



Assessment of knowledge on poly cystic ovarian syndrome (PCOS) among young female adults

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Abstract

Polycystic ovarian syndrome (PCOS) is a hormonal disorder which affects the women of reproductive age where in the ovaries produce male hormones in higher level which prevents ovulation and leads to irregular menstrual cycle. There is strong association between hyperandrogenism with chronic anovulation in women causing infertility. About 5-10 per cent of women are affected worldwide. It is characterized by irregular or no menstrual periods, acne, obesity, and excess hair growth. The development of obesity amplifies PCOS in women. The study was conducted at three colleges of Bangalore city. A questionnaire was developed and validated to assess the knowledge towards PCOS. The subjects aged between 18 to 25 years were screened by taking height, weight and through BMI by random sampling. 100 overweight and obese samples were taken for the study. The subjects knowledge responses were collected. There were 37 percent overweight and 15 percent obese subjects in the age group of 21-22 years, 11 percent of overweight and 14 percent of obese subjects in the age group of 23-24 years and 10 percent of overweight and 13 percent of obese subjects in the age group of 18-20 years. More than half (56%) of the respondents age of menarche was at the age of 12 to 13 years where as 36 per cent and 8 per cent of the respondents attained their menarche at the age of 14 to 15 and 10 to 12 years respectively. 36 per cent of the subjects had irregular menstrual cycle. Majority of the samples did not have an adequate knowledge about PCOS. It is very important that all young females especially who are overweight and obese should know about the causes, risk factors, complications, diagnosis and management of the disease so that unrecognized and neglected symptoms can be introspected by the individual samples in order to prevent the degree and complications of PCOS. Nearly 79 percent of respondents of both over weight and obese young females had inadequate knowledge on PCOS whereas 21 percent of the subjects had inadequate knowledge. The results showed significant difference at 5 percent level. An adoption of active lifestyle habits, healthy dietary habits and regular physical activities help in prevention and management of PCOS among adults.

Keywords: PCOS, knowledge, overweight, obesity, menarche.

Introduction

Polycystic ovarian syndrome (PCOS) is a hormonal disorder which affects the women of reproductive age where in the ovaries produce male hormones in higher level which prevents ovulation and leads to irregular menstrual cycle. There is strong association between hyperandrogenism with chronic an ovulation in women causing infertility. About 5-10 per cent of women are affected worldwide¹. Basically PCOS is an endocrine disorder and is prevalent among females aged between 18 to 45 years. In India the prevalence of PCOS is around 9.13 per cent among adolescent girls².

There are no specific underlying diseases of the adrenal or pituitary glands but there is a strong association between hyperandrogenism with chronic an ovulation in women. Women with PCOS is characterised by obesity, acne (oily skin), hirsutism (hair growth in unwanted areas), hair loss, sleep apnea, infertility and irregular periods³.

About 38 to 88 percent of women with PCOS are either obese or over weight. Genetic predisposition to obesity, poor dietary

pattern and reduced physical activity are the causes for the development of obesity in women with PCOS which in turn amplifies and may even unmask the biochemical and clinical abnormalities characteristic of this condition⁴.

In India the diagnosis of PCOS is increasing in women mainly due to two factors i.e. changed lifestyle such as consumption of unhealthy foods and sedentary activity when compared to those women of older generations who used to eat low calorie traditional foods with proper physical activity. In present scenario the adolescent girls are following western lifestyle with respect to diet (high intake of refined sugars and fats). Because of this it is predicted that there may be six fold increase in the prevalence of obesity in India⁵.

Methodology

The present study was conducted at three colleges of Bangalore city. The data was collected using a questionnaire and was validated to assess the knowledge towards PCOS. The subjects aged between 18 to 25 years were screened by taking height,

weight and through BMI by random sampling. 100 samples were taken for the study.

The screened and selected subjects were given the questionnaire based on purposive selection. The purposive sampling methods were adopted. A detailed structured questionnaire was developed and collected the data on socio-demographic profile, anthropometric measurements were taken to screen the subjects. Data on regularity of menstrual cycle and knowledge towards PCOS was collected.

The questionnaire was pretested and was modified where ever necessary. The contents of the Proforma were explained to each subject and details were collected through face to face interview method. The data was collected by giving a close ended questionnaire.

Statistical analysis: The collected data was compiled, tabulated and expressed at percentage, mean, standard deviation. The results were analyzed and suitable statistical tests were applied.

Results and discussion

The subjects were screened by taking height and weight (anthropometric measurements) and calculating BMI by random sampling technique. Totally 288 subjects were screened for the study belonging to age group from 18 years to 25 years. Out of

288 subjects 100 samples overweight and obese samples were overweight and obese samples were identified and taken for the study.

Table-1a: Screening of subjects based on BMI.

Total no. of students screened	No. of overweight and obese subjects
288	100

Table-1b: Classification of overweight and obese subjects.

Total no. of overweight and obese subjects	No. of overweight subjects	No. of obese subjects
100	58	42

Figure-1 indicates that there were 37 percent of overweight and 15 percent of obese subjects in the age group of 21-22 years, 11 percent of overweight and 14 percent of obese subjects in the age group of 23-24 years and 10 percent of overweight and 13 percent of obese subjects in the age group of 18-20 years. This indicates that majority of the subjects were obese in the age group of 21-22 years, because of which there are possibilities of frequently eating out, and eating more of junk snack foods of high caloric value on daily basis.

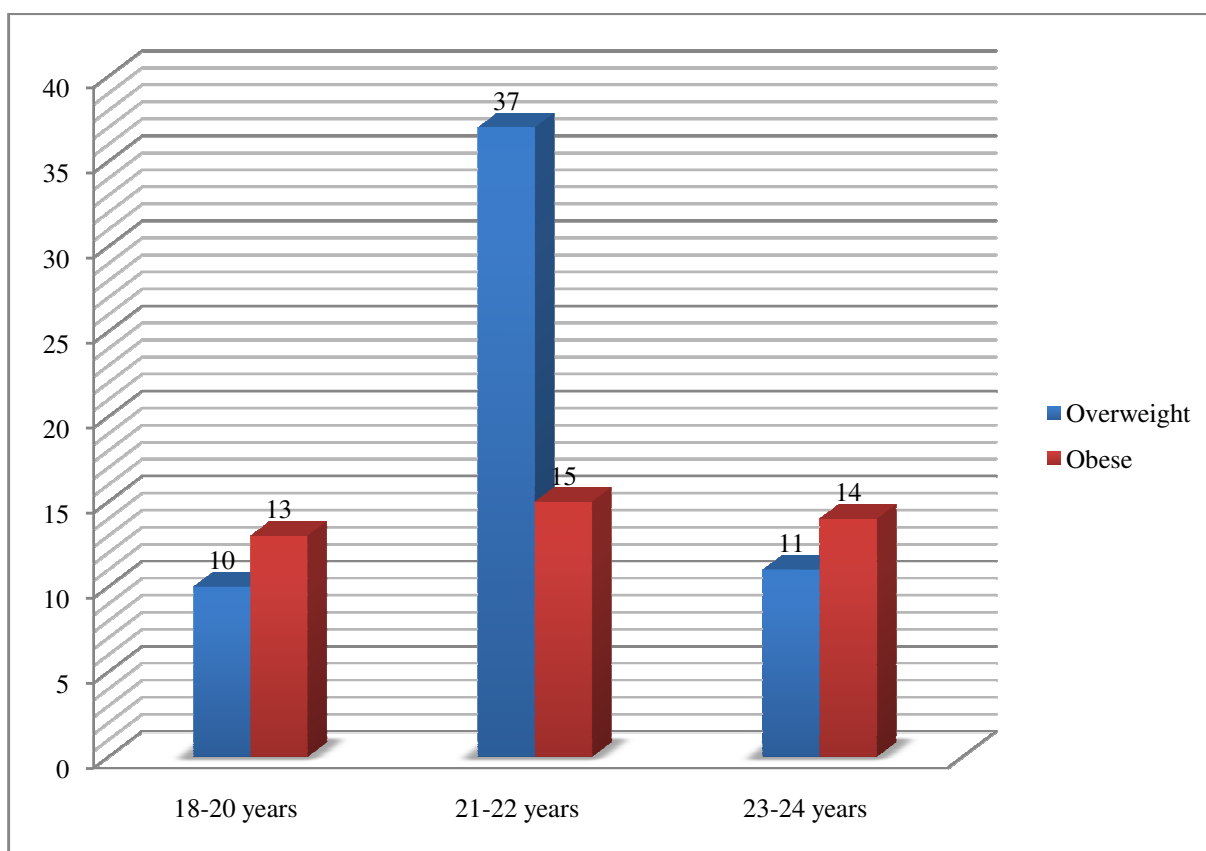


Figure-1: Classification of overweight and obese subjects based on their age.

Some of the unavoidable reasons might be because of staying away from home, because of which there is more dependence on outside food and convenient foods which are calorie dense, their sedentary to moderate lifestyle and physical inactivity levels.

In developing countries young adults belonged to 18–25 years age group are prone to overweight and obesity during the transition from adolescence to adulthood as much as in developed countries. The results are on par with the results of the present study⁵.

Table-2: Classification of respondents by age of menarche and regularity in menstruation.

Characteristics	Category	Respondents	
		Number	Percent
Age of menarche (years)	10-11 years	08	8.0
	12-13 years	56	56.0
	14-15 years	36	36.0
Regularity in menstruation	Regular	62	62.0
	Irregular	38	38.0
Total		100	100.0

Table-2 shows that more than half (56%) of the respondents age of menarche was at the age of 12 to 13 years where as 36 per cent and 8 per cent of the respondents attained their menarche at the age of 14 to 15 and 10 to 12 years respectively. This table also indicates that 36 per cent of the subjects had irregular menstrual cycle. It serves as a baseline factor for endocrine and metabolic disorder. It is a major and serious symptom of PCOS, negligence towards the irregular menstrual cycle leads to further more complications of PCOS.

Irregular menstrual cycle is a first step to characterize PCOS patients with a risk of endocrine and metabolic disorders. Hence emphasis should be given to regularity of menstrual cycle⁶.

Table-3 indicates the respondents knowledge on PCOS, 57 per cent knows the food to be excluded to avoid PCOS, 44 percent knows about PCOS and 41 percent have the knowledge about the time. Majority of the samples did not have an adequate knowledge about PCOS. It is very important that all young females especially who are overweight and obese should know about the causes, risk factors, complications, diagnosis and management of the disease so that unrecognized and neglected symptoms can be introspected by the individual samples in order to prevent the degree and complications of PCOS.

Most of the students had inadequate and average knowledge about PCOS which is on par with the results of the present study⁷.

Table-3: Response on knowledge aspects on PCOS.

Knowledge statements	Respondents	
	Number	Percent
Know about PCOS	44	44
PCOS stands for	38	38
Time interval between two menstrual cycle is	41	41
Related with respect to prevalence of PCOS in India	26	26
Cause of PCOS	22	22
Symptoms of PCOS	34	34
Complications of PCOS	12	12
Risk factors of PCOS	32	32
Concept of oligomenorrhea	20	20
Concept of Amenorrhea	29	29
Diagnostic test for PCOS	31	31
Treatment of PCOS	31	31
Foods to excluded during PCOS	57	57
Androgenic features in female	26	26
False with respect to PCOS	30	30

Table-4: Classification of respondents based knowledge level on Poly Cystic Ovarian Syndrome (PCOS). N=100

Knowledge Level	Respondents						X ² Test
	Over weight		Obese		Combined		
	N	%	N	%	N	%	8.93 *
Inadequate	50	86.2	29	86.2	79	79	
Moderate	8	13.8	13	13.8	21	21	
Adequate	0	0.0	0	0.0	0	0.0	
Total	58	100	42	100	100	100	

*Significance at 5% level

Table-4 indicates that nearly 79 percent of respondents of both over weight and obese young females had inadequate knowledge on PCOS whereas 21 percent of the subjects had

inadequate knowledge. The results showed significant difference at 5 percent level.

The table clearly indicates lack of knowledge among overweight and obese young female adults regarding PCOS. Hence it is very important to impart adequate knowledge among the respondents who are at risk can take preventive measures to avoid PCOS and their complications.

The knowledge of women with PCOS regarding PCOS and its management was found to be inadequate with mean score of 12.1 out of 33⁸.

Conclusion

An adoption of active lifestyle habits by physical activity, by having daily adequate sleep and positive mental well beingness, nutritionally balanced food by inclusion of all five food groups in moderation and inclusion of regular exercises like walking, yoga practices helps in prevention and management of PCOS among adults.

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