

Exploring the difference and relationship between Women with PCOS and without PCOS for Body Image and Perceived Stress

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ABSTRACT

Many women of reproductive age are diagnosed with Polycystic Ovary Syndrome (PCOS), but it has not been very well studied. Therefore the causes and thus treatments of PCOS are very ambiguous even though it is a common occurrence. Previous research focused in a major way on the physiological aspects and sometimes psychological aspects such as depression and anxiety. The present study aimed at assessing levels of body image and perceived stress in 30 women with PCOS and 30 women without PCOS. The sample was recruited from gynaecology outpatient clinics in Nashik through purposive and snowball sampling. Participants completed Body Image Concern Inventory (BICI) and Perceived Stress Scale (PSS). Student's t-test and Pearson 'r' was calculated. Body image was found to be lower, $t(58) = 2.84, p < .01$, in women with PCOS ($M = 48.23, SD = 16.58$) than women without PCOS ($M = 38.2, SD = 9.34$), whereas perceived stress was higher, $t(58) = 3.58, p < .01$, in women with PCOS ($M = 24.47, SD = 6.07$) than women without PCOS ($M = 18.63, SD = 6.29$). Body image and perceived stress were positively correlated in both populations (women with PCOS $r(28) = .70, p < .01$, women without PCOS $r(28) = .45, p < .01$). These findings highlight the psychosocial nature of PCOS, suggesting multidisciplinary approaches during treatment. These approaches should incorporate interventions for improving aspects of psychological well-being along with alleviation of physical symptoms.

Keywords: Polycystic Ovary Syndrome, Body Image, Perceived Stress, Women with PCOS, Women without PCOS.

Introduction

Polycystic Ovary Syndrome (PCOS), also known as polycystic ovarian syndrome, is an endocrinal disorder that affects a woman's hormone levels. PCOS often leads to formation of fluid filled cysts (sacs) in ovaries, irregular menstrual cycles, hirsutism (excess hair growth), hyperandrogenism (high levels of testosterone, which is a male sex hormone), and in some cases acne, obesity, infertility. Due to different criteria being used to diagnose, there is discrepancy in the prevalence rates reported by different studies. But a 2019 review found that the prevalence rates of PCOS in India range from 3.7 to 22.5 per cent (Ganie, M. A., et. al., 2019)¹. The actual rates could be much higher as the studies were small scale and due to modern lifestyle a lot of women actually experience menstrual irregularities. The current research aims to measure the body image and perceived stress levels in women with PCOS and women without PCOS. This will be done using Body Image Concern Inventory (BICI) by Heather Leigh Littleton and Perceived Stress Scale (PSS) by Cohen et. al respectively. Women with PCOS reported greater body dissatisfaction scores compared to a BMI controlled sample of women without PCOS (Himelein & Thatcher, 2006)². Women with PCOS have less positive attitude towards their body image as compared to women without PCOS and they also have lower quality of life (Sharma & Srivastava, 2021)³. Women with infertility and menstrual irregularities experienced poorer body image satisfaction (Bazarganipour, F., et. al., 2013)⁴. Although in a recent study body image disturbances were observed in only 12 (11.43%) out of the 105 patients recruited (Joshi, R., Sawant, N., Mayadeo, N., 2021)⁵.

Adolescents with PCOS scored higher on perceived stress scale (PSS) than non-PCOS control group adolescents (Khafagy, G., El Sayed, I., Abbas, S., & Soliman, S., 2020)⁶. Women with PCOS, when compared to women without PCOS, reported higher prevalence of depression (27.3% v. 18.8%), anxiety symptoms (50% v. 39.2%) and greater score for perceived stress (1.01 ± 0.03 v. 0.88 ± 0.01) (Damone, A., et. al., 2018)⁷.
Concepts under study:

Body Image

Body image refers to the multifaceted psychological experience that encompasses one's self-perceptions and self-attitudes, including thoughts, beliefs, feelings, and behaviours related to one's physical appearance. But the mental representation that an individual creates of oneself may or may not be actually related to the individual's physical appearance. Body image is subject to all kinds of distortions from the attitudes of one's parents, other early experiences, internal elements like emotions or moods, and other factors.

It is a multidimensional construct that refers to a person's thought, feelings and behaviour regarding his/her body and appearance (Cash, 2012)⁸. Body image, in terms of self-concept for women, includes feeling feminine, attractive, enjoying one's body, as a symbol of social expression and a way of being in the world.

A connection between body dissatisfaction and mental health problems in females is supported by significant research (Haines & Neumark-Sztainer, 2006; Paxton, 2002). In a study body dissatisfaction was found to be higher in women across all ages than in men. The same study also pointed that men's and women's body image are dissimilar and seem to vary over the lifespan (Quittkat, Hartmann, Düsing, Buhlmann, & Vocks, 2019)⁹.

Perceived Stress

Physiologically, stress can be defined as a state in which homeostasis is jeopardized by the action of external (environmental) and internal (physiological and psychological states) stressors (Bozovic, Racic, Ivkovic, 2013). In particular to psychological state, stress is the experience of a perceived threat, resulting from a series of physiological responses and pathways (Seaward, 2012).

Perceived stress is defined as the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period. So it is more about an individual's feelings about the lack of control and unpredictability than the actual stressors in the environment or within oneself.

PCOS

Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine system disorders that affect women in their reproductive age (Azziz et al., 2004)¹⁰. Women with PCOS may experience depression, social fears, reduced quality-of-life, and chronic stress (Janssen et al., 2008). Such psychological comorbidity contributes to the development, progression, and maintenance of fat accumulation (Pasquali et al., 2006)¹¹ which further makes weight loss as a lifestyle change difficult to achieve. The way in which stress contributes to PCOS-related pathophysiology likely involves several pathways, including immune function (Black, 2003), and stress effects on the hypothalamic-pituitary-adrenal (HPA) axis (Rosmond, 2005; Diamanti-Kandarakis and Economou, 2006)¹².

Statement of the problem

To study the difference and relationship between Women with PCOS and Women without PCOS for Body Image and Perceived Stress.

Purpose of the Study

In the present age a lot of women experience menstrual irregularities are diagnosed with PCOS. PCOS often leads to acne, hirsutism and obesity which are factors that could negatively affect an individual's body image with regard to their physical appearance. This in turn could possibly lead to increased levels of perceived stress. A review of relevant literature showed a few studies measuring these variables with respect to PCOS. The desire to better understand the relationships between these variables, and what it could mean for the individuals experiencing the many adverse effects of PCOS was the inspiration to conduct the current research.

Objectives of the study

- 1) To compare the Body Image level in Women with PCOS and Women without PCOS.
- 2) To compare the Perceived Stress level in Women with PCOS and Women without PCOS.
- 3) To study the relationship of Body Image and Perceived Stress in Women with PCOS.
- 4) To study the relationship of Body Image and Perceived Stress in Women without PCOS.

Review of Literature

Damone et al. (2019)⁷ aimed to assess anxiety, depression and perceived stress in women with and without PCOS and whether stress mediates the relationship between PCOS, anxiety and depression. For this purpose they performed a cross-sectional analysis that compared women with (n = 478) or without (n = 8134) a self-reported diagnosis of PCOS. It was found that the prevalence of anxiety symptoms, depression and perceived stress is higher in women with PCOS. It was also found that stress may mediate depression and anxiety in PCOS.

Joshi, Sawant and Mayadeo (2021)⁵ recruited 105 patients with a PCOS diagnosis to study depression, anxiety, body image disturbances and self-esteem of women with PCOS. Assessment was done using Beck's Depression Inventory, Hamilton Depression Rating Scale, Hamilton Anxiety Rating Scale, Body Image Concern Inventory and Rosenberg's Self Esteem Scale. Results indicated that body image disturbances were seen in only 12 (11.43%) patients and that the prevalence of anxiety and depression is higher than body image concerns and low self-esteem in patients with PCOS.

Khafagy et al. (2020)⁶ conducted a study aimed at investigating levels of perceived stress among adolescents with PCOS and without PCOS. For this purpose 36 adolescents with PCOS and 36 matched controls were recruited. Perceived Stress Scale (PSS) was used for measuring severity of stress. A statistically significant difference in PSS scores among adolescents with and without PCOS was found.

Sharma and Srivastava (2021)³ assessed body image satisfaction and quality of life using Multidimensional Body Self Relation Questionnaire- Appearance Scale (MBSRQ-AS) and World Health Organisation Quality of Life instrument (WHOQOLBREF) respectively among women with PCOS and without PCOS. A total of hundred women were enrolled in the study out of which forty were women with PCOS while remaining were healthy controls. The findings indicate that women with PCOS had lower body image satisfaction and quality of life than women without PCOS.

Hypothesis

- Body Image is lower in Women with PCOS than Women without PCOS.
- Perceived Stress is higher in Women with PCOS than Women without PCOS.
- Body Image and Perceived Stress are positively correlated in Women with PCOS.
- Body Image and Perceived Stress are positively correlated in Women without PCOS.

Sample

Non-probability sampling, specifically, purposive sampling and snowball sampling were used for the present study.

Sample Category	Sample Size (N)	Age Range
Women with PCOS	30	18-38 years
Women without PCOS	30	18-38 years
Total	60	

Statistical Analysis

Mean, SD, Student's t-test and Pearson product moment correlation 'r' were calculated.

Results

Table 1 Means and SD for Body Image in Women with PCOS and Women without PCOS:

Category	Mean score (BICI)	SD	't'
Women with PCOS	48.23	16.58	2.84*
Women without PCOS	38.2	9.34	

*Significant at 0.01 levels

Table 2 Means and SD for Perceived Stress in Women with PCOS and Women without PCOS:

Category	Mean score (PSS)	SD	't'
Women with PCOS	24.47	6.07	3.58*
Women without PCOS	18.63	6.29	

*Significant at 0.01 levels

Table 3 Relation of Body Image and Perceived Stress in Women with PCOS:

Test	Mean score	r
BICI	48.23	0.70
PSS	24.47	

*Significant at 0.01 levels

Table 4 Relation of Body Image and Perceived Stress in Women without PCOS:

Test	Mean score	r
BICI	38.2	0.45
PSS	18.63	

*Significant at 0.01 levels

Discussion:

In the present study researcher had formulated four hypotheses which have been accepted by the obtained values. All the values calculated are significant at 0.01 levels. In the present findings it is evident that Women with PCOS have significantly higher mean score on the Body Image Concern Inventory (BICI) than Women without PCOS. Similar results were obtained in the study by Sharma & Srivastava (2021)³. Women with a diagnosis of PCOS experience greater levels of perceived stress. Previously Damone et. al. (2019)⁷ found the prevalence of perceived stress to be higher in women with PCOS. A strong correlation of concern regarding body image and perceived stress in women diagnosed with PCOS highlights the psychosocial nature of the disorder. Body Image and Perceived Stress are positively correlated in Women without PCOS too.

Body image is negatively affected by a lot of the media that we consume nowadays. Especially the age group chosen by the researcher and their concern about one's physical appearance is reflected in the results.

Conclusion

- 1) Body Image is lower in Women with PCOS than Women without PCOS.
- 2) Perceived Stress is higher in Women with PCOS than Women without PCOS.
- 3) Body Image and Perceived Stress are strongly positively correlated in Women with PCOS.
- 4) Body Image and Perceived Stress are positively correlated in Women without PCOS.

Limitations and Suggestions

The sample included in the present study was recruited from the region of Nashik city only. Demographic details such as socioeconomic status, education level, employment status or number of years since PCOS was diagnosed were not collected. Further studies covering wider sociodemographic and geographical details should be conducted to achieve accurate results.

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