Exploring Anxiety and Perceived Stress Among Women with and without Polycystic Ovary Syndrome

Ria Saji[1], Deepthi Vijayan[2]

[1]Student, Kristu Jayanti College
[2]Assistant Professor, Kristu Jayanti College

Abstract

This study explores the connection between Polycystic Ovary Syndrome (PCOS) and psychological well-being, with a specific focus on anxiety levels and perceived stress in females. Through a review of existing literature, it highlights the significant impact of PCOS on mental health, particularly the prevalence of heightened anxiety and stress levels among females with this condition. The study involved 100 Indian females aged 20-40, with 40 diagnosed with PCOS and 60 without any diagnosis. Anxiety and perceived stress levels were assessed using the Perceived Stress Scale (PSS) and the Self Rating Anxiety Scale. Results confirm that females with PCOS experience higher levels of anxiety compared to those without the condition. Interestingly, there was no difference in perceived stress levels between the two groups. These findings underscore the nature of perceived stress while emphasizing the importance of acknowledging and addressing its psychological impact in healthcare settings for individuals with PCOS. While this research offers insights, it acknowledges limitations such as a relatively small sample size and reliance on self-reported data. Further studies are needed using comprehensive screening approaches to enhance our understanding of the psychological aspects related to PCOS, which can ultimately be used to find targeted interventions.

Keywords: Polycystic Ovarian Syndrome (PCOS), Anxiety, Perceived Stress.

Introduction

The widespread hormonal condition, polycystic ovarian syndrome (PCOS), impacts a considerable portion of reproductive-aged females (Teede et al., 2018), with an approximate occurrence of 5–10%. Despite its prevalence, confusion often arises regarding the terminology, with "Polycystic Ovary Disease" (PCOD) and "Polycystic Ovary Syndrome" (PCOS) often used interchangeably. PCOD typically refers to the presence of multiple ovarian cysts, whereas PCOS encompasses a broader spectrum of diagnostic criteria, including hyperandrogenism and anovulation (Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group, 2004). Within the intricate landscape of PCOS, anxiety and perceived stress emerge as salient concerns, exerting profound impacts on both mental and physical well-being.

Anxiety, characterized by emotional, cognitive, and physiological manifestations, holds significant sway over individuals' psychological health. It is a multifaceted emotional response to perceived threats or stressors, often accompanied by feelings of unease, worry, and apprehension (American Psychiatric

Association, 2013). For females grappling with PCOS, anxiety assumes a multifaceted dimension, intertwining with concerns about fertility, body image dissatisfaction, and the challenges of hormonal management. This intricate interplay between physiological factors and psychological distress underscores the need for a comprehensive understanding of anxiety within the context of PCOS.

Perceived stress is a fundamental concept in psychology and health sciences, and represents an individual's subjective assessment of the extent to which external events and internal demands exceed their coping resources (Cohen et al., 1983). It is rooted in Lazarus and Folkman's Transactional Model of stress, represents individuals' subjective assessment of stressors vis-à-vis their coping resources. In the case of females with PCOS, perceived stress is compounded by a myriad of factors, including physiological imbalances, sociocultural pressures, and uncertainties surrounding reproductive health. Thus, the examination of perceived stress in the context of PCOS unveils a complex web of interactions shaping individuals' psychosocial experiences.

A wealth of literature delves into the nuanced facets of anxiety and perceived stress in females with PCOS, offering diverse insights and perspectives. Studies consistently highlight elevated levels of anxiety symptoms and perceived stress among females diagnosed with PCOS, attributing these phenomena to a confluence of factors such as hormonal imbalances, body image dissatisfaction, and the overarching impact of PCOS on various domains of life.

"DSM-5: Chapter on Anxiety Disorders" (Hyman, 2013) provides a comprehensive classification of anxiety disorders, elucidating the distinct symptomatology and diagnostic criteria for various subtypes. It dissects the intricate interplay of genetic predispositions, environmental influences, and chronic health conditions in shaping anxiety disorders, underscoring the need for tailored interventions and support mechanisms.

However, amidst the plethora of research, significant gaps persist, particularly concerning the influence of socio-cultural factors and the ramifications of the COVID-19 pandemic on anxiety and perceived stress in Indian females with PCOS. The evolving societal landscape, coupled with the unprecedented challenges posed by the pandemic, necessitates a nuanced exploration of these psychosocial dynamics to inform targeted interventions and support strategies.

Against this backdrop, this research endeavours to unravel the psychological dimensions of PCOS, with a specific focus on anxiety and perceived stress, within the post-COVID-19 era and the unique socio-cultural milieu of India. By elucidating these intricacies, we aspire to augment understanding, enhance support systems, and foster comprehensive care for females grappling with PCOS in India and beyond.

Method
Research Design
The present study adopts a quantitative research design to understand the difference in anxiety and perceived stress levels among females diagnosed with and without Polycystic Ovary Syndrome (PCOS).

Objectives
The primary objective of the study is to understand the difference in anxiety and perceived stress levels between females with and without PCOS. Specifically, the study aims to:
1. To understand the difference in anxiety levels between females with and without PCOS.
2. To understand the difference in perceived stress levels between females with PCOS and females without PCOS.

Hypotheses

The hypotheses proposed for the study are as follows:

$H_0$1: There is no significant difference between the anxiety levels of females with and without PCOS.

$H_0$2: There is no significant difference between the perceived stress levels of females with and without PCOS.

Population and Sampling

The target population comprises females aged 20-40 years residing in India. Using a purposive sampling technique, participants will be divided into two groups based on PCOS diagnosis: those with PCOS (n=40) and those without PCOS (n=60). Inclusion criteria include proficiency in English, PCOS diagnosis status, and Indian citizens. Participants with major psychological or physical concerns will be excluded from the study.

Tools

1. Perceived Stress Scale (PSS): Developed by Cohen et al. (1983), this scale assesses individuals' subjective perception of stress in response to life events over the past month. It consists of 10 items rated on a 5-point Likert scale, with higher scores indicating greater perceived stress levels.

2. Self-Rating Anxiety Scale (SAS): Developed by Zung, the SAS comprises 20 items designed to evaluate the severity of anxiety symptoms in individuals. Respondents rate each item based on their experiences over a specified timeframe, providing insights into emotional, cognitive, and physiological dimensions of anxiety.

Data Analysis

Data collected through structured questionnaires administered via online platforms will be entered into Microsoft Excel and analysed using IBM SPSS Statistics version 25. Descriptive statistics, including means and standard deviations, will summarize anxiety and perceived stress scores. Independent sample t-tests will be conducted to compare anxiety and perceived stress levels between females with and without PCOS.

Data Collection Procedure

Data collection will be carried out through Google Forms distributed on social media platforms. Participants will access the questionnaire via a provided link or QR code. Strict adherence to ethical guidelines, including informed consent, anonymity, and voluntary participation, will be ensured through verbal explanations of the study's purpose and values.

Table 1: *The difference in Anxiety levels, among the females diagnosed with PCOS and those without the diagnosis of PCOS.*

Variable	Category	n	M	SD	t	p
Anxiety	DP	40	50.50	10.56	5.19	.000
	NP	60	39.03	10.13	5.23	.000

p>0.05   (DP = Diagnosed population, NP = Normal Population)

H₀1: There is no significant difference between the anxiety levels of females with and without PCOS.

The Table 1 shows that, the anxiety level was found through the independent sample t-test among females with and without PCOS. The results demonstrate that Anxiety levels were significantly higher in females diagnosed with PCOS (M = 50.50, SD = 10.56) compared to the females without any diagnosis of PCOS (M = 39.03, SD = 10.13), t (98) = 5.19, p < 0.05. Therefore, the null hypothesis H₀1, stating that there is no significant difference between the anxiety levels of females with and without PCOS is rejected.

Table 2: *The difference in Perceived stress levels, among the females diagnosed with PCOS and those without the diagnosis of PCOS.*

Variables	Category	n	M	SD	t	p
Perceived	DP	40	27.43	5.95	1.49	.139
Stress	NP	60	25.58	6.18	1.48	.142

p>0.05   (DP = Diagnosed population, NP = Normal Population)

H₀2: There is no significant difference between the perceived stress levels of females with and without PCOS.

The Table 2 shows that, perceived stress level was found through the independent sample t-test among females with and without PCOS. The results shows that the perceived stress levels did not significantly differ between the females diagnosed with PCOS (M = 27.43, SD = 5.95) and the females without any diagnosis of PCOS (M = 25.58, SD = 6.18), t (98) = 1.49, p = 0.139 > 0.05. Therefore, the null hypothesis H₀2, stating that there is no significant difference between the perceived stress levels of females with and without PCOS is accepted.

Discussion

This research tries to understand the difference between Polycystic Ovary Syndrome (PCOS) and psychological well-being, focusing on anxiety levels and perceived stress. Using the Perceived Stress Scale and the Self-Rating Anxiety Scale, the study aimed to compare anxiety levels and perceived stress levels among females with and without PCOS. Conducted via Google Forms with ethical considerations, the findings suggest significantly higher anxiety levels in females with PCOS compared to those without, highlighting the need for comprehensive care addressing both physical and psychological aspects of PCOS.

The observed difference in anxiety levels may stem from factors like hormonal imbalances and fertility concerns associated with PCOS. Interestingly, perceived stress levels did not significantly differ between the two groups, indicating potential influences of unmeasured psychosocial or environmental factors.

The results affirmed the hypothesis that females with PCOS exhibit higher anxiety levels, emphasizing the importance of recognizing and addressing the psychological impact of this hormonal disorder.

While the findings regarding anxiety were consistent with the existing literature, the lack of a significant difference in perceived stress between females with and without PCOS was a noteworthy observation. This underscores the complexity of perceived stress and suggests that factors beyond the scope of this study may influence overall stress levels in both groups.

Limitations

Despite contributing valuable insights, this research has its limitations, including a relatively small sample size and the self-report nature of the data. Future research endeavours should consider longitudinal approaches, incorporating medical and psychological screenings to provide a more comprehensive understanding of anxiety and stress in females with PCOS.

In conclusion, this research contributes to the ongoing dialogue surrounding the psychological impact of PCOS and underscores the imperative for further investigations and targeted interventions to enhance the overall well-being of females with this condition.

Conclusion

The research underscores the critical need for healthcare providers to recognize and address the psychological aspects of Polycystic Ovary Syndrome (PCOS) during clinical encounters. Routine mental health assessments should be integrated into the care of females with PCOS to ensure a comprehensive approach that considers both physical symptoms and psychological well-being. Moreover, tailored mental health support, such as therapy sessions and support groups, is essential to manage the heightened prevalence of anxiety observed in this population, leading to more effective coping mechanisms and improved overall quality of life.

Implications

Furthermore, the study emphasizes the importance of a holistic healthcare approach, advocating for integrated treatment strategies that address both physical and mental health aspects of PCOS. By catalyzing further research efforts, including longitudinal investigations into the complex relationship between PCOS and mental health, the aim is to develop personalized treatment plans that enhance overall well-being and contribute to better mental health outcomes for individuals living with PCOS.

References

1. American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders. *Diagnostic and Statistical Manual of Mental Disorders*, *5*(5). https://doi.org/10.1176/appi.books.9780890425596
2. Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*, *24*(4), 385–396. https://doi.org/10.2307/2136404
3. Dokras, A., Clifton, S., Futterweit, W., & Wild, R. (2012). Increased prevalence of anxiety symptoms in women with polycystic ovary syndrome: systematic review and meta-analysis. *Fertility and Sterility*, *97*(1), 225-230.e2. https://doi.org/10.1016/j.fertnstert.2011.10.022
4. Teede, H. J., Misso, M. L., Costello, M. F., Dokras, A., Laven, J., Moran, L., Piltonen, T., Norman, Robert. J., Andersen, M., Azziz, R., Balen, A., Baye, E., Boyle, J., Brennan, L., Broekmans, F., Dabadghao, P., Devoto, L., Dewailly, D., Downes, L., & Fauser, B. (2018). Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. *Fertility and Sterility*, *110*(3), 364–379. https://doi.org/10.1016/j.fertnstert.2018.05.004
5. Teede, H. J., Misso, M. L., Deeks, A. A., Moran, L. J., Stuckey, B. G. A., Wong, J. L. A., Norman, R. J., & Costello, M. F. (2011). Assessment and management of polycystic ovary syndrome: summary of an evidence-based guideline. *The Medical Journal of Australia*, *195*(6), S65–S112. https://doi.org/10.5694/mja11.10915

6. Teede, H., Deeks, A., & Moran, L. (2010). Polycystic ovary syndrome: a complex condition with psychological, reproductive and metabolic manifestations that impacts on health across the lifespan. *BMC Medicine*, *8*(1). https://doi.org/10.1186/1741-7015-8-41

7. Teede, H., Tassone, E. C., Piltonen, T., Malhotra, J., Mol, B. W., Peña, A., Witchel, S. F., Joham, A., McAllister, V., Romualdi, D., Thondan, M., Costello, M., & Misso, M. L. (2019). Effect of the combined oral contraceptive pill and/or metformin in the management of polycystic ovary syndrome: A systematic review with meta-analyses. *Clinical Endocrinology*, *91*(4), 479–489. https://doi.org/10.1111/cen.14013

8. Zung, W. W. K. (1971). A Rating Instrument For Anxiety Disorders. *Psychosomatics*, *12*(6), 371–379. https://doi.org/10.1016/s0033-3182(71)71479-0