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Body Image Concern and Mood among Patients with PCOS

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Abstract: *The purpose of the study is to assess the role of body image concern and mood among patients with PCOS. The study also assesses whether there is a significant difference in body image concern and mood among people residing in home and away from home. A sample of 125 people (64 away from residence, 61 residing in home) aged between 18-25 participated in the study. Body Image Concern Inventory (BICI) by Littleton & Breitung (2005) and Mood Survey (MS) by Underwood & Froming, (1980) were used to measure the variables in the study. The data was statistically analysed using independent sample t- test and spearman correlation coefficient. According to the results, body image and level of mood are significantly negatively correlated, body image and reactivity to situation was significantly positively correlated. But there was no significant difference in body image concern, level of reactivity and level of mood in people residing in home and away from home.*

Keywords: *Body image concern, mood and PCOS*

I. INTRODUCTION

Polycystic ovary syndrome is one of the most common endocrine disorders in women of reproductive age. A multifactorial and polygenic illness, polycystic ovarian syndrome (PCOS) presents with a wide range of signs and symptoms due to disruptions in reproductive, endocrine, and metabolic processes (De Leo, Musacchio, Cappelli, Massaro, Morgante, & Petraglia, 2016). Some of the fundamental physio pathological characteristics seen in PCOS women are insulin resistance, Obesity and infertility (Prathap et al., 2018). Some other most distressing symptoms in adults with PCOS are hirsutism, acne, menstrual irregularity, and infertility (Prathap et al., 2018). By checking the total prevalence of polycystic ovarian syndrome (PCOS) it is a widely prominent endocrine disorder among women of reproductive age (Pundir et al., 2020). It is also commonly known that PCOS has a detrimental impact on a patient's emotional well-being (Pundir et al., 2020).

Polycystic ovary syndrome is also associated with depression and anxiety, decreased quality of life and sexual satisfaction, and increased emotional distress (Davitadze et al., 2023). Polycystic Ovary syndrome (PCOS) is one major risk factor that makes the life of females more frantic (Tabassum et al., 2021). Women diagnosed with Polycystic ovary Syndrome (PCOS) often experience a keen impact on their mood due to the complex interaction of hormonal, physical, and psychological factors (Department of Health & Human Services, 2002). Hormonal imbalances, particularly elevated levels of androgens and insulin resistance, may contribute to mood swings, irritability, and emotional fluctuations; this indeed a reason for the cause of anxiety and depression in PCOS women (Sadeeqa et al., 2018). The longitudinal study conducted on Risk of depression and other mental health disorders in women with polycystic ovary syndrome explain a significant risk mood disorder in patients with PCOS (Kerchner et al., 2009). Physical indicators that may negatively affect a person's motivation and self-esteem include weight gain, acne, and hirsutism (excessive hair growth) which is more common symptom of patients with PCOS and Concerns about fertility and infertility are common among women with PCOS, which can lead to emotional stress and have a detrimental impact on relationships, work, family life, and community involvement, as well as on other aspects of their lives (Zangeneh et al., 2012). Patients with PCOS will undoubtedly benefit from making a few lifestyle changes, like starting a new diet, eating foods high in nutrients and omega-3 fatty acids, like baked or broiled salmon, and using olive oil instead of butter or margarine to lessen the severity of their symptoms (*PCOS Diet*, 2023). Doctor-prescribed medications have also been shown to be effective in PCOS patients (*PCOS Diet*, 2023). It's also crucial to recognize and address the emotional aspects of PCOS, offering support and coping mechanisms alongside medical interventions to promote a holistic approach to well-being for women affected by this condition (Dewani et al., 2023). Seeking guidance from healthcare professionals, including gynecologists and mental health experts, has a vital role in managing symptoms associated with PCOS (*Polycystic Ovary Syndrome (PCOS)*, n.d.).

A. Polycystic ovary syndrome

Women who are of reproductive age are affected by PCOS, an endocrine condition. Depending on the diagnostic criteria, PCOS, often referred to as polycystic ovarian syndrome or poly-cystic ovary condition, is thought to afflict 2% to 10% of women (Li et al., 2013). This prevalence may vary across a variety of racial, ethnic, and cultural groups. Some studies find different gradients in the 2%–18% range, depending on the criteria used for inclusion (Bussell & Perkins, 2011; Gibson-Helm et al., 2014; Teede et al., 2010). It was first identified by Stein and Leventhal in 1935 as a cluster of symptoms including obesity, enlarged ovaries, amenorrhea, and hirsutism. Although the term Stein-Leventhal syndrome is still recognized, the phrase "polycystic ovary syndrome" was later coined (Waldman & Legro, 2019). A condition in which the ovaries contain many cystic follicles associated with chronic anovulation and overproduction of androgens," according to the American Society for Reproductive Medicine (ASRM), is PCOS. Anovulation, which is defined as a persistent or chronic lack of ovulation, refers to dysfunction in the process of the ovary properly releasing an egg (ova, plural ovum) (*Polycystic Ovary Syndrome (PCOS)*, n.d.). In broad medical terms, anovulation refers to any disruption in the ovulation process; in PCOS, it is mainly the disruption of the maturation of the egg in its follicle (the pocket on the ovary surface that the egg matures in) (Professional, n.d.). The term "cystic" in the name PCOS refers to the incomplete maturation of follicles, which appear as fluid-filled bumps ("cysts") on the ovary surface, reminiscent of a pomegranate interior (Professional, n.d.). The symptoms of PCOS may differ from person to person and may change from time to time. Possible symptoms include heavy, long, intermittent, unpredictable, or absent periods; infertility; acne or oily skin; excessive hair on the face or body; male-pattern baldness or hair thinning; and weight gain, especially around the belly (Professional, n.d.). People with PCOS are more likely to have other health conditions, including type 2 diabetes, hypertension (high blood pressure), high cholesterol, heart disease, and endometrial cancer (cancer of the inner lining of the uterus) (Professional, n.d.). The diagnosis of PCOS includes a heterogeneous group of women with regular ovulatory cycles and relatively normal weight, as well as women with fully developed clinical symptoms (Professional, n.d.). The diagnosis of PCOS is based on the Rotterdam 2003 criteria, which include the presence of two out of three of the following features: oligo/anovulation, clinical and/or biochemical hyperandrogenism, and polycystic ovaries by gynecological ultrasound (Waldman & Legro, 2019). PCOS appears to be associated with various health issues, including metabolic syndrome, cardiovascular disease, and ovulatory infertility (Waldman & Legro, 2019). Obesity, hirsutism, and acne are the most prevalent signs of PCOS. These diseases may have psychological repercussions for those who are affected, which may result in problems with dysmorphic appearance concerns, general life satisfaction, and global self-worth (Meri Davitadz et al., 2023; Waldman & Legro, 2019).

B. Body image

A psychosomatic element of the body's functions and appearance, dissatisfaction with one's physical appearance has a severe impact on PCOS females and can lead to a life that is stressful, gloomy, and of low quality (Kriti et al., 2022). A psychosomatic element of the body's functions and appearance, dissatisfaction with one's physical appearance has a severe impact on PCOS females and can lead to a life that is stressful, gloomy, and of low quality (Agarwal et al., 2023). Body image is a multidimensional construct encompassing thoughts, behaviors, and evaluations of one's body with positive and negative features (Agarwal et al., 2023). Research has demonstrated that, even after controlling for body mass index, women with PCOS experience higher levels of body dissatisfaction than healthy control women with regular cycles (Meri Davitadz et al., 2023). Women with PCOS appear to place a high value on physical appearance and bodily functions, both in their relationships and in their thinking. They appear to have a rather immature, irascible, hostile, and mistrustful attitude toward the outer world. (Scaruffi et al., 2018). Women with PCOS appear to place a high value on physical appearance and bodily functions, both in their relationships and in their thinking. They appear to have a rather immature, irascible, hostile, and mistrustful attitude toward the outer world (Scaruffi et al., 2018). PCOS is a frequent state in young women like college going students (Scaruffi et al., 2018).. Currently, PCOS is the most prevalent endocrine condition affecting women and a major contributor to infertility. One in five women in India alone has received a diagnosis of the illness, and the percentage is startlingly increasing (Bharali et al., 2022). Many women who have PCOS feel physically ill, unattractive, and unfit. Dealing with this on an emotional and mental level can be very challenging (Bharali et al., 2022). People who have unfavourable and negative thoughts and feelings about their physical attributes—such as their weight, shape, or appearance—experience body dissatisfaction. Poor body image affects physical and psychological health and may influence self-esteem, mood, competence, and social and occupational functioning (Bharali et al., 2022). The way in which one experiences her body is highly subjective, and is a product of her perceptions, thoughts, and feelings about body size, competence and function (Bazarganipour., 2013.).

Negative perception of body image among PCOS include dissatisfaction with appearance, perceived loss of femininity, feeling less sexually attractive, and self-consciousness about appearance (Bazarganipour.,2013). Effect of PCOS on women's emotional wellbeing is also a commonly known fact (Pundir et al., 2020). Hence it is crucial to focus attention into the emotional aspects of PCOS as well, like those associated with mood (Dewani et al., 2023).

C. Mood

Mood swings, which are caused by a hormone imbalance, can feel like fast varying emotions and show up as irritation, anger, sadness, and/or anxiety (Rizwan, 2023). The prevalence of depression among women with PCOS is very high and varies from 28% to 64% , including different kinds of feeling sick, depressed mood, melancholy, sadness, regardless of the cause of this disorder (Xing et al., 2022). The symptoms of depression include: Depression manifests as low mood, diminished interest and enjoyment, decreased energy resulting in increased fatigue, and decreased activity (Xing et al., 2022). Additional typical symptoms include inability to focus and pay attention, low self-esteem, sleep issues, appetite loss, thoughts, patterns, and even suicidal thoughts (Xing et al., 2022). Weiner and colleagues (2004) conducted a study on Androgens and Mood Dysfunction in Women: Comparison of Women with Polycystic Ovarian Syndrome to Healthy Control result healthy Control result showed after accounting for variations in somatic symptomatology and other mood states, depression remained markedly elevated in the PCOS group. Mood swings are common among women, particularly in the days leading up to their menstrual cycle (Weiner et.al 2004). While mood swings are a common occurrence for everyone, people with PCOS may experience frequent and/or strong mood fluctuations that have an adverse effect on relationships, job, and general quality of life (Weiner et.al 2004).

D. Women with PCOS

Females diagnosed with polycystic ovary syndrome (PCOS), also referred to as PCOS, have an imbalance in hormones that interrupts the ovulation process (Singh et al., 2023). Infertility and ovarian cyst formation, as the name suggests, are also potential outcomes of PCOS. Other symptoms include weight gain, insulin resistance, hirsutism (excessive facial and body hair), and hair loss (Singh et al., 2023). The purpose of the study is to determine body image concerns and mood swings among PCOS patients. Over the past 20 years, an increasing number of women have reported experiencing PCOS symptoms. In fact, some gynaecologists claim that PCOS is plaguing an increasing number on teenagers (Jabeen et al., 2022). On discussions regarding the factors contributing to the increase in PCOS cases, some factors include lifestyle, which includes high levels of stress exposure, inactivity, irregular eating habits, and inadequate sleep, is one of the most frequent causes (Jabeen et al., 2022). Obesity is the second most common cause and is directly related to a sedentary lifestyle (Jabeen et al., 2022). Insulin resistance, a condition in which the body produces more insulin because it is resistant to the effects of insulin, is closely linked to PCOS (Jabeen et al., 2022). This causes the blood to contain a high concentration of insulin, which sets off a chain reaction that causes your ovaries to produce more testosterone and other androgens. Male pattern baldness, acne, and hirsutism—unwanted hair growth—are just a few of the physical symptoms of PCOS that are caused by the excess androgens, also known as "male hormones," that are present in women with PCOS (Department of Health & Human Services, 2002). Weight loss is adversely affected by insulin resistance, which is why many women with PCOS struggle to reduce their weight and are overweight (Barber et al., 2019). Because the mind and body are inextricably linked and influence each other all the time, it can be difficult for women with PCOS to manage these symptoms (Barber et al., 2019). Lack of awareness on PCOS and its effect make the condition more and more worse (Barber et al., 2019). The study also intends to find out whether mood and body image concern has any effect on people living in home and living away from home (Barber et al., 2019).

Study conducted by Kanwal and colleagues (2021b) shows that there was a significant correlation between body image concern and mood in PCOS patients. Davitadze and colleagues (2023) performed research to determine how women with and without polycystic ovarian syndrome (PCOS) differed in their concerns about their bodies image. Meta-analysis of three studies using Multidimensional Body-self relation questionnaire appearance scale in comparison to people without PCOS, those with PCOS had more dissatisfaction with overweight preoccupation, poorer body area satisfaction, and body weight categorization. A meta-analysis of two studies utilizing the Body Esteem Scale for Adolescents and Adults revealed that those with PCOS had significantly lower weight subscale scores than those without PCOS. This implies that body image issues are more serious for persons who have PCOS, highlighting the significance of knowledge in PCOS clinical management.

Głowińska and colleagues (2016) conducted a study on determinants of emotional problems and mood disorders in women with polycystic ovary syndrome and it was found that anxiety and mood problems are high risks for women with PCOS. Women with PCOS exhibited a greater lifetime incidence of eating disorders, phobias, and depressive episodes.

Women with PCOS may have seven times as many suicide attempts as women without PCOS (Månsson et al., 2008). In summary, women with PCOS are very likely to experience a range of emotive and cognitive conditions with varying degrees of severity (Meenakshi & Fenn, 2021; Srivastva et al., 2018a).

II. METHODOLOGY

A. Objective

- 1) To find out whether there is any significant relationship between body image concern and level of mood among patients with PCOS.
- 2) To find out whether there is any significant relationship between body image concern and reactivity to situations among patients with PCOS.
- 3) To find out if there is any difference in body image concerns of PCOS patients who are residing at home and away from home.
- 4) To find out if there is any difference in the level of mood of PCOS patients who are residing at home and away from home.
- 5) To find out if there is any difference in reactivity to situations of PCOS patients who are residing at home and away from home.

B. Hypothesis

H01: There is no significant relationship between body image concern and level of mood among patients with PCOS.

H02: There is no significant relationship between body image concern and reactivity to situations among patients with PCOS.

H03: There is no significant difference in body image concerns of PCOS patients who are residing in home and away from home.

H04: There is no significant difference in the level of mood of PCOS patients who are residing in home and away from home.

H05: There is no significant difference in reactivity to the situation of PCOS patients who are residing in home and away from home.

C. Research Design

A quantitative approach and a cross sectional research design is used in this study.

D. Variables

The variables of the study were body image concern and mood. The demographic variable was people's residence at home and away from home.

E. Sample Distribution

In the present study, purposive sampling method was used to collect data from 126 adult participants from all over Kerala and Bangalore. The data was obtained by contacting them through hospitals with permission from concerned authorities. The responses were collected from the participants using the Google Form which was a one-time response. The consent of the participant was taken before filling the google form to participate in the current study.

F. Inclusion criteria

The individuals between the age of 18 to 25 will be included in the study Both working and student population.

G. Exclusion criteria

Individuals diagnosed with other mental disorders.

Individuals with other severe health problems.

Patients having any substance use disorder.

H. Research ethics followed

1) Informed consent of participant taken.

2) Anonymity of the participant maintained.

3) Researchers informed the doctors that the details shared by the hospital are kept confidential.

4) Researcher avoided unnecessary or embarrassing questions for each patient.

5) Confidentiality of participants maintained.

I. Tools for the study

- 1) Body Image Concern Inventory (BICI) by Littleton and Breitkopf (2005)
- 2) Mood Survey (MS) by Underwood and Froming (1980)

J. Description of the tool

1) Body Image Concern Inventory

The Body Image Concern Inventory (BICI) is a 19-item self-report measure designed to assess dysmorphic appearance concern. It was developed by Littleton & Breitkopf (2008) and has been validated in a number of studies. The BICI is a brief and easy-to-use measure that can be used to screen for body image concerns in adolescents and adults. Respondents rate each item on a 5-point Likert scale, from 1 ("never") to 5 ("always"). Reliability refers to the consistency of a measure over time and across different situations. The BICI scale has high internal consistency, with a Cronbach's alpha of 0.90 or higher. This means that the different items on the scale are all measuring the same thing. The BICI scale also has good test-retest reliability, meaning that people's scores on the scale are relatively consistent over time. Validity refers to the extent to which a measure measures what it is intended to measure. The BICI scale has good content validity, meaning that the items on the scale are relevant to the concept of DAC. The BICI scale also has good convergent validity, meaning that it correlates with other measures of DAC. For example, the BICI scale correlates strongly with the Body Dysmorphic Disorder Questionnaire (BDD-Q), another widely used measure of DAC. Additionally, the BICI scale has been shown to discriminate between individuals with and without DAC.

2) Mood Survey (MS)

The MS is an 18-item instrument that assesses happy and sad moods as traits, that is, as long-term personality characteristics. It was developed by (Underwood & Froming, 1980). Happy and sad moods are treated as endpoints on a continuum in an attempt to identify people who differ in average mood level taken over a long period of time. Conceptual analysis of moods suggested three dimensions on which initial construction of the MS was based: the average level of a person's mood, frequency of mood change, and the intensity with which people react to mood experiences. The MS actually possesses two primary subscales: level of mood (LM) and reactivity to situations (RS). Reliability Test-retest reliability over three weeks is .80 for the level subscale and .85 for reactivity, indicating good stability. For a seven-week period, test-retest reliability was .63 for level and .83 for reactivity. No data on internal consistency were available. Validity The MS has good concurrent validity, correlating significantly with a number of other measures such as the Beck Depression Inventory and the Mood Adjective Checklist. The MS also showed stronger correlations with personality measures than did other state measures of mood. Further, the subscales of the MS were found to correlate or not correlate in the predicted directions with other mood scales, establishing a form of construct validity

Statistical analysis

IBM SPSS Statistics version 25 was used to analyse the results. To understand the relationship between the variables body image concern and mood Spearman Correlation was used since the data was not normally distributed. To understand the difference in the variables between people residing in home and away from home, independent sample t-test was used since the equality was tested and equality of variance was assumed in Levene's test for equality of variance.

III. RESULT AND DISCUSSION

This chapter presents different statistical analysis tests such as t-test, and correlation were carried out to analyse the calculated data and the results obtained are discussed under the following sessions. The t-test was carried out to know the significant difference between two groups selected to study and correlation analysis done to find out the relationship between the variables under study.

Table 1

Descriptive statistics mean and standard deviation of body image concern level of mood and reactivity to stimulus

Results

Variable	N	M	SD
Body Image Concerns	125	49.872	17.18

Level of Mood	125	85.09	21.2
Reactivity to situations	125	145.24	63.49

The numbers of participants for the study was 125. For body image concern, the mean was 49.872, with a Standard deviation of 17.18. For level of mood mean value was 85.09, and with a standard deviation of 21.2. For reactivity to situation mean value was 145.24 with a standard deviation of 63.49

Correlation among Mood and Body image concern

- 1) Objective 1: To find out whether there is any significant relationship between body image concern and level of mood among patients with PCOS.

Table 2
Correlation for body image concern, level of reactivity, and mood.

Variable	BODY IMAGE CONCERN	REACTIVITY TO SITUATION	LEVEL OF MOOD
BODY IMAGE CONCERNS	-		
REACTIVITY TO SITUATION	.379**	-	
LEVEL OF MOOD	-.217*	-.161	-

Note-n:125,* P<0.05 level,

The result indicates that the BICI and level of mood have statistically significant low negative correlation ($r=-0.217, P<0.05$). This suggests that as one variable, body image, increases, the other variable, level of mood, decreases. Our hypothesis (H01) states that there is no significant relationship between body image concern and level of mood among patients with PCOS. We reject the null hypothesis since there is a statistically significant low negative correlation between body image concern and level of mood among patients with PCOS.

Davitadze and colleagues (2023) conducted research to determine differences in body image concerns between women with and without PCOS. Their meta-analysis revealed that women with PCOS exhibited more dissatisfaction, overweight preoccupation, and poorer body area satisfaction than those without PCOS, highlighting the significance of body image issues in PCOS clinical management. Barry, Kuczmierczyk, and Hardiman (2011) found that women with PCOS typically suffer from elevated levels of depression compared to women without PCOS. This systematic review and meta-analysis provided evidence that PCOS is associated with psychological distress, supporting the result of the study findings on mood disturbances in PCOS patients.

Bazarganipoure and colleagues (2013) conducted a study focusing on the psychological aspects of PCOS patients, including body image. They found that PCOS patients often have body dissatisfaction, which is linked to their quality of life, and depression scores. This research further corroborates the relationship between body image concern and mood disorders in PCOS patients.

2) Objective 2: To find out whether there is any relationship between body image concern and reactivity to situations among patients with PCOS.

The variable body image concern and reactivity to stimulus have a statistically significant positive correlation ($r=0.379$, $P < 0.01$ level). This suggests that as one variable body image concern increases the reactivity to stimulus increases. Our hypothesis (H02) stated that there is no relationship between body image concern and reactivity to stimulus among patients with PCOS. We reject this null hypothesis since there is a statistically significant weak positive relationship between body image concern and reactivity to situation PCOS patients.

A meta-analysis of three studies using the Multidimensional Body-Self Relations Questionnaire Appearance Scales (MBSRQ-AS) revealed clinically significant results showing women living with PCOS reported feeling worse on appearance evaluation and appearance orientation compared to those without PCOS (Alur-Gupta et al., 2019b). In another study conducted by Scaruffi and colleagues (2018) it seems that physical appearance and bodily function have a central place in the minds of women with PCOS, as well as in their relationships. However, it is a body they find it hard to feel and with which they mostly feel uncomfortable. Their approach to the outside world seems to be characterized by a certain degree of immaturity, anger, hostility and distrust (Scaruffi et al., 2018). In a research after accounting for variations in somatic symptomatology and other mood states, depression remained markedly elevated in the PCOS group (Weiner et al., 2004b).

3) Objective 3: To find out if there is any significant difference in body image concerns of PCOS patients who are residing at home and away from home.

Table 3

Represents mean, standard deviation, cohen's d and difference in body image concern based on residence

Variables	Residing away from home		Residing in home		T	P	COHEN'S D
	M	SD	M	SD			
BICI	51.23	17.85	48.44	16.48	.907	.366	17.20

The table 2 has two groups. 64 individuals resided away from home and 61 resided at home. This t-test assesses whether there is a significant difference in means between the two groups for the variable Body Image Concern. The Mean of people residing away from home and residing at home are 51.23 and 48.44 respectively. SD (standard deviation) for people residing away from home and residing at home are 17.85 and 16.48 respectively with t- value, 0.907 and the corresponding P value for the same is 0.36. Since the p-value is greater than 0.05 we accept the null hypothesis, which means there is no significant difference in mean of body image concern between people residing away from home and residing at home.

Studies have documented a higher prevalence of body image concerns, dissatisfaction, among individuals with PCOS (Bazarganipour et al., 2013). Irrespective of the environment the PCOS people are living in, these may be influenced by a combination of physical symptoms, psychological factors, and sociocultural influences (Bazarganipour et al., 2013). Compared to women who live in apartments or dorms, young women who live at home ovulate more frequently (Metcalf et al., 1983). Regular pattern of ovulatory menstrual cycles is established in most young women within 5 years of the menarche (Metcalf et al., 1983). This may be due to the food habits the people have. As well as in a qualitative study the results showed that adolescent girls with PCOS consume a lot of unhealthy foods such as fast food, soft drink, sweets, and junk food (Hajivandi et al., 2020b).

- 4) Objective 4: To find out if there is any difference in the level of mood of PCOS patients who are residing at home and away from home.

Table 4

Represents mean, standard deviation, cohen's d and difference in level of mood based on residence.

Variables	Residing away from home		Residing in home		T	p	COHEN'S D
	M	SD	M	SD			
Level of mood	85.81	20.86	84.34	21.70	.38	.70	21.28

The table has 2 groups, with 64 observations of individuals residing away from home and 61 residing in home. T-test assesses whether there is a significant difference in means between the two groups for the variable level of mood. The Mean of people residing away from home and residing in home are 85.81 and 84.34 respectively. SD (standard deviation) for people residing away from home and residing in home are 20.86 and 21.70 respectively with t- value, 0.38 corresponding P value for the same is 0.70. Since the p-value is greater than 0.05 we accept the null hypothesis which means there is no significant difference in mean of level mood in people residing away from home and residing in home.

Insights from related research highlight the multifaceted nature of mood disturbances in PCOS and suggest that various factors beyond the living environment may influence mood stability in this population (Sadeeqa et al., 2018). PCOS is characterized by hormonal imbalances, particularly elevated levels of androgens, which have been linked to mood disturbances such as depression and anxiety. In study it is shown that these hormonal fluctuations can affect mood regulation in individuals with PCOS, regardless of their living environment (Meenakshi & Fenn, 2021). High stressful environment can also impact the mood of the PCOS patients. Academic pressure, financial stress, interpersonal conflicts, and social isolation can affect mood stability in individuals with PCOS, irrespective of their living situation (Simon et al., 2023).

- 5) Objective 5: To find out if there is any difference in reactivity to situations of PCOS patients who are residing at home and away from home.

Table 5

Represents mean, standard deviation, cohen's d and difference in reactivity to stimulus based on residence.

Variables	Residing away from home		Residing in home		T	P	COHEN'S D
	M	SD	M	SD			
Reactivity to situation	144.34	61.23	146.18	66.27	-.161	.872	63.74

The table has 2 groups with 64 observations residing away from home and next 61 residing in home. T-test assesses whether there is a significant difference in means between the two groups for the variable reactivity to stimuli. The Mean of people residing away from home and residing in home are 144.34 and 146.18 respectively. SD (standard deviation) for people residing away from home and residing in home are 61.23 and 66.27 respectively with t- value, -.161 corresponding P value for the same is 0.872. Since the p-value is greater than 0.05 we accept the null hypothesis which means there is no significant difference in mean of reactivity to stimuli in people residing away from home and residing in home.

Mental health issues related to PCOS may not always show significant differences based on residential background (Sharm, Kaur, Kumar and Khetarpal, 2022). Presence of factors like professional and social support, awareness and education about PCOS, acceptance of self-identity etc. may equally help women with PCOS across situations (Williams, Sheffield and Knibb, 2015). For the present group of participants, the presence of such factors could have been a cause for the lack of a significant difference between those residing at home and those away from home.

The fact that they were contacted through health centres may imply that, the least they had was professional support. In depth analysis on other contributing variables in future may throw more light into the complex phenomena of mental health in PCOS patients.

IV. IMPLICATION OF THE STUDY

This study finding of a weak correlation between body image and mood in PCOS patients challenges the assumption that body image is the sole driver of emotional well-being in this population. It suggests other factors likely play a more significant role. This underscores the need for a broader approach to understanding mood and body image concerns in PCOS. The presence of PCOS can affect females in regard to their academic, personal and social life. The family members of the patients and the educational institutions should pay more attention towards them to prevent the adverse effect of PCOS.

One major issue is that women are not aware of the severity of this hormonal dysfunction, which prevents some of them from seeking treatment (Professional, n.d.). Students who have PCOS face a number of challenges, including headaches, extreme menstrual pain, anxiety, mood swings, and difficulty attending classes while menstruating. There should be more awareness on PCOS and how it affects the well-being of the person by conducting seminars, workshops and making counselling more available and accessible to the PCOS population. Future research should explore additional psychological and social variables that might be influencing these aspects. By taking a more holistic view, we can develop more tailored treatment plans for PCOS patients that address not just the physical condition but also the mental and emotional aspects. This could entail developing tools to assist patients in overcoming the psychological difficulties associated with PCOS or adding mental health specialists to treatment teams. In the research people residing away from home and residing in home experience almost the same level of body image concern and mood disturbance. This suggests that the environment in which people are living has the least effect in PCOS patients. The focus should be more on the food preferences, psychological concerns and physical symptoms.

V. SUGGESTIONS

The future study can include other socio-demographic details. Move beyond one-time analyses into longitudinal studies that monitor changes in mood and body image. This can provide insight into the progression of PCOS and the effects of treatment on mental health. Larger sample size can be helpful in generalizing the result of the study. Also various geographical areas may be covered for future study. Examining different symptoms of PCOS and how it affects the body image and mood in PCOS patients can also be a useful direction for future research. Integrating social and cultural factors into the research design to understand the societal expectations around weight, beauty standards, and fertility influence body image concerns in women with PCOS across diverse cultures can yield substantial findings. Examining whether mind-body therapies such as cognitive behavioural therapy (CBT) or mindfulness training can help PCOS patients feel better about their bodies and their moods can also be adopted. Finding out how social support networks—friends, family, and support groups—can help women with PCOS feel better about their bodies and their moods can be an interesting exploration. By incorporating these suggestions, future research can create a more comprehensive picture of the emotional experiences of women with PCOS. This knowledge can then be used to develop better support systems, treatment interventions, and overall well-being strategies for this population.

VI. CONCLUSION

The study was done with the aim of understanding the relationship between body image concern and mood among patients with PCOS. The participants were selected through purposive sampling for being a part of the study. It was found that there is a statistically weak negative relationship between body image concern and level of mood among females diagnosed with PCOS and a statistically significant positive correlation between body image concern and reactivity to situation. Which means in females diagnosed with PCOS as body image concern increases level of mood concerns also decreases. In females diagnosed with PCOS as body image concern increases, reactivity to situation also increase. T-test was conducted on PCOS population residing in home and away from home in relation with level of mood, PCOS population residing in home and away from home in relation with their reactivity to situation and PCOS population residing in home and away from home in relation with body image concern. There was no statistical significant relation between all these variables. Insights from related research highlight the multifaceted nature of mood disturbances and body image concern in the PCOS population and suggest that various factors beyond the living environment may influence mood stability and body image concern in this population.

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