of girls having the poor knowledge regarding the PCOD, 10.1% of girls having the average knowledge regarding the PCOD, and 85.8% of girls are having good knowledge regarding PCOD. These results show the effectiveness of educational program which helps them in management and prevention of PCOD.

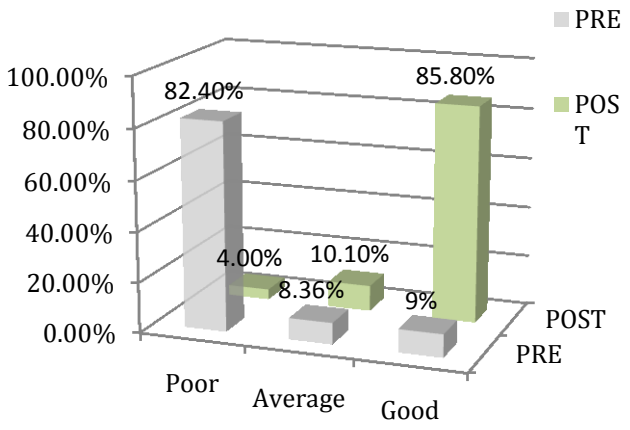


Figure 02 I: Knowledge on PCOD

CLINICAL CHARACTERISTICS

In the studied population only 34% of people are in normal condition,32.1% of people are suffering with hair problem, 10.5% of people are suffering with irregular menstrual cycles, 4.5% of people are suffering with overweight, 44.1% of people are suffering with mental problems, 31.6% of people are suffering with hair problems and irregular menstrual cycles, 0.9% of people are suffering with hair problems and overweight, 1.09% of people are suffering with irregular menstrual cycles and overweight, 1.27% of people are suffering with irregular menstrual cycles, overweight and hair problems. By using Rotterdam criteria the results we can say that more number of girls were at risk of PCOD

Table 02: Clinical characteristics

S.NO	CHARACTERISTICS	NUMBER OF GIRLS	PERCENTAGE
1.	Normal	187	34
2.	Hair problems	177	32.1
3.	Irregular menstrual	58	10.5
4.	Overweight	25	4.5
5.	Mental problems (depression,anxiety,aggression)	243	44.1
6.	Hair problems+ Irregular menstrual	174	31.6
7.	Hair problem +Overweight	05	0.90
8.	Irregular menstrual + Overweight	06	1.09
9.	Hair problem + Irregular menstrual + Overweight	07	1.27

DISCUSSION

Now a days polycystic ovarian disease is common in woman due to lack of exercise and work which causes various problems in their body, so our main aim is to create awareness of the causes, symptoms, complication, management of PCOD in women which helps them for necessary prevention of infertility and early treatment of PCOD. The present study reveals that educational program is effective in improving the

awareness regarding PCOD. In our study results regarding the knowledge of girls before counseling were supported by the study conducted by Harshinee Chandrasekhar [6] andnearly 82.5% of girls having poor knowledge regarding PCOD and only 9% of girls are having good knowledge regarding PCOD where these results are supported by Hoda Abdel Azim Mohamed[7]. Moreover our current study results regarding the effectiveness of educational program to improve the awareness is consistent with results of study conducted by Hoda Abdel Azim Mohamed [14]. So many articles shows Family history is found to have strongest impact with the occurrence of PCOD, but our study has not collected the data regarding family history of participants. In our study we did not collect the information regarding their medical reports.

CONCLUSION

According to the results of our study, before educational sessions most of the students (82.4%) had poor knowledge regarding polycystic ovarian syndrome, after the educational sessions there was an improvement in the knowledge of girls on polycystic ovarian disease. It was found that the mean scores of post-test were significantly higher after educational program compared to their values at pre-test in all variable. The efforts to develop awareness is very important and it can be done in variety of ways by conducting medical camps, through media and educational institutions and by making relatives, neighbors and friends more aware of these issues, so that the future generation will be aware about PCOD and will be safe and stay healthy. Furthermore psychological, behavioral, problems have to be considered for awareness programs, it helps to increase the probability of adapting to a healthy life style.

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CONFLICT OF INTREST

The author has no potential conflict of interest

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