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## Resilience, Emotion Regulation, And Experiences In Close Relationships Amongst Women With And Without PCOS: A Comparative Study

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Polycystic ovary syndrome is a common disorder that affects women of reproductive age. PCOS is associated with higher risk of mental health problems. Women with PCOS may face unique challenges in their resilience, emotion regulation, and experiences in close relationships. The present study aims to establish the comparison between women with PCOS and without PCOS on their emotion regulation, resilience, and experiences in close relationships. The sample consisted of 100 women (50 with PCOS, 50 without PCOS) who are between 21-30 years and in a premarital relationship. The Brief Resilient Coping Scale (BRCS) is used to assess the resilience levels, The Emotion Regulation Questionnaire (ERQ) is used to assess individual differences in emotion regulation strategies, and The Experiences in Close Relation Scale (ECR-S) is used to assess attachment style in close relationships. Independent T-test is used to analyze the data. The results indicated that there is a significant difference in the levels of resilience of women with and without PCOS. Another major finding of the research suggested that in both the facets of Emotion Resilience: Cognitive Reappraisal and Expressive Suppression, there was a significant difference between both the groups. Finally, our third variable, Experiences in Close Relationships measured the attachment styles: Anxiety Attachment Style and Avoidant Attachment Style, it was revealed that women with PCOS have higher levels of avoidance attachment style, whereas no significant difference in anxiety attachment style.

**Key Words:** PCOS, resilience, emotion regulation, attachment styles, cognitive reappraisal, expressive suppression

## INTRODUCTION

Estimates are that PCOS affects between 4.8 and 8% of the women (Azziz et al., 2004). Although the precise origin of polycystic ovarian syndrome (PCOS) is unknown, it is thought to be a result of both hereditary and environmental factors. Insulin resistance, which raises insulin levels in the body, is one of the main underlying causes, this in turn prompts the ovaries to create more androgen hormones like testosterone, which can disrupt ovulation and cause ovarian cyst growth (Dimanti-Kandarakis & Dunaif, 2012) Obesity is also closely related to PCOS and can worsen insulin resistance and hormonal abnormalities (Palomba., et al 2016). Inflammation, contact with endocrine-disrupting substances, and genetic differences that influence hormone production and metabolism are additional potential causes (Escobar-Morreale, 2016). A person's capacity to adapt and cope well in the face of trauma, adversity, or major life stresses is referred to as resilience in psychology (Masten and Obradovic, 2008). Through a variety of coping mechanisms and interventions, resilience can be gradually built up and improved over time rather than being a fixed attribute (Luthar et al., 2000). Research on the connection between resilience and Polycystic Ovary Syndrome (PCOS) is scarce. However, some research has indicated that people with PCOS could have difficulties that call for resiliency to handle. For instance, a study of women with PCOS indicated that they had higher levels of anxiety and sadness as well as a much worse quality of life than those without PCOS (Dokras et al., 2011). Resilience and adaptive coping mechanisms may be necessary to deal with PCOS symptoms including irregular menstrual periods and infertility. Emotion regulation is process by which individuals influence what emotions they have, when they have them, and how they experience and express them (Gross, 2014-15). A well-regulated person, will have a better balance and judgment of their feelings and actions. Being well-regulated allows and individual to carefully judge the affective outcomes and which ones to avoid. (Wegner, Erber, & Zanakos, 1993). A research conducted by suggested that insulin-resistant women with PCOS demonstrate differences during emotional processing in the prefrontal cortex in comparison to those without PCOS which suggests potential underlying biological difference impacting emotion regulation between women with and without PCOS. (Marsh et al 2010). Close relationships are one of the important domains in social psychology. One of the key concept that describes close relationships is interdependence. (Harold Kelly & John Thibaut, 1970). Psychology's attachment theory describes the characteristics of human emotional attachment. Our bond to our parents as youngsters is where it all starts. Later in life, the type of attachment we have with romantic partners will depend on how effectively this attachment is nurtured and cared for. (Collins & Read, 1990).

The present aims to establish the comparison between women with PCOS and without PCOS on their emotion regulation, resilience, and experiences in close relationships. The study was driven by the growing concern of PCOS in India as a significant health issue. Understanding how women with PCOS cope with these symptoms and manage their emotions can provide valuable insights into the development of effective interventions and support services for this population.

The current study is therefore extremely important as it can contribute to a better understanding of the psychological impact of the condition and inform the development of targeted interventions to support affected women.

The study aims to compare the emotion regulation levels, resilience levels, and experiences of close relationships of women with and without PCOS. Comparative research on resilience, emotion regulation and experiences in close relationships in women with and without PCOS in Indian context is insufficient. By adding the body of literature on mental well-being of women with PCOS in the Indian setting, this study can close the gap by offering empirical data on resilience, emotional regulation, and experiences in close relationships in these two groups. By studying the differences between resilience, emotion regulation, and experiences in close relationships of women with and without PCOS, researchers can gain a better understanding of the impact that PCOS has on women's lives. By understanding the specific challenges faced by women with PCOS in resilience, emotion regulation, and experiences in close relationships can help healthcare providers provide more comprehensive care to their patients.

## **Method**

### **AIM**

The present study would establish the comparison between women with PCOS and without PCOS on their emotion regulation, resilience, and experiences in close relationships.

### **OBJECTIVE**

1. To compare the emotion regulation levels of women with and without PCOS.
2. To compare the resilience levels of women with and without PCOS.
3. To compare the experiences of close relationships of women with and without PCOS.

### **HYPOTHESIS**

**H1** There will be a significant difference in emotion regulation of women with and without PCOS.

**H2** There will be significant difference in resilience levels of women with and without PCOS.

**H3** There will be significant difference in experiences of close relationships of women with and without PCOS.

## ***RESEARCH DESIGN***

A comparative research design is used to find the relationships between independent and dependent variables. Here the aim is to find the effect of PCOS on emotion regulation, resilience, and experiences in close relationships. Also, to compare the groups of women with and without PCOS.

## ***VARIABLES***

Independent Variable: PCOS

Dependent Variables: Emotion regulation, Resilience, and Experiences in close relationships.

Inclusive criteria: Women age range of 21-30 years and who are pre-marital relationships with or without diagnosis of PCOS

Exclusion criteria: Men and married women below 21 years and above 30 years

## ***SAMPLING DESIGN***

The sample consists of 100 women (age- 21-30 years) 50 with PCOS and 50 without PCOS. Snowball sampling was used for data collection.

## ***TOOL DESCRIPTION***

### **BRIEF RESILIENCE COPING SCALE**

The Brief Resilient Coping Scale (BRCS) is a self-report questionnaire designed to assess an individual's ability to cope with stress and adversity. It was developed by Sinclair and Wallston in 2004. The tool consists of four items, each rated on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (strongly agree). The BRCS has been found to have good reliability and validity in various studies. For example, in study of college students, the BRCS had a Cronbach's alpha of .76, indicating good internal consistency. In another study, the BRCS was positively correlated with measures of psychological well-being and negatively correlated with measures of anxiety and depression, providing evidence of its construct validity. Overall, the BRCS is a brief and reliable measure of resilience that can be easily administered in various settings.

## EMOTION REGULATION QUESTIONNAIRE

The Emotion Regulation Questionnaire (ERQ) is a self-report measure developed by Gross and John in 2003 to assess individual differences in emotion regulation strategies. The questionnaire consists of 10 items, with each item rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The ERQ Measures two main emotion regulation strategies: cognitive reappraisal and expressive suppression. Cognitive reappraisal refers to changing one's thoughts about a situation in order to change the emotional response, whereas expressive suppression refers to the deliberate attempt to inhibit or control the outward expression of emotions. The ERQ has been found to have good reliability and validity. For example, in a study of college students, the ERQ had a Cronbach's alpha of .79 for cognitive reappraisal and .73 for expressive, indicating good internal consistency. The ERQ has also been shown to have good test-retest reliability and to discriminate between individuals with different levels of emotion regulation difficulties. In terms of validity, the ERQ has been found to be related to various aspects of psychological well-being, including greater life satisfaction and lower levels of anxiety and depression. The ERQ has also been shown to predict outcomes such as academic performance and job satisfaction. Overall, the ERQ is a reliable and valid measure of individual differences in emotion regulation strategies, and can be useful in both research and clinical settings to assess an individual's emotion regulation abilities and inform intervention.

## EXPERIENCES IN CLOSE RELATIONSHIP SCALE- SHORT FORM

The Experiences in Close Relationship Scale- Short Form (ECR-S) is a self-report questionnaire designed to assess an individual's attachment style in close relationships. It was developed by Wei, Russell, Mallinckrodt, and Vogel in 2007. The ECR-S consists of 12 items, each item rated on a 7 point Likert Scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale measures two dimensions of attachment style: attachment anxiety and attachment avoidance. Attachment anxiety refers to the extent to which an individual worry about being rejected, abandoned, or unloved by others, while attachment avoidance refers to the extent to which an individual avoids emotional closeness or dependence on others. The ECR-S has been found to have good reliability and validity in various studies. For example, in a study of college students, the ECR-S had a Cronbach's alpha of .85 for attachment anxiety and .82 for attachment avoidance, indicating good internal consistency. The ECR-S has also been shown to have good test-retest reliability and to discriminate between individuals with different attachment styles. In terms of validity, the ECR-S has been found to be related to various aspects of psychological well-being, including self-esteem, depression, and anxiety. The ECR-S has also been shown to predict outcomes such as relationship satisfaction and interpersonal functioning. Overall, the ECR-S is a reliable and valid measure of attachment style in close relationships.

## PROCEDURE

For the purpose of data collection, women (21-30) who were in a pre-marital relationship were approached. Firstly, rapport was established with them and purpose of the study was explained. Consent was taken before the participants were asked to be part of the research. They were asked to fill out demographic details like name, age, city and PCOS diagnosis. They were assured that their responses would be kept confidential and will be used for research purposes only. The tools were administered one by one all instructions were mentioned. They were instructed that there were no right or wrong answers. At the end they were thanked for giving their valuable time.

## STATISTICAL ANALYSIS

After collecting data, Microsoft Excel was used to tally responses. The tallies of all responses were then exported into the Statistical Package for the Social Sciences (SPSS) 29.0 for Windows. Resilience, Emotion Regulation, and Experiences of Close Relationships of women with and without PCOS were examined primarily with the help of SPSS. T-test was used to analyze and compare the two groups.

### Analysis of Results

**Table 1**

*Results of Descriptive Statistics and Independent Sample – test on the Resilience, Emotion Regulation, and Experiences in Close Relationships in women with and without diagnosis of PCOS*

	Diagnosis	M	SD	t	df	Sig.	Mean	Std.
						(two-	Diff.	Error
						sided	Diff	
						p)		
Resilience	Yes	13.34	2.677	-2.554	98	.012	-1.240	.485
	No	14.58	2.148					
Emotion	Yes	24.62	7.151	-5.171	98	<0.01	-6.140	1.188

regulation :

Cognitive

Reappraisal

	No	30.76	4.401					
Expressive	Yes	20.36	3.837	4.533	98	<0.01	3.820	.843
Suppression								
	No	16.54	4.559					
Experience in	Yes	23.14	5.031	-1.822	98	.072	-1.680	.922
close relationship:								
Anxiety								
Attachment								
	No	24.82	4.149					
Avoidance	Yes	22.98	4.264	3.863	98	<0.01	3.940	1.020
Attachment								
	No	19.04	5.817					

The above table shows the mean, standard deviation, and standard error of mean of resilience amongst women with and without PCOS. The mean score of resilience is slightly lower amongst women with PCOS (M=13.34, SD= 2.677) compared to those without PCOS (M=14.58, SD=2.148). It also shows the T value of Resilience of the both the groups. Here we can see (.012 < 0.05), that means there is a significant difference between resilience levels of women with PCOS and without PCOS.

Secondly, the table shows the mean, standard deviation, and standard error of mean of 2 facets of Emotion Regulation: Cognitive Reappraisal and Expressive Suppression amongst women with and without diagnosis of PCOS. The mean score of Cognitive Reappraisal in women with PCOS (M=24.62, SD=7.151) is lower amongst women without PCOS (M=30.76, SD= 4.401). Whereas, Expressive Suppression there is a minute difference in both the groups. The mean score of women with PCOS (M=20.36, SD=3.837) and Women without PCOS (M=16.54, SD=4.559). It also presents the T values of 2 facets of Emotion Regulation: Cognitive Reappraisal and Expressive Suppression. Here we can see that for both Cognitive Reappraisal (<0.01) and Expressive Suppression (.840 > 0.05 level), this signifies that there is a significant relationship between both the groups.

Lastly, the last segment of the table shows the mean, standard deviation, and standard error of mean of 2 facets of Experiences of Close Relationships: Anxiety Attachment Style and Avoidance Attachment Style amongst women with and without diagnosis of PCOS. The mean score of Anxiety Attachment Style in women with PCOS (M=23.14, SD=5.031) is slightly lower amongst women without PCOS (M=24.82, SD= 4.149). Whereas, in Avoidance Attachment there is a difference in both the groups. The mean score of women with PCOS (M=22.98, SD=4.264) and women without PCOS (M=19.04, SD=5.817). The avoidance attachment is a little higher in women with PCOS. The T values of 2 facets of Experiences in Close Relationships: Anxiety Attachment and Avoidance Attachment. Here we can see that for Anxiety Attachment ( $0.72 > 0.05$ ) which signifies that there is no significant difference in Anxiety Attachment facet. Whereas, in Avoidance Attachment we can see that ( $0.001 < 0.05$ ) which means that there is a significant difference in Avoidance Attachment style in both the groups.

## DISCUSSION

Among women of reproductive age, PCOS (Polycystic Ovary Syndrome) is a prevalent hormonal condition. High quantities of androgen hormones (male hormones) produced by the ovaries as a result of this illness can cause a variety of symptoms and perhaps serious health issues. Although the precise etiology of PCOS is unknown, it is believed to be a result of a mix of genetic, hormonal, and environmental factors. Women who have PCOS may have larger ovaries and numerous tiny cysts, as well as a variety of other symptoms. In terms of mental health issues, PCOS (Polycystic Ovary Syndrome) is linked to a higher risk of depression, anxiety, and eating disorders. The emotional and psychological impacts of PCOS, as well as social pressures and stigma related to body image and weight, may all play a role in these diseases.

An individual's capacity to overcome obstacles, adjust to adversity, and recover from stress is referred to as resilience. Resilience can be boosted by a variety of techniques and interventions. It is a dynamic process that encompasses a person's beliefs, behaviours, and emotions.

The methods by which people control their emotions, including how they perceive, experience, and express them, are known as emotion regulation. People with effective emotion management skills can manage stress, control their moods, and keep up positive connections.

The interactions that people have with others in their interpersonal connections, especially those that are close or intimate, are referred to as experiences in close relationships. While unpleasant experiences can result in feelings of isolation, loneliness, and conflict, positive experiences in close relationships can contribute to feelings of social support, love, and attachment.



Awareness a person's capacity to manage stress, navigate interpersonal interactions, and uphold mental health and wellbeing requires an awareness of all three dimensions. In terms of resilience, mood control, and intimate relationship experiences, women with PCOS may suffer particular difficulties.

Our study has focused on establishing the comparison between women with PCOS and without PCOS on their emotion regulation, resilience, and experiences in close relationships. For this, a sample of 100 women (50 diagnosed with PCOS and 50 not diagnosed with PCOS) were selected. The age group of the women is 21-30 who are currently in a pre-marital relationship. This sample was selected through snowball sampling. Three tests were administered on all women:

The brief resilient coping scale, a self-report questionnaire designed to assess an individual's ability to cope with stress and adversity. It was developed by Sinclair and Wallston in 2004. The BRCS consists of four items, each rated on a 5-point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The Emotion Regulation Questionnaire (ERQ) is a self-report measure developed by Gross and John in 2003 to assess individual differences in emotion regulation strategies. The ERQ measures two main strategies: cognitive reappraisal and expressive suppression.

The Experiences in Close Relationship Scale is a self-report questionnaire designed to assess an individual's attachment style in close relationships. It was developed by Wei, Russell, Mallinckrodt, and Vogel in 2007. The ECR-S consists of 12 items, with each item rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale measures two dimensions of attachment style: attachment anxiety and attachment avoidance.

Statistics used for the sample was- Independent Sample T-test

Hypothesis 1 stated that, there will be a significant difference in emotion regulation of women with and without PCOS. Independent sample t-test was employed. According to the result it was revealed that there is a significant difference between the resilience levels of both the groups. The mean score also showed that the resilience levels are slightly lower amongst women with PCOS ( $M=13.34$ ,  $SD= 2.677$ ) compared to those without PCOS ( $M=14.58$ ,  $SD=2.148$ ).

Thus, we accept the hypothesis.

The above hypothesis is validated by a research done in past, such as:

Zhang & Liu (2021) conducted a cross-sectional study on correlation between psychological resilience and burnout among female employees in a shopping mall in China. One of the result of the survey showed that total psychological resilience scores of female employees in shopping malls with PCOS were significantly lower than those of healthy women.

Hypothesis 2 stated that there will be significant difference in emotion regulation levels of women with and without PCOS. There are 2 facets of emotion regulation: Cognitive reappraisal and Expressive Suppression. The results revealed that there is a significant difference in both the groups. the T values of 2 facets of Emotion Regulation: Cognitive Reappraisal and Expressive Suppression. Here it was found that for both Cognitive Reappraisal ( $<0.01$ ) and Expressive Suppression ( $<0.01$ ), this proves that there is a significant difference between both groups. There is a difference in mean scores as well, in Cognitive Reappraisal dimension women with PCOS ( $M=24.62$ ,  $SD=7.151$ ) whereas women PCOS have slightly greater mean ( $M=30.76$ ,  $SD=4.401$ ). in the case of Expressive Suppression, women with PCOS had slightly greater score ( $M=20.36$ ,  $SD=3.837$ ) than women without PCOS ( $M=16.54$ ,  $SD=4.559$ ).

Hence, we will accept the hypothesis.

The above hypothesis can be validated by a research done in past, such as:

Javed, Ahmad, and Iqbal (2022) aimed to determine the role of resilience and emotion regulation and marital satisfaction in females diagnosed with PCOS. The T-test analysis of the showed that cognitive reappraisal and expressive suppression were high in participants without acne symptoms. Another finding was that expressive suppression was high in females who had irregularity in their menstruation cycle (sign of PCOS).

Another study, Meenakshi and Jenn (2021) concluded that women with PCOS have significantly lower level of emotion regulation than those without PCOS.

Hypothesis 3 stated that there will be significant difference in experiences of close relationships of women with and without PCOS. The results revealed that there was no significant difference between anxiety attachment style but there was a significant difference in avoidance attachment style. The mean score revealed that Avoidance Attachment score of women with PCOS ( $M=22.98$ ,  $SD=4.264$ ) and women without PCOS ( $M=19.04$ ,  $SD=5.817$ ). The avoidance attachment is a little higher in women with PCOS.

Hence we can conclude that there is a significant difference in experiences of close relationships of women with and without PCOS. Hence, we accept the hypothesis.

The above hypothesis can be validated by research done in past, such as:

Amir et al (1999) researched on women experiencing infertility (a condition associated with PCOS), however, shows links between insecure attachment and negative psychological symptoms.

## Conclusion

Polycystic syndrome is a hormonal disorder that is affecting women's reproductive and metabolic health globally. Women with PCOS often face challenges in their various aspects of their lives, including their resilience, emotion regulation, and experiences in close relationships.

The current study revealed that, there is a significant difference in the levels of resilience of women with and without PCOS. Another major finding of the research that there is no difference in emotion regulation aspect. Finally, it was also found that women with PCOS have higher levels of avoidance attachment style, whereas no significant difference in anxiety attachment style, which concludes that women with PCOS have more insecurely attachment styles.

## Limitations

The number of studies examining resilience, emotion regulation and experiences in close relationships on PCOS population is limited in India and abroad. The study also has a relatively smaller sample size. It is worthwhile to carry out similar studies using different samples and variables.

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