

Assessment of Body Image Distress in Women with Polycystic Ovarian Syndrome

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ABSTRACT

Background; Polycystic ovary syndrome (PCOS) is one of a common hormonal issue among women of childbearing age. Multiple cysts formation in ovaries, high level of androgen hormone and lack of ovulation and abnormal body appearance could be symptoms of PCOS that leads of severe negative effects on women mental health.

Objective: To find out the association of body-appearance and mental health with PCOS.

Study Design: Prospective cross-sectional study

Place and Duration of Study: Department of Obstetrics & Gynaecology, Services Institute of Medical Sciences Lahore from 1st July 2022 to 31st December 2022.

Methodology: This was questionnaire base study in which 54 PCOS suffering women and 67 control females were participated. Questions were asked about their body-image satisfaction and behavior towards sexual activities in routine life.

Results: Average age in years of PCOS patients was 37.3±17.2 and control group was 44.8±13.7, average weight was 88.6±23.9 kg and 79.5±17.2 kg respectively. All were married and more than 60% of them were housewives. 9 questions were asked related to body image of PCOS patients and 63% of them were not feeling depressed about their physical appearance while only 13% were very much concerned and not satisfied with their physical appearance.

Conclusion: Although PCOS has some negative effects on body appearance due to increased androgen level that might has some impact on self-confidence and less satisfaction with routine sexual life end up with depression and anxiety or some other mental disturbances, but there was no significant association was found between PCOS body-image and mental health.

Keywords: Assessment, Body image distress, Polycystic ovarian syndrome

INTRODUCTION

Polycystic ovary syndrome (PCOS) is a hormonal disorder that affects many women of reproductive age.¹ One of the common symptoms of PCOS is weight gain, particularly in the abdomen area, which can negatively impact body image and self-esteem. Additionally, PCOS can cause excessive hair growth on the face and body, as well as acne, which can also affect how a woman feels about her appearance.² The psychological impact of PCOS on a woman's mental health can be significant.³ Women with PCOS are more likely to experience depression, anxiety, and other mental health disorders than women without the condition. This may be related to the hormonal imbalances that occur with PCOS, as well as the physical symptoms that can affect a woman's sense of self and body image.⁴

The physical effects of PCOS can also have apparent effects on a woman's body image.⁵ Women with PCOS may feel pressure to conform to societal beauty standards that prioritize thinness and clear skin. This pressure can lead to body dissatisfaction, disordered eating, and other negative outcomes.⁶ Moreover, infertility, which is a common consequence of PCOS, can also have a significant impact on a woman's mental health. Women with PCOS may struggle with feelings of loss, grief, and anxiety related to their fertility, which can contribute to depression and other mental health issues.⁷

The symptoms of PCOS, such as irregular periods and infertility, can be distressing and can lead to anxiety, depression, and other mental health concerns. Additionally, the social stigma surrounding PCOS can make women feel isolated and unsupported.⁸ It is important for healthcare providers to recognize the impact that PCOS can have on a woman's mental health and to provide appropriate support and treatment.⁹ This may include referrals to mental health professionals, as well as addressing the physical symptoms of PCOS through lifestyle modifications, medication, or other treatments.¹⁰ Distress over one's body image may be a significant contributing cause to mental health issues in PCOS-affected women, according to recent studies. Negative

thoughts or feelings about one's body type, weight, or attractiveness are referred to as body-image distress.¹¹ Due to physical side effects including weight gain, acne, or excessive body hair, women with PCOS may have dissatisfaction with their body image.¹²

According to numerous research, women with PCOS experience greater body-image distress than those without the condition. Additionally, it has been discovered that the link between PCOS and mental health issues like depression and anxiety is mediated by body-image disturbance. Recent studies have suggested that body-image distress may be another important factor that contributes to mental health problems in women with PCOS. Body-image distress refers to negative feelings about one's body shape, weight, or appearance.^{12,13} Women with PCOS may experience body-image distress due to physical symptoms such as weight gain, acne, or excess body hair. Several studies have shown that body-image distress is higher in women with PCOS compared to women without PCOS. Moreover, body-image distress has been found to mediate the relationship between PCOS and mental health problems such as depression and anxiety.¹⁴

Polycystic ovarian syndrome can cause weight gain, especially in the abdomen, which can hurt self-esteem. Polycystic ovarian syndrome can also produce excessive hair growth and acne, which can damage a woman's self-esteem. Polycystic ovarian syndrome can seriously affect a woman's mental health. Depression, anxiety, and other mental health disorders are more common among PCOS-afflicted women. Polycystic ovarian syndromes hormonal abnormalities and physical symptoms may negatively effects a woman's self-esteem and body image. Relationship between body imaging and the physical, apparent, and mental effects of PCOS on women is to better understand the multidimensional nature of the condition and its impact on women's well-being. By exploring how the physical effects of PCOS can have apparent effects on a woman's body image, and how both physical and apparent effects can lead to mental health concerns,

we can gain insight into the complex and interconnected nature of PCOS. This understanding can inform healthcare providers in providing holistic care that addresses both the physical and mental aspects of the condition, and can also inform efforts to reduce the stigma surrounding PCOS and promote body positivity and acceptance for all women. Healthcare practitioners must notice the mental health effects of PCOS and give appropriate support and treatment. Lifestyle changes, medication, and mental health referrals may be used to manage PCOS symptoms.

MATERIALS AND METHODS

This prospective cross-sectional study was conducted at Department of Obstetrics & Gynaecology, Services Institute of Medical Sciences Lahore from 1st July 2022 to 31st December 2022. Fifty four patients of PCOS and 67 normal as control were recruited. Women who met the Rotterdam criteria were recruited. The Rotterdam criteria are a set of diagnostic criteria for polycystic ovary syndrome (PCOS), a common endocrine disorder in women of reproductive age. These criteria were established during a conference in Rotterdam, the Netherlands, in 2003, and have since been widely adopted by medical professional's worldwide.¹⁵

According to the Rotterdam criteria, a woman is diagnosed with PCOS if she meets at least two of the three criteria; ¹ Irregular or absent menstrual cycles: The woman experiences infrequent menstrual cycles or no periods at all (amenorrhea), ² Hyperandrogenism: The woman has high levels of androgens, male hormones that are also present in females. This can cause symptoms such as acne, excess hair growth (hirsutism), and male-pattern baldness and ³ Polycystic ovaries: The woman's ovaries contain many small cysts, typically seen on an ultrasound were included. All patients with hirsutism and irregular menses were excluded. 15 questions were included in questionnaire including age, marital status, weight, births, education status as matric level or above was educated and less than matric was uneducated and some related to participant's physical appearance satisfaction level

more precisely body-image satisfaction score as not at all, little bit, quite a bit and very much. Satisfaction score like not at all and a little were considered as un-happy status while very much was considered as happy, only quite a bit was considered as happy and un-happy both. The data was entered and analyzed through SPSS-25. Correlation of normal and control values was identified with 95% confidence interval and 5% error margin. P value less than 0.05 was considered significant.

RESULTS

Average age of patients was 37.3±17.2 years and control was 44.8±13.7 years and other all demographic characters are described in Table 1. Questions were included in questionnaire were shown in table 2, each question was asked with 4 possible options. Average of all 4 possible answers is given in table with statistical analysis. Very first question was Have you been self-conscious about your appearance shown in Figure 1. Third question "Have you been dissatisfied with your appearance when dressed?" response was Not at all 27 and 38, A little 9 and 11, quite a bit 7 and 11 and Very much was 11 and 7 for patient and control respectively. Same as all other responses are shown in table 2. Fourth response on questions "have you been feeling less feminine/masculine as a result of your disease and treatment" with maximum number of not at all 33 and 27 in both control and patient respectively (Table 3).

Table 1: Demographic Information of the Patients

Character	Patients (n=54)	Controls (n=67)
Age (years)	37.3±17.2	44.8±13.7
Marital status	54 (100%)	67 (100%)
Weight	88.6±23.9	79.5±17.2
Births	4±2	3±1
Educated	18 (33.4%)	28 (41.8%)
Occupation	45 (83.4%)	58 (86.6%)

Table 2: Comparison of Different Parameters According to Normal and Polycystic Ovarian Syndrome

Questions	Not at all		A little		Quite a bit		Very Much		P value
	Normal	PCOS	Normal	PCOS	Normal	PCOS	Normal	PCOS	
Have you been feeling self-conscious about your appearance?	17(25.3%)	12(22.2%)	14(20.8%)	12(22.2%)	11(16.4%)	9(16.6%)	25(37.3%)	21(38.8%)	0.01
Have you been feeling less physically attractive as a result of your disease or treatment?	23(34.3%)	19(35.1%)	9(13.4%)	6(11.1%)	12(17.9%)	9(16.6)	22(32.8%)	20(37%)	0.02
Have you been dissatisfied with your appearance when dressed?	38(56.7%)	27(50%)	11(16.4%)	9(16.6%)	11(16.4%)	7(12.9%)	7(10.4%)	11(20.3%)	0.03
Have you been feeling less feminine/masculine as a result of your disease and treatment?	33(49.2%)	27(50%)	5(7.4%)	6(11.1%)	8(11.9%)	10(18.5%)	21(31.3%)	11(20.3%)	0.07
Do you find it difficult to look at yourself naked?	39(58.2%)	24(44.4%)	7(10.4%)	13(24%)	8(11.9%)	7(12.9%)	13(19.4%)	10(18.5%)	0.02
Have you been feeling less sexually attractive as a result of your disease and treatment?	37(55.2%)	31(57.4%)	11(16.4%)	10(18.5%)	9(13.4%)	6(11.1%)	10(14.9%)	7(12.9%)	0.03
Do you avoid peoples because of the way you feel about your appearance?	34(50.7%)	29(53.7%)	9(13.4%)	6(11.1%)	11(16.4%)	5(9.2%)	13(19.4%)	14(25.9%)	0.02
Do you feel the disease or treatment has left your body less whole?	36(53.7%)	27(50%)	9(13.4%)	12(22.2%)	13(19.4%)	9(16.6%)	9(13.4%)	6(11.1%)	0.03
Have you felt dissatisfied with your body?	38(56.7%)	32(59.2%)	11(16.4%)	8(14.8%)	11(16.4%)	9(16.6%)	7(10.4%)	5(9.2%)	0.02

Table 3: Comparison of Groups According to 4th Question

Group	Not at all	A little	Quite a bit	Very much	Total
Patient	27	6	10	11	54
Control	33	5	8	21	67

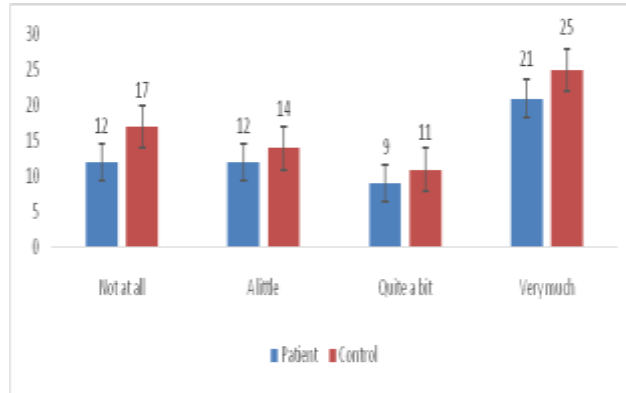


Fig. 1: Have you been self-conscious about your appearance

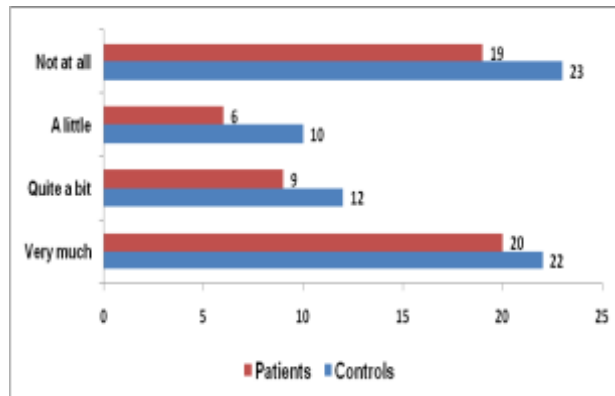


Fig. 2: Have you been feeling less physically attractive as a result of your disease or treatment?

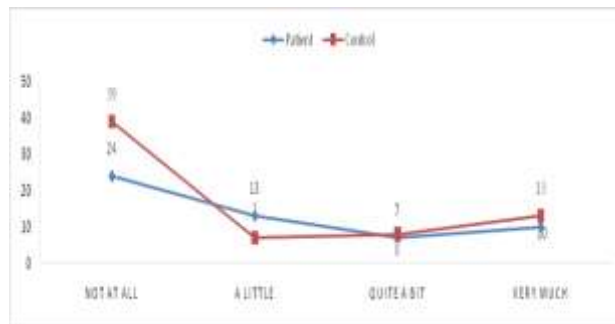


Fig. 3: Do you find it difficult to look at yourself naked?

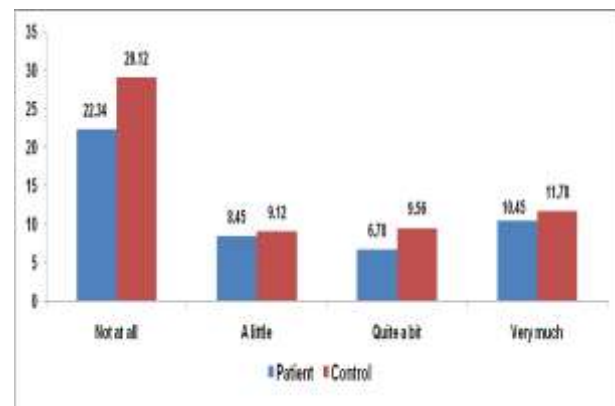


Fig. 4: Average satisfaction level

DISCUSSION

The average age of patients was 37 years with 100% marital status, 4 children per women was average birth rate and 33% were having education over 10th standard and more than 60% of them were housewives. In the present study the patients were given a predesigned questionnaire only PCOS diagnosed patients were selected, criteria for diagnosis was used was ultrasound imaging to assess ovarian volume in women with PCOS and found that body fat distribution and insulin resistance were both associated with increased ovarian volume.^{15,16} But in a few previous studies the dual-energy X-ray absorptiometry (DXA) to assess body composition in women with PCOS and found that increased body fat percentage was associated with insulin resistance and poorer metabolic outcomes.¹⁷ This study assessed the mental health and quality of life of women with PCOS using self-reported questionnaires about body-image satisfaction which has found that the condition was associated with increased levels of anxiety and depression and decreased quality of life, which was elaborated in a previous study where association between PCOS, quality of life and effects of mental health was aim to the study and significant correlation was observed between them.¹⁸ The estimation of prevalence of PCOS in a community sample of women using different diagnostic criteria and found that the condition affected approximately 8-13% of women of reproductive age.¹⁹

The important insights into the physical, apparent, and mental effects of PCOS on women and highlight the importance of proper diagnosis and management of the condition. This meta-analysis examines the prevalence of PCOS in women of different ethnicities and highlights the importance of early detection and management of this condition.²⁰ Another systematic review and meta-analysis explores the prevalence of anxiety and depression in women with PCOS, highlighting the need for mental health support for this patient population.⁵ Because in present study it was observed that a highest number of 67% of patient and control were not satisfied with their body-image and physical appearance that is one of main reason mental discomfort end-up with anxiety. This evidence-based guideline provides recommendations for the diagnosis, management, and treatment of PCOS, emphasizing the importance of a multidisciplinary approach to care.²¹ The risk of impaired glucose tolerance, type 2 diabetes, and metabolic syndrome in women with PCOS, emphasizing the importance of lifestyle changes and medication to manage these conditions.²² The strong association between self-image and body appearance by asking 9 questions from both patients and controls was found. First one was about self-conscious and more than half of patients and control group on the very much conscious side. While a study published in India 2022 stated that women with PCOS were less self-conscious about body appearance and low self-esteem, less sexual attraction and loss of femininity while in present study all these factors were also showing same trend like more than 60% were showing not satisfaction about sexual attraction, self-esteem and femininity.²³ In another recent study the sexual desire was observed less than 40% and sexual dysfunction was observed in 43% of patients.²⁴

Polycystic ovary syndrome has been found to be associated with negative impacts on self-appearance and mental health anxiety in this study and in several studies published in peer-reviewed literature.²²⁻²⁴ The women with PCOS had significantly higher levels of body dissatisfaction, depression, and anxiety compared to women without PCOS and the hormonal imbalances and physical symptoms associated with PCOS can lead to negative perceptions of self-appearance and mental health issues.²⁵ Another study found that women with PCOS had higher rates of body dysmorphic disorder, which is characterized by obsessive thoughts and preoccupations with perceived physical flaws. The physical symptoms of PCOS, such as weight gain and acne, may contribute to body dysmorphic disorder in women with PCOS.²⁶

The women with PCOS had higher rates of anxiety and depression compared to women without PCOS. They suggested that the hormonal imbalances associated with PCOS may contribute to this mental health issues.²¹ Which was also observed in present study and recommended hormonal and lifestyle interventions, such as medication, dietary changes, and exercise, may help manage symptoms and improve your health. Self-care can help manage stress and anxiety associated with PCOS. A mental health professional can help develop coping strategies and address negative self-perceptions and Focus on strengths and accomplishments, rather than your perceived flaws or shortcomings, worth is not determined by your appearance or diagnosis.

CONCLUSION

Polycystic ovarian syndrome is likely associated with mental health and in previously published data PCOS patient has likely 3-time extra risk of getting mental health sickness as compared to normal women. Body image, physical appearance and self-esteem are the key factors actually make such association. But unlikely answers of these questions related to these three factors were not similar to previous published data. Because more than 58% of patients were satisfied with their physical appearance and no statistical significance was observed. But this data with low sample could not be representative for large populations, researchers need to conduct surveys with maximum sample number to find it in better way that if there is any association present between PCOS and mental health related to body image and appearance.

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