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Body Image Dissatisfaction, Depression and Quality of Life in Women with Polycystic Ovary Syndrome

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Abstract

The purpose of this study was to examine the relationship among polycystic ovary syndrome (PCOS) quality of life, body image dissatisfaction and depression in women having PCOS. It was a cross sectional analytical study. The study was conducted at the department of gynaecology of two government hospitals of Lahore from February 2020 to April 2020. Using convenience sampling, 150 PCOS diagnosed women with age ranging from 18-40 years were selected. Beck depression inventory, polycystic ovary syndrome questionnaire and body shape questionnaire were used for collection of data. The results revealed PCOS quality of life and body image dissatisfaction to be significant predictors of depression (p<.05) in women. Women having depressive symptoms had low quality of life scores and infertility was found to be the quality of life domain which PCOS affected the most followed by excess body weight and hirsutism. Women having polycystic ovary syndrome experience numerous physiological and psychological challenges, however, the psychological component of this complex condition largely goes unnoticed. It is recommended that care of these women should adopt a holistic approach and must include behavioral health professionals to provide comprehensive care.

Key words: *Body Image Dissatisfaction, Depression, Infertility, Polycystic Ovary Syndrome, Women.*

Introduction

Polycystic ovary syndrome (PCOS) is a serious and frequently occurring endocrine disorder in reproductive aged women. Its prevalence is estimated to be about 52% in Pakistani women which is a lot higher than the prevalence in western women (Sidra et al., 2019). It is a leading cause of infertility and is characterized by ovulatory dysfunction, hyperandrogenism and metabolic disruption. Ovulatory dysfunction could cause infertility and menstrual cycle irregularities; excess androgen produces acne and excessive hair growth in a male pattern, while metabolic issues lead to insulin resistance and obesity. All these undesirable symptoms which are culturally viewed as unpleasant and unfeminine have adverse impact on mental health of women. Severe emotional distress results due to these psychosexual and cosmetic consequences of PCOS and contribute to deteriorated quality of life (QoL) in women. It is also associated with a wide range of medical problems including hypertension, diabetes, coronary heart disease, and endometrial cancer (Williams et al., 2018)

There is a lot of research data on the physiology of PCOS and its consequences on health, however, there is dearth of data when it comes to psychological implications of PCOS on women. It is associated with several mental health problems, including anxiety, depression, diminished sexual satisfaction, and lowered health-related quality of life. Women with PCOS are considered to be at a higher risk of suicide attempts and social phobia as compared to normal population. Depression is estimated to be between 27-64% in this population (Bazarganipour et al., 2013). Multiple factors play a role in prevalence of psychological disorders amongst which physical or appearance related features of PCOS are of utmost significance for investigation. Recent literature has examined the role of PCOS-related symptoms, such as infertility, excess body weight, elevated testosterone, insulin resistance or hirsutism in depressive or anxiety symptoms in these women (Cooney et al., 2017). According to recent evidence, about two-thirds of women having PCOS are obese or overweight, and about three-fourths have hirsutism. These features along with many others affect a woman's feelings of physical attractiveness (Damone et al., 2019). Body image dissatisfaction which is defined as negative subjective evaluation as well as a dissatisfaction with shape and size of one's body is found to be lower in women with PCOS as compared to ones without it (Alur-Gupta et al., 2019; Ribeiro et al., 2020).

PCOS influences QoL deleteriously. Studies have found that the manifestation of the impact of PCOS on QoL differs across the globe and it is important to focus on domains which are important for that particular population. In Iranian women with PCOS, infertility and irregular menstrual cycle had the major impact on Qol, whereas in Turkish women, hirsutism and menstrual irregularity was the most reported concern. Infertility and body weight were two main concerns of Brazilian women affecting their QoL. This study found that QoL manifests differently for women belonging to different cultures and regions (Williams et al., 2018). There is limited research work on PCOS despite the fact that its prevalence is quite high in Pakistan. It is important to investigate the QoL concerns as defined by women having PCOS in Pakistan to see how it impacts them physically and psychologically. Also, examining the psychological consequences of PCOS is needed because they are often underestimated and largely ignored. It was hypothesized that PCOS related QoL (PCOSQ) will be worse in women having depressive symptoms as compared to the ones without depression. Another hypothesis was that body image and PCOSQ will predict depression in women with PCOS.

Objectives

- To explore the relationship among body image dissatisfaction, PCOS quality of life and depression in women.
- To examine the demographic correlates of rejection sensitivity and depression among university girls
- To investigate body image dissatisfaction and PCOSQ as predictors of depression in women with PCOS.

Literature Review

A study conducted on PCOS women found it to be associated with increasing incidence of depression in East Asian population. Younger PCOS females (aged 15–29 years) as compared to middle-aged females had an increased risk of depression. During reproductive age, 6–10% of female had PCOS. Among them, 40% experience depression, mostly at young ages. The research included 15 to 50 year-olds women newly diagnosed with polycystic ovary syndrome during 1998–2013 from the Taiwan National Health Insurance Research Database having sample size (n = 7684) and then matched them with sex, age and index year with females without polycystic ovary syndrome as the comparison cohort (n = 30 736). The prevalence of depression was higher in the PCOS group than in the comparison group. PCOS females aged 15–29 years

had significantly higher depression risk (adjusted HR = 1.39, 95% CI = 1.18–1.65). These findings provide fundamental information to women, clinicians, and other developing Asian countries to make the PCOS treatment strategies better and to include depression assessment in routine checkups of women with PCOS (Pastore et al., 2011).

Another cross sectional study was conducted on reproductive aged women to assess the differences in body image dissatisfaction, anxiety and depression in women having PCOS and a control group. The results indicated that women with PCOS had worse body image and greater prevalence of anxiety and depression as compared to the control group women. Body image, being overweight and appearance mediated the relationship between PCOS status and depression and anxiety in women (Alur-Gupta et al., 2019).

Method

This was a cross sectional study which was conducted at the department of gynecology of two government hospitals of Lahore from February 2020 to April 2020. The participants were selected through convenience sampling technique. The sample consisted of 150 women clinically diagnosed with polycystic ovary syndrome with age range from 18-45 years (M=29.63, SD=5.81). Pregnant women were excluded from the study. Women suffering from any chronic medical disease, endocrinological problems, or the ones on any hormonal medications (for the past 3 months) were also excluded to avoid any possible confounding with quality of life.

PCOS quality of life questionnaire (PCOSQ) was used to assess PCOS specific quality of life in women. It is a 26 item questionnaire with a seven point Likert response format. Low scores indicate poor QoL. It assesses the impact of PCOS symptoms on women including hirsutism, menstrual problems, infertility, weight, and emotions.

Body image dissatisfaction was measured through Body Shape Questionnaire (BSQ) consisting of 34 items. Each item is scored from 1 to 6 and higher scores indicate greater concerns with body shape. Beck Depression Inventory was used to screen women for depression. It has 21 items with score range of 0 to 3. Total score ranges from 0 to 63 indicating categories of severity of depression. As scores increase, it shows greater severity of depression.

Approval of the study was taken from ethical review board of the department and board of studies. Permission was also obtained from relevant hospital authorities and then the patients were approached for data collection. The women were briefed about the purpose of the study and were assured of the confidentiality of the data. Informed consent was obtained and questionnaires were provided to the ones who agreed to participate.

Results

Table-I shows the frequency and percentages of the sociodemographic characteristics of the participants. Majority of the women were single (46%) and were unemployed (58%). The maximum number of women (66%) had completed their education till intermediate. 61% of the women were living in joint family system.

Table 1: Demographic characteristics of the participants (N=150)

Variables	Categories	F (%)
Education	Middle school or under	42 (28)
	Intermediate	57 (38)
	Graduation	39 (26)
	Post-graduation	12 (8)
Occupation	Employed	63 (42)
	Unemployed	87 (58)
Marital Status	Married	54 (36)
	Single	69 (46)
	Widowed/Divorced	27 (18)
Family System	Nuclear	58 (39)
	Joint	92 (61)

Pearson`s correlation was carried out to examine the relationships among PCOS quality of life, body image dissatisfaction, depression and sociodemographic variables. The results in table-II indicated that QoL and body image were significantly poor in younger girls as compared to older ones. Married women had higher dissatisfaction with their body image and depression than the ones who were single. PCOS QoL was better in women with less severity of depressive symptoms and lower body shape dissatisfaction.

Table 2: Correlation among study variables

Variables	1	2	3	4	5	6	7	8
1.Age	-	.31**	.23**	.25**	.22**	-.17*	.07	.11
2.Education		-	.24**	-.40**	-.02	.04	.07	-.03
3.MaritalStatus			-	-.29**	-.06	.16*	.23**	.20*
4.FamilySystem				-	-.03	.11	.09	.06
5.Occupation					-	.01	.01	.07
6.PCOSQ						-	-.80**	-.72**
7.BSQ							-	.74**
8.BDI								-
M	28.72	3.55	1.83	.89	1.59	88.07	44.95	21.04
SD	6.91	1.54	.71	1.93	1.02	42.62	19.98	11.26

Note. *p<.05; **p<.01

Table 3: Multiple Hierarchical Regression for depression (N=150)

Variables	*Model 1*			*Model 2*			*Model 3*		
	B	*SE*	*B*	*B*	*SE*	*B*	*B*	*SE*	*B*
Age	.43	.22	.19**	-.04	.15	-.11*	-.00	.14	-.004
Education	-.54	.80	-.06	-.96	.55	-.10	-.95	.52	.105
Marital Status	5.13	1.99	.24**	4.2	1.37	.21***	2.50	1.34	.130
No. of Children	-.64	.90	-.09	.24	.62	.08	.07	.58	.02
PCOSQ				-.24	.01	-.52***	-.13	.03	-.40***
BSQ							.29	.06	.51***
R^2	.08*			.47***			.63***		
F	2.69			32.15			34.11		

Hierarchical regression analysis was run to predict the impact of sociodemographic variables, PCOSQ and body image dissatisfaction on depression (Table-IV). From model 1, increasing age and being married

were significantly associated with higher depression score. PCOSQ was added in next step and it was found to be a strong predictor of depression (β = -.52, p< .001). In the last model body image dissatisfaction was added which contributed significantly to depression (β = -.51, p< .001) and added 63% of the variance.

Discussion

The current study was carried out to examine the association in PCOS quality of life, body image dissatisfaction and depression. It was found that women with PCOS have a lower quality of life, negative self-image, and higher levels of depression. This could be attributed to the fact that PCOS is a disorder with metabolic, reproductive, and psychological features and implications on health across the lifespan. Women encounter challenges to their feminine identity, most importantly infertility. Studies have also indicated that issues like hirsutism, acne, menstrual abnormalities and obesity also affect the mood adversely and precipitate psychological distress, anxiety and depression (Damone et al., 2019). Our study found a significant relationship among low PCOSQ, poor body image and depressive symptoms which is consistent with previous literature. A direct relationship between PCOS and depression has been reported by earlier studies as well (Asdaq et al., 2020; Sadeeqa et al., 2018). The mood alterations may be attributed to PCOS related hyperandrogonism which alters monoamine balance and could probably result in depression. In addition to this, infertility is one prominent feature of PCOS and is related with marriage stability and social status specifically in a country like Pakistan where the pressure to have a baby starts right after marriage. The results also revealed the lowest scores on the infertility domain of PCOSQ indicating that this is the QoL area which PCOS affected the most and this finding was consistent with previous studies conducted in Pakistan on PCOS (Zehra et al., 2015). The familial and societal expectations affect the severity and depth of psychological symptoms experienced by women.

The symptoms of PCOS specifically related to physical appearance deteriorate a woman's self-image and self-esteem leading to worsening of health-related quality of life (Afifi et al., 2017). The studies conducted on the psychological impact have reported strong negative emotional responses experienced by women with PCOS especially as a result of having distorted self-perceptions (Thorpe et al., 2019). The current study showed a strong association of body image dissatisfaction with depression and PCOSQ. This finding is in line with previous literature according to which BID correlates with depression and anxiety. Meta-analysis conducted on women with PCOS have also found a 3.78 higher odds of moderate or severe depressive symptoms in these women as compared with controls. Also, women with PCOS having depressive symptoms had increased odds of hirsutism and obesity as indicated by our study as well that women who were depressed scored significantly higher on these two QoL dimensions as compared to non-depressed women (Annagür et al., 2014; Dokras et al., 2016).

Studies have also indicated body image dissatisfaction to be a mediator between depression and quality of life. Given that physical features like hirsutism, acne, and obesity are so common and prevalent in women with PCOS, these findings are not surprising (Bazarganipour et al., 2013). So, these findings if taken together suggest that women with PCOS are at an increased risk of body image dissatisfaction and depression and this association needs to be explored more. Screening and counselling the women is needed for women with PCOS because of their higher tendencies for body image dissatisfaction and its association with common psychological issues. Timely treatment including psychoeducation, meditation and cognitive behavioral therapy have been proven to be highly effective in PCOS (Alur-Gupta et al., 2019). However, this was a cross sectional research with a small sample size and hence, future researches are suggested to conduct studies on a large sample and to make use of longitudinal research design so that possible confounding of variables could be controlled.

Conclusion

The study found that women with PCOS have low QoL, body image dissatisfaction and symptoms of depression. The study recommends screening of PCOS women for psychological issues specifically depression. In addition to this, complications associated with PCOS should be given importance and proper management plans need to be designed for each patient according to their specific needs (Teede et al., 2018). PCOS management guidelines need to include positive assessment of one's body image so that women with lower self-esteem related to their body image could be identified and timely management be given.

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