Knowledge and Awareness about Polycystic Ovary Syndrome among Medical students

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ABSTRACT:

Context: With a prevalence upto 26%, PCOS is a rising problem. It is important to bring awareness among the people to reduce its incidence and it's complications.

Aim: To assessthe knowledge and awareness about polycystic ovarian syndrome among medical students.

Settings and Design: Cross-sectional study done among the medical students studying in a medical college in Chennai.

Methods: This study was conducted among 192 participants. Convenient sampling method was used. A pretested semi-stricter questionnaire was used to assess the knowledge and awareness about PCOS.

Statistical Analysis used: Data was entered in excel spreadsheet and analysed using SPSS software version 16, statistical analysis was done using Chi-square test.

Results: 57.8% of the participants had a good knowledge about PCOS, whereas 36.9% of them had a fair knowledge and 5.2% of them had a poor knowledge about PCOS. There was a significant association between gender, socio-economic class and the level of knowledge of the participants.

Conclusion: Thus, this study helps us to bring more awareness among people and to prevent it and also to diagnose it early, so that lifestyle changes and appropriate actions can be taken. Hence,disease itself and it's complications can be prevented

Keywords: PCOS, medical students

INTRODUCTION:

Polycystic ovarian syndrome is a multi system end ocrinopathy among women of reproductive age group. It has a wide range of symptoms such as irregular cycles, , infertility, obesity, hirsutism and acanthosisnigrans . Many factors influence PCOS such as genetics, environment, lifestyle changes, sedentary life and diet[1]. Other associated changes are hyperandrogenism which leads to anovulation and also metabolic morbities such as insulin resistance, glucose intolerance and cardiovascular risk [1]. Weight loss alone can correct the hormonal imbalance in many cases which in turn lessens the symptoms or it may totally disappear[2]. Globally, prevalence of PCOS ranges from 2.2% to 26%. According to the Rotterdam's criteria, prevalence of PCOS was found to be 9.13% in South India[3]. Women with PCOS are vulnerable to Type 2 diabetes, arteriosclerosis, endometrial carcinoma and dyslipidemia. Infertility results from anovulation which may present as failure to conceive. Hirsutism, Oligomenorrhea, obesity together with enlarged polycystic ovary are the diagnostic criteria for PCOS [4]. Psychiatric disorders are also found to be associated with PCOS which includes depressive disorders, anxiety disorders and bipolar disorders [5].Lack of awareness about the disease and its symptoms leaves it undiagnosed which may lead to decreased quality of life. Early diagnosis of PCOS is essential to take necessary steps to prevent its progress. Thus, promoting healthy diet and lifestyle, early intervention and bringing adequate knowledge among people are required to prevent the complications.

METHODS AND MATERIALS:

This cross-sectional study was done among medical students in a tertiary care hospital in Chennai, India. Students who were willing to participate were included in the study. Those who were not willing to participate were excluded. Informed consent was obtained from all the participants of the study. Study duration was about 6 months. Ethics clearance from Institutional Ethics Committee (IEC) was applied for and obtained. A total of 192 participants were studied[3]. Convenient sampling method was used. The participants were assured that participation was voluntary, and confidentiality would be maintained. The questionnaires were given after describing the purpose of the study. A pretested semi-structured questionnaire was devised and validated. The first part of the questionnaire covered the socio-demographic details. The second part of the questionnaire included the questions about their knowledge and awareness about polycystic ovarian syndrome. After obtaining the data, it was entered in excel spreadsheet and analyzed using SPSS software version 16, statistical analysis was done using Chi-square test.

RESULT:

The present study was conducted among the medical students in a medical college. A total of 192 participants were included in this study. 40.62%(78)were male participants and 58.95% (112) were female participants [Figure 1]. 57.8% of the participants had a good knowledge about PCOS, whereas 36.9% of them had a fair knowledge and 5.2% of them had a poor knowledge about PCOS (Figure 2).
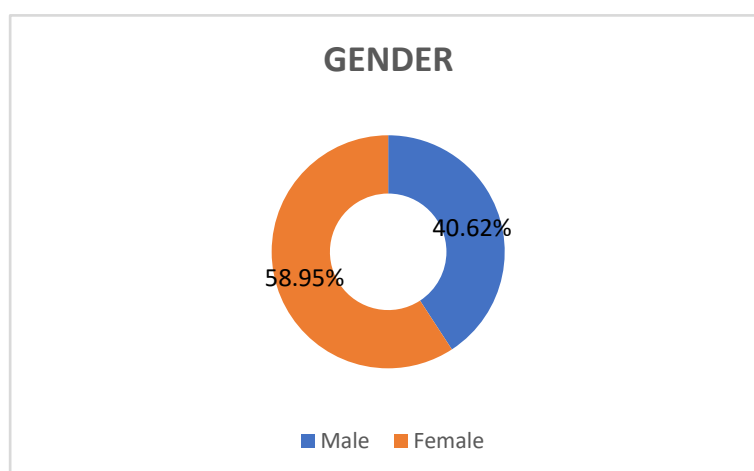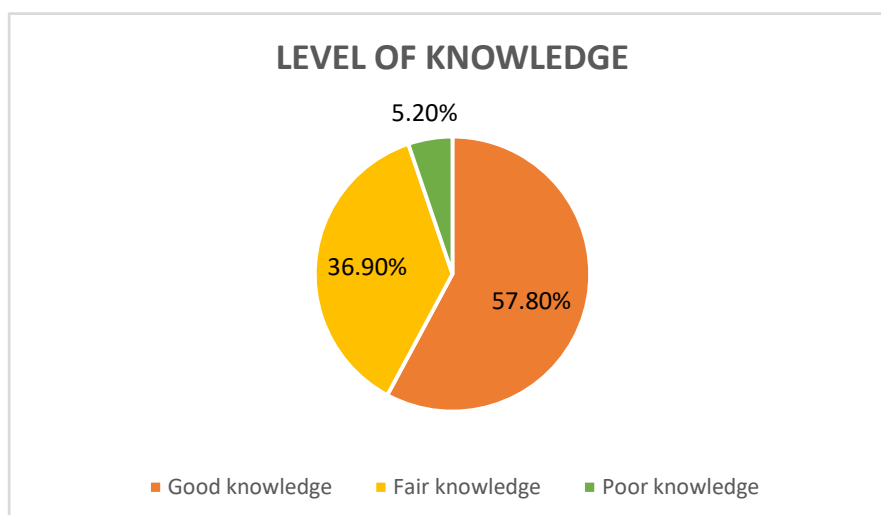

FIGURE 1: Gender

FIGURE 2: Level of knowledge

In this study, 90.1% and 9.8% of the participants were living in urban and rural areas respectively [Table 1, Figure 3]. According to modified B G Prasad socio-economic classification, 96.3% were belonging to upper class, 2.6% to upper middle class, 0.5% to lower middle and lower class (Figure 4).The mean age of the participants was 21.9 years. Among the participants, 29.68% of the participant or their family member have been affected with PCOS.
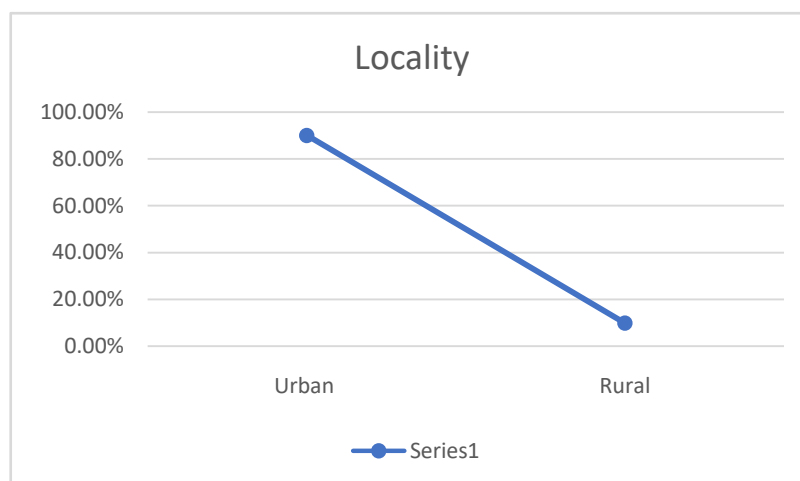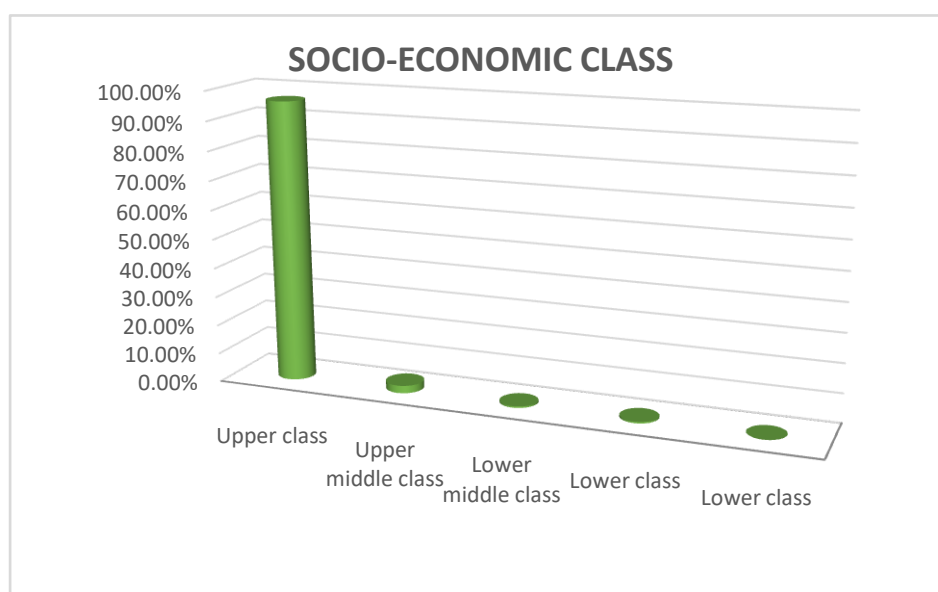

FIGURE 3: Locality

FIGURE 4: Socio-Economic Class

 From Table 2, there is a significant association was found between gender, socio-economic class and the level of knowledge among the participants in this study.The level of awareness among the medical students was 92.7% while 7.29% did not have prior knowledge about PCOS.Knowledge from doctors (20.83%) and from someone who has PCOS (20.83%) were the predominant sources of knowledge about PCOS. 16.14% from magazines or books, 16.14% from internet, 10.93% from

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friends, 8.33% from teachers and 3.12% from mass media have gained their knowledge about PCOS (Figure 5).
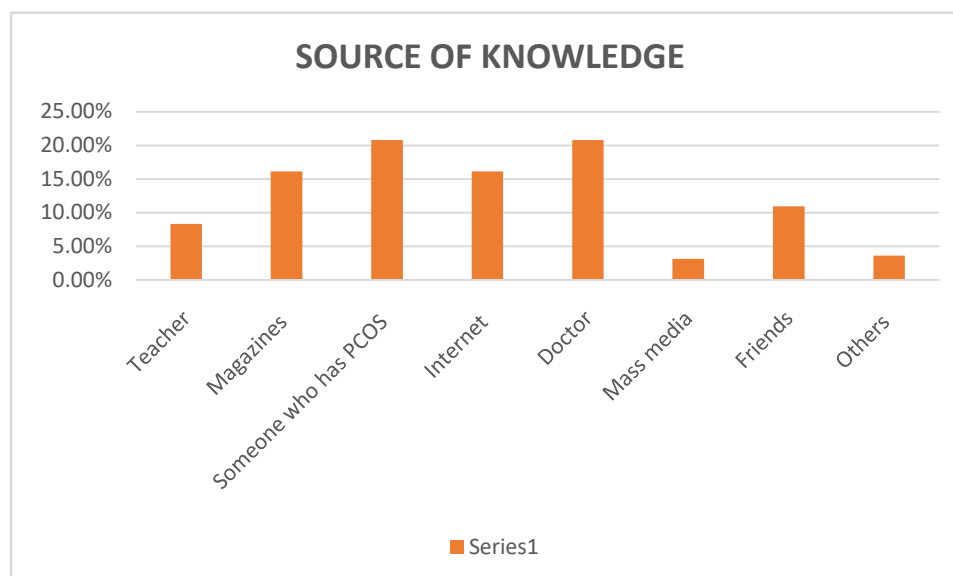

FIGURE 5: Source of knowledge

Around 58% of the participants were aware that hirsutism was one of the symptoms of PCOS and 76.5% of the participants knew that obesity can cause PCOS. 55.72% were aware that " Discolouration or dark patches are seen in the skin" was one of the clinical feature of PCOS, whereas 8.33% did not know and 35.93% were uncertain. 36.45% of the participants were aware that " PCOS is an inherited disease". On the other hand,83.85% of them knew that "PCOS was treatable".

Among the participants,68.75% of them knew that " PCOS causes infertility" whereas 57.81% of them knew that "Androgen is increased in PCOS".55.72% of the participants were aware that " PCOS can lead to type 2 diabetes".53.12% of the study subjects thought that "early puberty was a risk factor". 46.35% of the study subjects were aware that "PCOS can lead to breast and uterine cancer" while 51.56% knew that " shape of the ovary changes". 75% of the participants agreed that "menstrual regulation helps in the regulation of ovulation".

About 88.54% of the participants agreed that " exercise and change in diet plan decreased the symptoms of PCOS" and around 86.45% knew that " PCOS was diagnosed by Ultrasound". 40.62% of the participants thought that "anti-diabetic drug is given in PCOS" and 75.52% of the study subjects also knew that "Hormonal therapy can be used in PCOS".

Table 1: Socio-demographic factor wise distribution of the study subjects (n=192)

VARIABLES	GOOD KNOWLEDGE (n=111, 57.8%) n(%)	FAIR KNOWLEDGE (n= 71, 36.9%) n(%)	POOR KNOWLEDGE (n=10, 5.2%) n(%)	TOTAL (n=192,100%) n(%)
Type of family: Nuclear	96 (56.47)	64 (37.65)	10 (5.88)	170 (100)
Joint	15 (68.18)	7 (31.82)	0 (0)	22 (100)

Locality:				
Urban	102 (58.96)	63 (36.42)	8 (4.62)	173 (100)
Rural	9 (47.37)	8 (42.10)	2 (10.53)	19 (100)

Table 1: Association of characteristics among study subjects with their level of knowledge (n=192)

VARIABLES	GOOD KNOWLEDGE (n=111, 57.8%) n(%)	FAIR KNOWLEDGE (n= 71, 36.9%) n(%)	POOR KNOWLEDGE (n=10, 5.2%) n(%)	TOTAL (n=192,100%) n(%)	P Value
Gender: Male	35 (44.30)	34 (43.03)	10 (12.66)	79 (100)	0.000
Female	76 (67.26)	37 (32.74)	0 (0)	113 (100)	
Socio-Economic Class: Upper class Upper middle class	107 (57.84) 4 (80)	69 (37.30) 1 (20)	9 (4.87) 0 (0)	185 (100) 5 (100)	0.002
Middle class	0 (0)	0 (0)	1 (100)	1 (100)	
Lower middle class	0 (0)	1 (100)	0 (0)	1 (100)	
Lower class	0 (0)	0 (0)	0 (0)	0 (0)	

DISCUSSION:

PCOS is an endocrine disorder which has a wide range of symptoms like hirsutism, obesity, irregular menstruation, hair fall, acne, insulin resistance. It is an emerging problem among adolescents and women of reproductive age group due to their changes in dietary habits, lifestyle etc. As majority of the women with PCOS remain undiagnosed, it is necessary to bring awareness among the people about PCOS and its symptoms so that appropriate actions are taken. The findings of the present cross-sectional study shows the knowledge and awareness about PCOS among medical students.

Majority of our participants had a good knowledge about PCOS. In the present study, the level of awareness about PCOS was 92.7% . While in the previous study conducted at NUINS, the average level of awareness was 76%[3]. In this study, 57.8%, 36.9% and 5.2% of the participants had good, fair and poor knowledge respectively. In a study conducted by pitchai et al, 21% of them had good knowledge, 46% of them had fair knowledge and 6% had poor knowledge[6]. 40.62% of the study subjects were male and 58.33% were female while in a study conducted by Hussain SN et al., 25.6% were male and 74.4% were female[7].

20.83% of our participants gained their knowledge through doctors and another 20.83% from someone who had PCOS. 16.14%, 16.14%, 10.93%,8.33% and 3.12% had their knowledge from magazine sir books, internet, friends, teachers and mass media respectively. Similar results were seen in a study carried out by Alessa A et al., who found that 15.3%, 21.3%, 10.4%, 10.8 and 3% knew about PCOS by getting affected by PCOS, Internet, patients, doctors and books respectively [8].On the other hand, similar findings were found in a study where doctors (94.53%)were their major source of knowledge[9].

About 58% of the participants knew that hirsutism was one of the symptoms of PCOS. On the other hand, 31.7% of the participants knew hirsutism was a symptom in a similar study conducted

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[8].76.5% of the participants knew that obesity can cause PCOS. Similar findings were found in a study conducted in Pakistan where87.1% of the participants knew that obesity can cause PCOS[10]. 32.8% of the participants knew that obesity was seen in PCOS in a study conducted by Alessa A et al., [8]. 55.72% of the subjects knew that discolouration of the skin is seen in PCOS while 21.7% of the participants knew that discolouration on skin is seen in a study conducted by Haq N et al.,[10].

In this study, 46.35% of the participants agreed that PCOS can lead to breast and uterine cancer and 53.12% of them were aware that early puberty was a risk factor whereas 30.2% of them knew that breast and uterine cancer were complications of PCOS and 6.5% knew that early puberty was a risk factor in a study conducted by Alessa A et al., [8]. 68.75% of the study subjects knew that PCOS causes infertility. In another study conducted by Hussain SN et al., around 91% of the participants agreed that PCOS can cause infertility[7].In this study,55.72% were aware that PCOS can lead to type 2 diabetes whereas in a study done in Narayangonjonly 3.5% of the participants knew that diabetes was a complication of PCOS [9].

Around36% of the participants knew that it was inherited disease. 10.4% of the study subjects in another study knew that PCOS was inherited [10].75% of the participants agreed that menstrual regulation helps in ovulation regulation and 51.56% knew that shape of the ovaries changes whereasin the study conducted by Alessa A et al., 10.4% agreed that it was inherited. 49.7% agreed that regulation of menstrual cycle helps in the regulation of ovulation and 23.9% knew that ovaries shape changes[8].

In the present study,86.45% agreed that PCOS was diagnosed by Ultrasound. In another study, 81.8% of the participants knew that PCOS can be confirmed by vaginal ultrasound [10].While, in another study, 72.1% knew that PCOS can be diagnosed by vaginal ultrasound [7]. Around 57.81% of the participants knew that androgen is increased in PCOS. 87.8% of the participants in another study knew about increased levels of androgen in PCOS [10]. 28.3% of the participants knew about increase in androgen in a previous study [8].

In the present study, 88.5% were aware that exercise and change in diet plan decreased the symptoms of PCOS. Similar findings were found in a study conducted by pitchai et al., where 62% were aware that exercise helps in the management of PCOS [6]. In another study, 36.75% perceived that exercise prevents PCOS [9].Most of the subjects (75.52%) knew that hormonal therapy can be given in PCOS and 40.62% of them knew that anti-diabetic medications are being used in PCOS. Similar observations were found in a study done by Haq N et al., where 82.3% of the participants knew that hormonal therapy may be used in PCOS and 76.1% of them knew that anti-diabetic medication may be used to treat diabetes[10].On the other hand, in a study done by Hussain SN et al., 40.6% agreed that PCOS can be treated by anti-diabetic medication [7].

CONCLUSION:
On the whole, this study reflects the knowledge and awareness about PCOS among the medical students. Thus, it helps us to bring more awareness among the people and catch the disease early before the complications sets in, as the undiagnosed cases may lead to decreased quality of life without proper intervention. Hence, it is necessary for us to decrease it's incidence and it's complications.

ACKNOWLEDGEMENT:

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