Original Article

Body shape concerns, sexual satisfaction, and associated factors among patients with polycystic ovarian syndrome

A cross-sectional study in Western Saudi Arabia

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ABSTRACT

الأهداف: تحديد القلق بشأن شكل الجسم (BSC)، والرضا الجنسي، والعوامل المرتبطة بين المرضى المصابات بمتلازمة تكيس المبايض.

المنهجية: باستخدام استبيان منظم ومُعتمد، تم إجراء مسح مقطعي في مستشفى الولادة والأطفال بمكة المكرمة. قمنا بتطبيق تحليل متعدد المتغيرات لتحديد العوامل المرتبطة بالقلق بشأن شكل الجسم والوظيفة الجنسية. تم تطبيق اختبار ارتباط سبيرمان للعثور على العلاقة بين هذين الجانبين.

النتائج: من بين 432 مريضة تم دراستهن، كان لدى ما يقرب من نصفهن بعض درجات القلق بشأن شكل الجسم (50.9%) والخلل الجنسي (50.5%). كان القلق بشأن شكل الجسم مرتبطًا بشكل كبير بالعمر (p=0.001)، والتعليم (p=0.017)، والمهنة (p=0.005)، وحالة المتابعة (p=0.005). كانت الوظيفة الجنسية والرضا مرتبطين بشكل كبير بالتعليم (p=0.001)، ومؤشر كتلة الجسم (p=0.001)، ووجود أمراض مزمنة أخرى (p=0.011). علاوة على ذلك، وجدنا علاقة سلبية بين تقييم الوظيفة الجنسية والقلق بشأن شكل الجسم (سبيرمان رو = -0.567، p=0.001)

الخلاصة: تشجع هذه الدراسة مقدمي الرعاية الصحية على السؤال بشكل استباقي عن القلق الجنسي بين هؤلاء المرضى. قد توجه النتائج مقدمي الرعاية الصحية وصناع السياسات والباحثين في تطوير استراتيجيات لتحسين جودة حياة النساء المصابات بمتلازمة تكيس المبايض.

Objectives: To determine body shape concerns (BSCs), sexual satisfaction, and associated factors in patients with polycystic ovarian syndrome (PCOS).

Methods: Using a structured and validated questionnaire, a cross-sectional survey was carried out at the Maternity and Children's Hospital in Makkah, Saudi Arabia. Data were collected between August 2023 and June 2024. We included adult patients with PCOS who had completed at least one follow-up visit. We used multivariate analysis to determine the factors associated with BSC and sexual function. Spearman's correlation analysis was executed to assess the correlation concerning these 2 aspects.

Results: Of the 432 patients studied, nearly half (50.9%) had some degree of BSC and sexual dysfunction (50.5%). Body shape concern exhibited a significant association with age (p=0.001), education (p=0.017), occupation (p=0.005), and follow-up status (p=0.005). Sexual function and satisfaction were significantly associated with education (p=0.001), body mass index (p=0.001), and the existence of other comorbidities (p=0.011). Additionally, the study revealed a negative relationship between sexual function assessment and BSC (Spearman's rho= -0.567; p=0.001).

Conclusion: This study encourages healthcare providers to proactively query sexual apprehension among these patients. These findings may guide health caregivers, policymakers, and scholars in developing measures to improve the quality of life of women with PCOS.

Keywords: sexual dysfunction, body shape concerns, women, Makkah, Saudi Arabia

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Polycystic ovary syndrome (PCOS) is a metabolic and hormonal disorder frequently observed in women of reproductive age. The estimated prevalence rate among adult females is approximately 5-10% and may increase to 20% based on the diagnostic criteria used. The manifestations of this disorder vary and include reproductive impairment (infertility and menstrual irregularity), metabolic syndrome (dyslipidemia, insulin

resistance, and obesity), anxiety, depression, and sexual dysfunction. Additionally, this disorder is associated with the deterioration of quality of life (QoL), which may affect sexual life and well-being.[1-3]

Body appearance is defined as a concept that includes personal well-being conditions, body shape, competencies, sexual perception, and awareness. Literature has revealed that body shape alterations have a detrimental impact on the body image of patients with versus without PCOS. Previous research has indicated that particular features of PCOS (such as hirsutism, acne, and an elevated body mass index [BMI]) are linked to depression, anxiety, and body dissatisfaction.[4-6]

In 2023, Dybciak et al[7] reported a significantly higher number of depressive symptoms in patients with PCOS than those in the comparison group. Several studies report that these manifestations are linked to more depression-related and fewer health-related QoL metrics in women with PCOS. Polycystic ovary syndrome affects the health and QoL of females during adolescence, reproductive age, and postmenopausal periods, thus representing a critical medical, social, and economic issue.[8,9]

A recent study found a few significant differences regarding the sexual health assessment subscales, which refer to the presence of weakness in sexual function among patients with versus without PCOS. Moreover, sexual attraction and satisfaction with sexual life deteriorated, and body perception affected sexuality in women with PCOS.[8,10] Other studies have shown that couples' sexual and marital satisfaction is affected by PCOS symptoms, such as acne, high BMI, and infertility.[5,11]

Compared with women without PCOS, those with PCOS had sexual dysfunction greater than 30%. Patients with PCOS, a higher BMI, and excessive androgen may feel low attractiveness and face obstacles in their sexual relationships. Studies have shown that patients with PCOS may come across issues such as reduced sexual desire, anorgasmia, and dyspareunia.[11-13] The self-appreciation of several females depends on their body perception and consequently impacts their societal interactions and personal associations. Cultural and social influences shape body image and self-respect; consequently, body image perceptions among patients with PCOS vary. Given the adverse impact of body dissatisfaction on both physical and mental health, it is essential to implement approaches within clinical practice to address these concerns.[14-16]

Previous research demonstrates that patients with PCOS tend to have high levels of body-shape concerns (BSCs) and sexual dysfunction, both of which adversely affect their physical and psychological health. Thus, it can be concluded that awareness of the requirements and problems affecting women with PCOS in the Makkah region, Saudi Arabia, helps women receive better, culturally appropriate healthcare. This information is also essential to help policymakers formulate and execute policies related to the reproductive, psychological, and physical health of women with PCOS to enhance patients' QoL. Despite studies on PCOS being carried out globally, data specific to the Makkah region, Saudi Arabia, are scarce, particularly concerning BSCs and sexual satisfaction among affected women, where culture and other societal factors may affect body image. Hence, the current research carried out to assess BSCs, sexual satisfaction, and associated factors in patients with PCOS. We also assessed the relationship between BSCs and sexual function. We hypothesized that these 2 aspects are significantly influenced by demographic and health-related factors including age, BMI, and education level among women with PCOS.

Methods. This cross-sectional analytical study was carried out between August 2023 and June 2024. We included adult patients with PCOS who visited the Maternity and Children Hospital in Makkah, Saudi Arabia, completed at least one follow-up visit, and were mentally stable.

We calculated the necessary sample size for this research utilizing the Raosoft online sample size calculator, which utilizes Cochran's sample size estimator equation ($n=z^2pq/e^2$). Our study aimed to measure multiple outcomes. Previous studies have indicated varying proportions of BSCs among patients with PCOS; therefore, we set a *p*-value of 0.5. This method is commonly used by numerous researchers to obtain a large sample size. Other values considered while estimating the sample size were the 95% confidence interval (CI; z=1.96), 5% margin of error, and 80% power. Furthermore, we included 20% of additional participants with anticipated nonrespondents.

This research was carried out according to the principles of the Helsinki Declaration. The research protocol was ethically cleared by the local committee

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of Bioethics of Jouf University, Aljouf, Saudi Arabia. Personal or identifiable patient information was not collected. The overall findings are presented in this manuscript. All patients with PCOS provided informed consent for their involvement in the research.

The relevant studies were retrieved from PubMed/Medline, Saudi Digital Library, Web of Science, and Scopus database using appropriate keywords. These keywords were utilized either individually, or with the Boolean operators ("AND", "OR" and "NOT"). We included references published from 2019 onwards. The relevant articles were initially assessed. In the event of contradictions, a final decision was consulted to include the selected article.

Following ethical approval from the institutional review board of Jouf University, Aljouf, Saudi Arabia (no.: 8-09-44) and the acquisition of permission from concerned authorities, patients with PCOS who consented to participate completed the data collection (Arabic) questionnaires on the personal electronic devices of the data collectors. The data collection tool comprised 3 sections; first, the background characteristics and health-related aspects of patients with PCOS were assessed. The second part assessed female sexual function using 6 items prepared by the research team based on existing research.[17,18] Furthermore, the authors carried out brainstorming sessions with a public health specialist, psychiatrist, and 3 patients with PCOS to construct this section of the questionnaire. The sexual function assessment tool included 6 items covering key components of sexual function: desire, arousal, lubrication, orgasm, satisfaction, and pain. All patients with PCOS responded on a scale ranging from never (one point) to always (6 points) for all 6 items. Higher scores in this section correspond to lower sexual function and satisfaction scores. We combined all scores and categorized them into low (>median score) and normal (≤median score) sexual function.

The final section used a shorter version of the body shape questionnaire (BSQ-8C) to determine BSCs among women with PCOS. The BSQ-8C is a widely used, standardized, and validated instrument in scientific studies, including Saudi Arabia, to determine BSCs.[19,20] The tool comprised 8 items, with participants rating each item on a scale from 'not at all' (0 points) to 'all the time' (6 points). These items assess multiple dimensions of body dissatisfaction, such as feelings toward specific body areas, worries regarding weight increase, and general discontent with body shape. We calculated the total BSQ-8C scores and grouped them into different levels of body concerns: none (<19), mild (19-25), moderate (26-33), and severe (>33).[19-21] Before proceeding with data collection, the data collection tool was pretested during a pilot study among 30 eligible patients with PCOS. All patients with PCOS agreed that the tool was simple and culturally acceptable. Cronbach's alpha values for the questionnaire was 0.83 for sexual function assessment and 0.87 for BSC assessment.

Statistical analysis. The research team utilized the Statistical Package for the Social Sciences (SPSS) Statistics for Windows, version 23.0 (IBM Corp., Armonk, NY, USA) to export the present study's data from the Excel sheet to SPSS for further data curation and formal analysis. The patients' demographic and descriptive findings were depicted as numbers, proportions, means, medians, and standard deviations. According to the Shapiro-Wilk test, the sexual function assessment and BSQ-8C scores were skewed. Hence, the researchers utilized Spearman's correlation analysis to assess the magnitude and direction of the relationship between these 2 domains. The significant variables (predictors) for the 2 domains were determined utilizing a binomial logistic regression method. An adjusted odds ratio (AOR) with a 95% CI that was devoid a null value in the logistic regression analysis was recognized as a significant factor.

Results. Questionnaires were distributed to 484 participants. The response rate was 89.3%. Most participants were between 31-40 (42.9%) years old, had a private occupation (41%), had university or graduate certificates (58%), had incomes of 5000-7000 Saudi Riyals (44.7%), were non-smokers (86.8%), were overweight (21.5%), were obese (45.8%), had 1-5 years of PCOD (39.6%). Among patients with PCOS, 67.1% were following up regularly and 53.5% had no other diseases as shown in **Table 1**.

The sexual function responses indicated low desire (83%), low arousal (68%), decreased lubrication (72%), little orgasm (78%), low satisfaction (74%), and increased pain (79%), as presented in **Table 2**.

As shown in **Table 3**, the sexual function scores were categorized as low or high at threshold point 14, and those with low scores were slightly higher (50.5%) than those with high scores (49.5%).

In this study, BSCs were categorized as no concerns (49.1%), mild concerns (15%), and moderate concerns (32.4%), with the highest rates among those with BSCs and severe concerns (3.5%, **Table 4**).

The correlation between BSC scores and sexual function scores was analyzed using Spearman's correlation and the result was rho= -0.567, *p*-value of 0.001.

In binary logistic regression considering other variables, the fact that women with PCOS were concerned regarding their bodies was significantly linked to their age (ref: 18-30, AOR of 41 and above =0.290, p=0.001), occupation (ref: government, AOR of private = 3.338, p=0.005), education status (ref: no formal education, AOR university/graduate studies = 1.614, p=0.017), income (ref: less than 5000 Saudi Riyals (SAR): AOR of more than 7000 SAR = 2.479, p=0.019), smoking (ref: no: AOR of yes = 1.74, p=0.003), BMI (ref: normal: AOR of obese = 0.290, p=0.003), regular follow-ups (ref: no: AOR of yes = 0.443, p=0.005), and female sexual function index (FSFI; ref: no: AOR of yes = 5.960, p=0.001, Table 5).

The presence of sexual dysfunction was significantly associated with occupation (ref: government: AOR of private = 2.042, p=0.077), up to high school (ref: no formal education: AOR of up to high school = 3.849, p=0.003) and university/graduate studies (ref: no formal education: AOR of university/graduate studies = 2.062, p=0.002), smoking (ref: no: AOR of yes = 0.411, p=0.028), BMI overweight (ref: normal: AOR of overweight = 2.466, p=0.001) and BMI obese (ref: normal: AOR of obese = 2.762, p=0.001), regular follow-ups (ref: no: AOR of yes = 1.823, p=0.001), presence of other disease (s) (ref: no: AOR of yes = 1.513, p=0.011), and BSC (ref: no: AOR of yes = 6.709, p=0.001, Table 6).

Table 1 - Background profiles of polycystic ovarian syndrome patients (N=432).

Variables	n (%)
Age groups (years)	
18-30	144 (33.4)
31-40	185 (42.9)
41 and above	103 (23.8)
Occupation	
Government	170 (39.4)
Private	177 (44.7)
Unemployed	85 (22.5)
Education status	
No formal education	64 (14.8)
Up to high school	117 (27.1)
University/graduate studies	251 (58.1)
Income	
<5000 Saudi Riyals	142 (32.9)
5000-7000 Saudi Riyals	193 (44.7)
>7000 Saudi Riyals	97 (22.5)
Smoking	
No	375 (86.8)
Yes	57 (13.2)
BMI status	
Normal	141 (32.6)
Overweight	93 (21.5)
Obese	198 (45.8)
Duration of PCOD	
<1 year	142 (32.9)
1-5 years	171 (39.6)
>5 years	119 (27.5)
Regular follow-ups	
No	142 (32.9)
Yes	290 (67.1)
Presence of other disease (s)	
No	231 (53.5)
Yes	201 (46.5)

Values are presented as numbers and percentages (%).
BMI: body mass index, PCOD: polycystic ovary disease

Discussion. Our study aimed to investigate the correlation BSCs, sexual function, and associated factors among women with PCOS in western Saudi Arabia. The major findings of this study indicate the existence of a negative direction and moderate strength of correlation between BSCs and sexual function. Additionally, identification of the associated factors for each of them were assessed, such as BMI, education status, follow up regularly, and occupation.

The present research findings indicate that 50.5% of patients had sexual dysfunction. A clinical study carried out in the Riyadh, Saudi Arabia, reported that approximately 60% of women had a high risk of sexual dysfunction.[22] The considerable occurrence of sexual dysfunction in patients has profound implications in

Table 2 - Patients' responses in sexual function assessment items (N=432).

Variables	Never	Rarely	Sometimes	Often	Usually	Always
Desire	79 (18.0)	108 (25.0)	174 (40.0)	49 (11.0)	16 (4.0)	6 (2.0)
Arousal	32 (7.0)	169 (39.0)	94 (22.0)	48 (11.0)	85 (20.0)	4 (1.0)
Lubrication	75 (17.0)	93 (22.0)	131 (30.0)	104 (24.0)	24 (6.0)	5 (1.0)
Orgasm	75 (17.0)	144 (34.0)	117 (27.0)	62 (14.0)	31 (7.0)	3 (1.0)
Satisfaction	66 (15.0)	136 (32.0)	116 (27.0)	79 (18.0)	23 (5.0)	12 (3.0)
Pain	108 (25.0)	144 (34.0)	89 (20.0)	70 (16.0)	14 (3.0)	7 (2.0)

Values are presented as numbers and percentages (%).

Table 3 - Sexual function assessment categories (N=432).

Variables	n (%)
Low score (sexual dysfunction) (≤14)	218 (50.5)
High score (normal sexual function) (>14)	214 (49.5)
Total	432 (100)

Values are presented as numbers and percentages (%).

Table 4 - Body shape concerns categories (N=432).

Categories	n (%)
No (<19)	212 (49.1)
Mild (19-25)	65 (15.0)
Moderate (26-33)	140 (32.4)
Severe (>33)	15 (3.5)
Total	432 (100)

Values are presented as numbers and percentages (%).

clinical practice. First, it underlines the need for sexual health assessment as part of routine care for women diagnosed with PCOS. Early intervention may be helpful; thus, medical doctors should inquire regarding the sexual function of the patients they attend to, especially if they are experiencing similar challenges. Second, the high prevalence of PCOS indicates the importance of the program, as well as specialized counseling and support services, for women with PCOS, especially concerning sexual health. Resolving these concerns helps improve the management of illnesses, particularly PCOS, and improves the living standards of affected individuals. Our findings are supported by those of previous studies.[10,23,24] Differing from the current research, Kałużna et al[25] reported that their participants' sexual satisfaction was undisturbed.

This research found that >83% of women with PCOS had low levels of desire, 68% had low arousal, 69% had decreased lubrication, 71% had low or absent orgasm, 74% had low satisfaction, and 79% complained of pain. Our findings indicated varying degrees of sexual dysfunction in each subdomain of the sexual function assessment. Specific solutions are therefore required to address these problems.[26] This could entail individually tailored and targeted counseling for specific sexual health issues, medical and lifestyle interventions to address some manifestations of decreased sexual desire and discomfort, and sex education to improve the ability of patients with PCOS to deal with sexual dysfunction.[27,28] Furthermore, focused sessions with a gynecologist, endocrinologist, and sex therapist may also contribute to enhancing the sexual health of women with PCOS, as the concept of "one size fits all" is not applicable.[8,26,29]

Body-shape concerns further lead to increased sexual dissatisfaction, and the correlation test in the present study confirmed this finding. The consistency of our results with those of other studies suggests that females with PCOS and BSCs are more likely to experience sexual dysfunction. Previous research reported a relationship concerning body image alteration, sexual satisfaction, and overall FSFI scores. Moreover, a moderate degree of body image concern was associated with sexual dysfunction. These findings are similar to other studies where in body image concerns were significantly associated with sexual dysfunction.[5,16,30] Interestingly, this phenomenon is also common in patients without PCOS.[31,32] Our analysis confirmed the role of BMI in increasing the likelihood of sexual dysfunction. Daescu et al[30] also revealed a similar association between a higher BMI and sexual function among females suffering from this condition. This implies that body image issues have a significant influence on sexual health, regardless of whether an individual has been diagnosed with PCOS. The implications are substantial: managing body shape issues and engendering realistic expectations regarding body image could form part of the key strategy for managing sexual dysfunction. In clinical practice, this implies the integration of body image counseling and supportive therapies into the treatment regimens of patients with PCOS. Therefore, it is possible to claim that broader educational programs, that concern the influence of body image in a sexual health context, may be helpful for all patients experiencing sexual dysfunction. This underlines a requirement for an integrative approach, focusing on physical and psychological well-being.

The present research highlights the frequency of sexual dysfunction in patients with PCOS and encourages healthcare providers to proactively inquire regarding sexual apprehension among these patients. Treating sexual issues might improve QoL and overall satisfaction with sexual relationships. Medical staff should address apprehensions regarding body shape and provide support to patients who experience negative feelings regarding their body. Implementing strategies to improve body satisfaction and self-esteem may positively impact patients' physical and psychological health. Furthermore, the research revealed the effect of sociocultural factors on body image and self-esteem among women with PCOS. Healthcare practitioners must be aware of these factors and provide care that is consistent with the patient culture. Understanding the diversity of attitudes toward the bodies of patients with PCOS could help in designing interventions and aids.

Table 5 - Body shape concerns and associated factors identified by binomial regression analysis.

Variables	Total (N=432)	No BSC (n=212)	Yes BSC (n=220)	Multivariable analysis		
				Adjusted (B)	95% CI	*P*-values
Age (in years)						
18-30	144 (33.3)	93 (43.9)	51 (23.2)	Ref		
31-40	185 (42.8)	90 (42.5)	95 (43.2)	0.622	(0.47-1.96)	0.411
41 and above	103 (23.8)	29 (13.6)	74 (33.6)	0.290	(0.15-0.56)	0.001
Occupation						
Government	170 (39.3)	55 (25.9)	115 (52.3)	Ref		
Private	177 (41.0)	90 (42.5)	87 (39.5)	3.338	(1.41-4.89)	0.005
Unemployed	85 (19.7)	67 (31.6)	18 (8.2)	2.198	(0.97 – 3.99)	0.060
Education status						
No formal education	64 (14.8)	51 (24.1)	13 (5.9)	Ref		
Up to high school	117 (27.1)	85 (40.1)	32 (14.5)	0.091	(0.40-3.23)	0.572
University/graduate studies	251 (58.1)	76 (35.8)	175 (79.6)	1.614	(1.26-2.86)	0.017
Income						
<5000 Saudi Riyals	142 (32.9)	95 (44.8)	47 (21.4)	Ref		
5000-7000 Saudi Riyals	193 (44.7)	68 (32.1)	125 (56.8)	2.256	(0.88-4.25)	0.651
>7000 Saudi Riyals	97 (22.4)	49 (23.1)	48 (21.8)	2.479	(1.83-4.01)	0.027
Smoking						
No	375 (86.8)	174 (82.1)	201 (91.4)	Ref		
Yes	57 (13.2	38 (17.9)	19 (8.6)	1.74	(1.12-3.39)	0.019
BMI						
Normal	141 (32.6)	83 (39.2)	58 (26.3)	Ref		
Overweight	93 (21.5)	46 (21.7)	47 (21.4)	0.690	(0.38-1.25)	0.262
Obese	198 (45.8)	83 (39.2)	115 (52.3)	2.148	(1.52-3.39)	0.003
Duration of PCOD						
<1 year	142 (32.9)	95 (44.8)	47 (21.4)	Ref		
1-5 years	171 (39.6)	65 (30.7)	106 (48.2)	1.479	(0.87-2.52)	0.151
>5 years	119 (27.5)	52 (24.5)	67 (30.5)	0.687	(0.59-3.61)	0.239
Regular follow-ups						
No	142 (32.9)	95 (44.8)	47 (21.4)	Ref		
Yes	290 (67.1)	117 (55.2)	173 (78.6)	0.443	(0.25-0.78)	0.005
Presence of other comorbidity (s)						
No	231 (53.5)	115 (54.2)	116 (52.7)	Ref		
Yes	201 (46.5)	97 (45.8)	104 (47.3)	0.600	(0.38-1.25)	0.485
Sexual dysfunction						
No	218 (50.5)	60 (28.3)	158 (71.8)	Ref		
Yes	214 (49.5)	152 (71.7)	62 (28.2)	5.960	(3.45-7.29)	0.001

Values are presented as numbers and percentages (%), please add percentages. BSC: body shape concern, CI: confidence interval, BMI: body mass index, PCOD: polycystic ovary disease, Ref: reference

Additionally, the current research aimed to enhance the well-being of patients with PCOS. These findings may guide health caregivers, policymakers, and researchers in developing measures to enhance the QoL of women with PCOS. This study contributes to the development of clinical guidelines and interventions in Saudi Arabia.

Study strengths & limitations. This study evaluated a significant health concern that remains underdiscussed in the conservative Saudi society. We used a standard, validated tool to obtain data on sexual function and body shape. Furthermore, we applied a multivariate analysis to control confounders and avoid bias. However, some limitations (such as the single-center design, self-selection bias, and recall bias) cannot be omitted from the present study.

In conclusion, we found that nearly half of the patients included had low sexual function and BSCs. Several factors associated with these 2 domains were identified. Furthermore, BSCs and sexual function scores were negatively correlated. Our findings underscore and recommend the broader need for culturally sensitive healthcare strategies in Saudi Arabia, including regular assessments of sexual health and body image concerns in routine care for women with

Table 6 - Sexual dysfunctions and associated factors identified by binomial regression analysis.

Variables	Total (N=432)	Sexual dysfunction (n=214)	No sexual dysfunction (n=218)	Multivariable analysis		
				Adjusted (B)	95% CI	*P*-values
Age (in years)						
18-30	144 (33.3)	76 (35.5)	68 (31.2)	Ref		
31-40	185 (42.8)	95 (44.4)	90 (41.3)	0.789	(0.39-1.56)	0.495
41 and above	103 (23.8)	43 (20.1)	60 (27.5)	1.034	(0.57-1.88)	0.913
Occupation						
Government	170 (39.3)	74 (34.6)	96 (44.0)	Ref		
Private	177 (41.0)	101 (47.2)	76 (34.9)	2.042	(0.89-4.67)	0.077
Unemployed	85 (19.7)	39 (18.2)	46 (21.1)	1.195	(0.57-2.53)	0.606
Education status						
No formal education	64 (14.8)	49 (22.9)	15 (6.9)	Ref		
Up to high school	117 (27.1)	77 (36.0)	40 (18.3)	3.849	(1.58-5.40)	0.003
University/graduate studies	251 (58.1)	88 (41.1)	163 (74.8)	2.062	(1.46-4.48)	0.002
Income						
<5000 Saudi Riyals	142 (32.9)	86 (40.2)	56 (25.7)	Ref		
5000-7000 Saudi Riyals	193 (44.7)	88 (41.1)	105 (48.2)	0.713	(0.29-1.73)	0.719
>7000 Saudi Riyals	97 (22.4)	40 (18.7)	57 (26.1)	1.543	(0.51-4.72)	0.447
Smoking						
No	375 (86.8)	171 (79.9)	204 (93.6)	Ref		
Yes	57 (13.2)	43 (20.1)	14 (6.4)	0.411	(0.19-0.91)	0.028
BMI						
Normal	141 (32.6)	88 (41.1)	53 (24.3)	Ref		
Overweight	93 (21.5)	55 (25.7)	38 (17.4)	2.466	(1.46-4.17)	0.001
Obese	198 (45.8)	71 (33.2)	127 (58.3)	2.762	(1.53-4.98)	0.001
Duration of PCOD						
<1 year	142 (32.9)	86 (40.2)	56 (25.7)	Ref		
1-5 years	171 (39.6)	80 (37.4)	91 (41.7)	1.521	(0.87-2.67)	0.143
>5 years	119 (27.5)	48 (22.4)	71 (32.6)	1.452	(0.87-2.51)	0.154
Regular follow-ups						
No	142 (32.9)	86 (40.2)	56 (25.7)	Ref		
Yes	290 (67.1)	128 (59.8)	162 (74.3)	1.823	(1.32-2.61)	0.001
Presence of comorbidity (s)						
No	2231 (53.5)	104 (48.6)	127 (58.3)	Ref		
Yes	201 (46.5)	110 (51.4)	91 (41.7)	1.513	(1.03-1.86)	0.011
BSC						
No	212 (49.1)	152 (71.0)	60 (27.5)	Ref		
Yes	220 (50.9)	62 (29.0)	158 (72.5)	6.709	(4.31-8.44)	0.001

Values are presented as numbers and percentages (%), please add percentages. BSC: body shape concern, CI: confidence interval, BMI: body mass index, PCOD: polycystic ovary disease, Ref: reference

PCOS. This study encourages healthcare providers to proactively inquire regarding sexual apprehension among these patients. These findings may guide health caregivers, policymakers, and scholars in developing measures to enhance the QoL of patients with PCOS. Future interventions could focus on multidisciplinary approaches, including counseling and support groups, tailored to address body image and sexual satisfaction issues in patients with PCOS. Considering the limitations, we recommend carrying out prospective and exploratory investigations in other regions of Saudi Arabia.

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