published: 31 October 2024
doi: 10.21070/midwiferia.v10i2.1710

Lifestyle Matters: Assessing University Students' Knowledge of PCOS and its Management

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OPEN ACCESS
ISSN 2548-2246 (online)
ISSN 2442-9139 (print)
Edited by:
Ririn Ariyanti
Reviewed by:
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Eva Hotmaria Simanjuntak
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Received: 25 Oct 2024
Accepted: 31 Oct 2024
Published: 31 Oct 2024
Citation:
Samahir Sabri Hamid (2024) Lifestyle Matters: Assessing University Students' Knowledge of PCOS and its Management
Midwiferia Jurnal Kebidanan. 10:2. doi: 10.21070/midwiferia.v10i2.1710

Polycystic Ovary Syndrome (PCOS), also known as Stein-Leventhal syndrome, is a common endocrine disorder affecting 15%–20% of women of reproductive age and is characterized by multiple follicular cysts in one or both ovaries. This study aimed to assess the knowledge of PCOS among female college students, evaluate the impact of lifestyle habits on the syndrome, and examine awareness of treatment options to reduce associated risks. A sample of 180 female students from three colleges participated in a survey that included demographic data and questions about PCOS knowledge. Findings revealed that 32% of participants had a good knowledge level, 53% had a moderate level, and 15% had a poor level regarding the influence of lifestyle on PCOS. These results underscore the need for educational initiatives to improve understanding of PCOS and encourage healthier lifestyle choices among young women.

Keywords : Lifestyle, Knowledge, PCOS, Management

INTRODUCTION

Polycystic Ovary Syndrome (PCOS), also known as Stein-Leventhal syndrome, is a complex gynecological and endocrine disorder affecting 7–15% of women of reproductive age globally, making it one of the most common causes of infertility [1,2]. The condition is characterized by enlarged ovaries containing multiple underdeveloped cysts or follicles, which rarely mature to release viable eggs, leading to irregular menstrual cycles, a hallmark symptom of PCOS [3,4,5].

The etiology of PCOS remains unclear, though abnormalities in gonadotropin activity and steroidogenesis (the production of steroid hormones) are implicated, along with high rates of insulin resistance. Insulin resistance is observed in 75% of lean women and up to 95% of overweight women with PCOS, making it a significant factor in the condition's pathogenesis. The World Health Organization estimates that 116 million women worldwide (3.4% of the population) may be affected by PCOS, underscoring the global impact of this disorder[7, 8, 9, 10].

Obesity is recognized as a major contributing factor to PCOS, with studies (e.g., Santhi, 2019) linking a body mass index (BMI) over 30 kg/m² to an increased risk. Given the high prevalence of overweight and obesity among women with PCOS, lifestyle modifications, including diet, exercise, and behavioral changes, are recommended as first-line treatment according to evidence-based guidelines [3,4, 9]. These interventions offer an opportunity for prevention and management of PCOS-related symptoms, as well as improvement in overall quality of life [4,6,9, 11].

This study aims to deepen understanding of PCOS and its relationship with lifestyle factors, providing evidence for effective interventions and enhancing awareness among health professionals to improve patient outcomes.

METHODOLOGY

Material and methods

This descriptive cross-sectional study was conducted to assess the knowledge of female students regarding polycystic ovary syndrome (PCOS) and the influence of lifestyle on this condition. A total of 180 female students from three colleges at Basrah University participated in the study. Participants provided demographic information, including age, marital status, residence, college type, and level of study.

The study used a structured questionnaire consisting of 21 items: three questions assessed participants' knowledge of PCOS, while the remaining 18 items evaluated their awareness of lifestyle factors and treatment methods associated with the syndrome.

Data collection was conducted through self-administered questionnaires, and responses were subsequently analyzed using Microsoft Excel. The analysis involved calculating frequencies and

percentages to describe the distribution of responses. Additionally, mean scores were computed to gauge the average level of knowledge among participants.

RESULT AND DISCUSSION

Polycystic ovary syndrome is linked to androgen-producing tumours as well as a number of issues with the hypothalamic-pituitary-ovarian axis [2, 3,28]. A prevalent disorder affecting 12–21% of women who are of reproductive age is PCOS. Seventy percent of women who with PCOS go undiagnosed. [16,27] the recent study presented to confirm the effect of life style of women on initiation of PCOS

Regarding demographic information of students participating The table -1 shows that the majority of in the questionnaire are in the 21-22 age group (47.2%). The table also shows that the number of participating students from the colleges of Nursing, Al-Zahraa Medicine, and Education for Girls was equal (33.3%). The table shows the number of participants according to years of study, where the fourth stage students obtained the largest percentage (30%), followed by the third stage, then the second and first stages. In terms of residence, the table shows that the majority of students live in the rural area (53.9%). The table shows the marital status of the students, where the largest percentage of students (86.1%) are unmarried.

Table (1) Demographic data of our participants. (N=180)

Variables		Frequency	Percentage
Age	18-20	65	36.1%
	21-22	85	47.2%
	23-24	27	15%
	25-35	3	1.7%
	Total	180	100%
College	Nursing	60	33.3%
	Medicine Al-Zahra	60	33.3%
	Education for Girls	60	33.3%
	Total	180	100%
Year of study	First	30	16.67%
	Second	45	25%
	Third	51	28.33%
	Fourth	54	30%
	Total	180	100%
Resident	Urban	83	46.1%

	Rural	97	53.9%
	Total	180	100%
Marital status	Married	25	13.9%
	Unmarried	155	86.1%
	Total	180	100%

Table (2) Knowledge of students regarding polycystic ovary syndrome. (N=180)

Question	Answers	F	%	M.S	Sig	Evaluation
1-Where did you hear about polycystic ovarian syndrome?	1-Friend or Relatives.	87	48.3%	1.93	NS	Moderate
	2-Health worker (doctor,nurse, etc,.).	19	10.6%			
	3-During the study.	74	41.1%			
2-What major organ is affected by PCOS?	1-No Idea.	5	2.8%	2.78	S	Good
	2-The ovaries.	158	87.8%			
	3-The womb.	17	9.4%			
3-What is Polycystic ovarian syndrome?	1-No Idea.	20	11.1%	2.86	S	Good
	2-The presence of cancerous cells in the ovaries.	3	1.7%			
	3-The presence of fluid filled sacs in the ovaries leading to an imbalance in the female sex hormones.	157	87.2%			

F=frequency %= percentage Sig= Significant, M.S= Mean Score

Table (3): Knowledge of students regarding PCOS and the effect of lifestyle, and methods of treating the syndrome. (N=180)

Question	Yes		No		Neutral		M.S	Sig	Evaluation
	F	%	F	%	F	%			
1--PCOS (Polycystic ovarian syndrome) is a curable disease?	71	39.4%	32	17.8%	77	43%	2.22	S	Moderate

2-PCOS is a chronic / Life-long disease?	78	43.3%	30	16.7%	72	40%	2.27	S	Moderate
3-Polycystic ovary syndrome is a condition that affects women over the age of 15?	66	36.7%	20	11.1%	94	52.2%	2.26	S	Moderate
4-Irregular or absence of menstrual (periods) cycle is a symptom of PCOS?	59	32.8%	5	2.8%	116	64.4%	2.30	S	Moderate
5-Hormonal imbalance is a key feature of PCOS?	58	32.2%	33	18.3%	89	49.4%	2.14	S	Moderate
6-In PCOS, there is an increased level of male hormones?	32	17.8%	83	46.1%	65	36.1%	1.72	NS	Moderate
7-Obesity may cause PCOS?	72	40.0%	3	1.7%	105	58%	2.38	S	Good
8-Overweight and obesity worsen the hormonal, sexual and metabolic symptoms of polycystic ovary syndrome?	55	30.6%	35	19.4%	90	50.0%	2.11	S	Moderate
9-The inability of insulin to work normally is one of the causes of weight gain or difficulty in losing excess weight in women with polycystic ovary syndrome?	46	25.6%	9	5.0%	125	69.4%	2.21	S	Moderate
10-Dividing meals into several small meals ranging from 4-6 meals throughout the day helps improve the symptoms of the syndrome?	58	32.2%	28	15.6%	94	52%	2.17	S	Moderate
11-Reducing the proportion of fast food (especially carbohydrates and sugars) in the diet can help improve the	**44**	**24.4%**	**23**	**12.8%**	**113**	**62.8%**	**2.12**	**S**	**Moderate**

condition of polycystic ovary syndrome?									
12-Exercise may help maintain a healthy weight and reduce symptoms of PCOS?	**95**	**52.8%**	**5**	**2.8%**	**80**	**44.4%**	**2.50**	**S**	**Good**
13- Is it possible for polycystic ovarian syndrome to cause diminished fertility, or a lower probability of becoming pregnant, or infertility, the inability to have children?	**76**	**42.2%**	**13**	**7.2%**	**91**	**50.6%**	**2.35**	**S**	**Good**
14-Can a woman with polycystic ovary syndrome get pregnant if the symptoms of the syndrome are controlled?	**61**	**33.9%**	**9**	**5%**	**110**	**61.1%**	**2.29**	**S**	**Moderate**
15-Polycystic ovary syndrome causes increased hair growth and skin changes such as acne or dark skin patches?	**50**	**27.8%**	**12**	**6.7%**	**118**	**65.6%**	**2.21**	**S**	**Moderate**
16-Having polycystic ovary syndrome can increase the likelihood of mood swings, depression, and anxiety?	**24**	**13.3%**	**76**	**42.2%**	**80**	**44%**	**1.71**	**NS**	**Moderate**
17- Is there a connection between an elevated risk of overweight or obesity and sleep deprivation brought on by depression and anxiety?	**35**	**19.4%**	**62**	**34%**	**83**	**46.1%**	**1.85**	**NS**	**Moderate**

18-Women may undergo hormonal treatment or surgical treatment to remove the cysts, in addition to improving lifestyle to control the syndrome?	**64**	**35.6%**	**8**	**4.4%**	**108**	**60.0%**	**2.31**	**S**	**Moderate**

Sig= Significant, M.S= Mean Score

Table (4): Students' general knowledge. (N=180)

Evaluation	Frequency	Percentage	Total mean
Poor	**27**	**15%**	**2.17**
Moderate	**95**	**53%**	
Good	**58**	**32%**	
Total	**100**	**100%**	

Generally, table- 4 shows that (32%) of the participants students had high knowledge, moderate knowledge (53%) and low knowledge (15%). The result of mean score showed that the students' knowledge about polycystic ovary syndrome was moderate.

This study assessed the awareness of PCOS and the influence of lifestyle factors among female students at the University of Basrah. The findings indicate that lifestyle modifications, such as dietary and exercise changes, can play a critical role in managing PCOS and improving related health outcomes [12, 13, 14]. A substantial body of research supports the effectiveness of lifestyle interventions in mitigating the risk of diabetes and metabolic syndrome, both of which are commonly associated with PCOS [15, 12, 11]. Such interventions, which focus on behavioral management, dietary adjustments, and physical activity, have shown promise in enhancing fertility outcomes among women with PCOS programs tailored for women with PCOS, incorporating behavioral and psychological techniques like goal-setting, self-monitoring, cognitive restructuring, problem-solving, and relapse prevention, appear particularly effective [16, 17, 18, 19 20]. These programs not only help in weight management but also in boosting motivation, social support, and psychological well-being, making them applicable across different stages of reproductive life [21, 22, 23, 24].

The present finous studies, underscoring the role of lifestyle in managing PCOS symptoms and improving fertility outcomes [27, 28, 29]. However, given that awareness levels were moderate among the study population, there is a pressing need to enhance education regarding lifestyle impacts on PCOS [31,

32]. Educational initiatives, especially targeted at young women, can empower individuals to make informed lifestyle choices that could positively influence their condition [33, 34].

CONCLUSION

Raising awareness about PCOS and the importance of lifestyle modifications is crucial for effective management and prevention. Lifestyle changes should be considered a first-line approach to managing PCOS, and healthcare professionals should prioritize educating women about diet, exercise, and weight management. Further research is recommended to explore targeted interventions that can effectively support women in making sustainable lifestyle changes.

ACKNOWLEDGEMENT

Thanks and appreciation to the college administration that facilitated the task of communicating with students to collect data, as well as the students who participated in the questionnaire

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