



## The Role of Self-Compassion, Body Image Concern and Mental Health among Females with PCOS

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### Abstract

The purpose of this study is to investigate how females (those suffering from PCOS) relate to self-compassion, body image concerns, and mental health, specifically psychological well-being and psychological distress. It is a quantitative study that used a correlational study research design to examine self-compassion, body image concerns, and mental health in women with PCOS. The sample was chosen using the non-probability judgmental sampling technique. Data was collected from 100 women with PCOS ranging in age from 14 to 48 years ( $M = 27.65$ ,  $SD = 5.915$ ). Data for PCOS women were gathered from Bahawalpur's Advance Aesthetic and Skin Centre, Infertility Treatment Centre, and Gyne hospitals. The measurement was done from three scales Scale of Self-Compassion (Neff et al., 2011); Scale of Body Image Concerns (Wei, 1897); Mental Health Inventory-18 (Veit & Ware, 1983). The results showed that of self-Compassion and Body image concern were significantly higher among females with menstrual problem than without menstrual problem. While psychologically wellbeing was non-significant higher in females with menstrual problem as compared to without menstrual problem. Moreover, psychologically distress was non-significant higher among females with menstrual problem than females without menstrual problem. The study conclude that was, self-compassion is significantly positively correlated with body image concern, psychological well-being, and psychological distress. Both psychological well-being and psychological distress were negatively associated with body image concerns. Furthermore, there is a significant negative relationship between psychological wellbeing and psychological distress.

**Keywords:** Self-Compassion, Body Image Concerns, Mental Health, PCOS

### Introduction

Self-compassion is a trait that can be changed and is associated with psychological well-being and an innate desire to practice healthy habits (Morrison et al., 2021). A person's mental representation of their body, including their attitude toward their physical self, looks, and overall health, wholeness, normal functioning, and sexuality, is known as their body image. According to Cohen et al. (1998), body image is a part of a broader idea of self that encompasses for women feeling feminine and attractive as well as appreciating their bodies as a means of social expression and a way of being in the world. Emotional, behavioral, and cognitive well-being are all considered aspects of mental health. It everything comes down to

human thought, emotion, and behavior. The absence of a mental illness is frequently referred to as "mental health" (Felman, 2020). A worse quality of life and higher rates of anxiety and depressed symptoms are just two of the detrimental effects that PCOS and its symptoms can have on mental health (Jones et al., 2008). PCOS symptoms such as obesity, hirsutism, infertility, and acne can all lead to emotional discomfort, which in turn can lower mental health (Pastoor et al., 2018). According to Fidermen et al. (2016), women with PCOS have a lower mental quality of life than women without the condition. The psychological pain that PCOS-afflicted women endure affects their mental health. People with PCOS frequently experience depression (Trent et al., 2002). PCOS is associated with hyper and organism and is linked to insulin resistance and other metabolic conditions profound peripheral insulin resistance, independent of obesity, in polycystic ovary syndrome. These clinical manifestations may affect negatively on the mental health. According to the findings, PCOS is linked to depressive symptoms (Annagür et al., 2014).

### **Rationale of the Study**

The study involved women who had PCOS issues. The goal was to investigate how PCOS women perceive their own emotional and physical well-being. How did you treat yourself and your body with kindness, and how did it affect PCOS women? What psychological, physical, and hormonal problems have been experienced as a result of PCOS? Females was facing with hirsutism, hyper pigmentation, periods irregular, infertility

### **Objective of the Study**

To examine the relationship between self-compassion and body image concern among females experiencing menstrual problems and those without such problems.

1. To compare the level of psychological well-being between females with menstrual problems and those without menstrual problems.
2. To compare the level of psychological distress among females with and without menstrual problems.
3. To investigate the mediating role of self-compassion in the relationship between body image concern and mental health among females.
4. To assess the differences in self-compassion, body image concern, psychological well-being, and psychological distress between females with menstrual problems and those without menstrual problems.

### **Hypothesis of the study**

1. There would be a significant positive relationship between self-Compassion and Body image concern among females with menstrual problem than without menstrual problem.
2. There would be psychologically wellbeing was non-significantly higher in females with menstrual problem as compared to without menstrual problem.
3. There would be psychologically distress was non-significantly higher among females with menstrual problem than females without menstrual problem.
4. There would be Self-compassion served as a mediator among females in the relationship between body image concern and mental health.
5. There would be self-compassion, body image concern, psychologically wellbeing and psychologically distress were higher with menstrual problem as compared to respondents of without menstrual problem.

### **Literature review**

Van Niekerk et al. (2021) investigated how women with polycystic ovarian syndrome affected their physical and psychological correlates of self-compassion and body compassion. The degree and possible correlates of self-and body-compassion in women with polycystic ovarian

syndrome (PCOS) ( $n = 227$ ) were examined in an international cross-sectional study. An online survey that examined psychological well-being, body image, self-and body compassion, and quality of life was filled out by the participants. Low levels of self and body compassion were found, and depression and body image issues were found to be negative correlations of self and body compassion. It was discovered that bodily compassion was positively correlated with physical wellness. The results emphasize the significance of psychological well-being, body image, and self-compassion in women with PCOS. The study "Menopause and body image: the protective effect of self-compassion and the mediating role of mental distress" was conducted by Young and Kotera in 2021. Although self-compassion has been found to be protective against body image issues, the association has not been examined in women going through menopause, when body image views may be more susceptible. Women in the UK ( $N = 248$ ) self-reported mental anguish, self-compassion, body admiration, and body preoccupation. Although self-compassion has been found to be protective against body image issues, menopausal women, whose perceptions of their bodies may be especially vulnerable, have not had this association examined. Women in the UK ( $N = 248$ ) self-reported mental anguish, self-compassion, body preoccupation, and body admiration. Karsten et al. (2021) investigate how PCOS affects sexual performance and mental health in obese women with a history of infertility. A 5-year follow-up of a randomized controlled trial (RCT) among obese women with a history of infertility is examined cross-sectionally in this study. In this follow-up research of an RCT, women with obesity and infertility were stratified by ovulatory state and trial center and randomized to either rapid infertility therapy (control) or a lifestyle intervention followed by infertility treatment. With a mean follow-up of 5.5 years (range 3.7-7.0 years), 173 (30.0 percent) of the 577 women who were randomized in the initial trial participated in this follow-up study; 73 of these women had PCOS, whereas 100 did not. Participants filled out questionnaires about their anxiety and depression symptoms (Hospital Anxiety and Depression Scale (HADS)), their quality of life (36-item Short Form Health Survey (SF-36)), and their sexual function (McCoy Female Sexuality Questionnaire (MFSQ)).

## **Methodology**

### **Research design**

It is a quantitative study that used a correlational research design to examine self-compassion, body image concerns, and mental health in women with PCOS.

### **Sampling Technique**

The sample was chosen using the non-probability judgmental sampling technique. The current study included more than 100 females with PCOS, including housewives, Jobians, and students. The information was gathered from the hospitals of Bahawalpur's aesthetic and skin Centre and infertility treatment center.

### **Participants Characteristics**

Data was collected from 100 women with PCOS ranging in age from 14 to 48 years ( $M = 27.65$ ,  $SD = 5.915$ ). Data for PCOS women were gathered from Bahawalpur's Advance Aesthetic and Skin Centre, Infertility Treatment Centre, and Gyne hospitals. The participants were taken be longing from low, middle-class and upper class families. Marital status also involves in which include, married, unmarried, single, separated, divorce and widow women.

### **Inclusion Criteria**

- 1: Housewives, Jobians, and PCOS students were chosen to participate in the current study.
- 2: Self-report of at least seven of the eight Rotterdam diagnostic criteria was used to determine PCOS inclusion criteria: (1) polycystic ovaries; (2) hyperpigmentation; (3) irregular menstrual

cycle; (4) hirsutism; (5) acne; (6) frontal hair loss; (7) body image perception; and (8) number of miscarriages.

3: Only females and girls who are married, unmarried, separated, single, divorced, or widowed were included in the current study.

4: Participants ranged in age from 14 to 48 years old ( $M = 27.65$ ,  $SD = 5.915$ ).

### **Exclusion Criteria**

1: Women and girls without PCOS are not chosen.

2: Women with an active eating disorders or body dysmorphic were not eligible.

3: Participants who refused to participate or who had difficulty fully comprehending the measures were excluded from the current study.

4: The current study did not include participants over the age of 50 or under the age of 60.

### **Instruments**

#### ***Self-Compassion Scale (12-items scale)***

Self-compassion scale is developed by Neff et al. (2011) a 12-item scale that assesses the system-level balance of compassionate attributes (kindness, common humanity, mindfulness) and actions (reduced self-judgment, isolation and over identification). The scale items assess how an individual views their self-directed actions in times of difficulty (e.g. 'When I'm going through a very hard time, I give myself the caring and tenderness I need') and items are presented on a Likert scale of 1 (almost never) to 5 (almost always). The negative domains of self-judgment, isolation and over-identification are reverse scored to produce the total level of self-compassion (Neff, 2003b), with higher scores representing higher levels of self-compassion. The SCS-SF has two subscales: 1; Self-disparagement; 2; Self-care. All the scores have good internal consistency. The total scale's Cronbach's alpha coefficient was .84.

#### **Body Image Concern Scale**

Body Image Concern Scale (BICS) (24 items scale) it is developed by Wei (1897), Zhejiang University Department of Clinical Psychology, School of Public Health. The 24-items matrix regarding the body image concern covered the following aspects: (a) nine items for the negative evaluation of and preoccupation with appearance; (b) four items for the distress caused by the appearance defect; (c) six items for the embarrassment in public; (d) seven items for the repetitive behaviors or mental acts relating to appearance; (e) seven items for the avoidance of social activities or physical contacts with others; (f) one items for the preliminary exclusion of other mental disorder. The initial scale offers five alternatives with five point Likert format: 1 - very unlike me, 2 - moderately unlike me, 3 – somewhat like and unlike me, 4 – moderately like me, 5 – very like me. All the scores have good internal consistency. The total scale's Cronbach's alpha coefficient was .82.

#### **Mental Health Inventory-18**

The Mental Health Inventory-18 (MHI-18) is a shortened version of the original Mental Health Inventory-36 (MHI-36) which was developed by (Veit & Ware in 1983. It has two global scales one is psychological distress scale and the other one is psychological well-being. It consists of six. 5-item subscales assessing the same anxiety and depression syndromes as the original scale, namely, major depressive. The Mental Health Inventory (MHI) is a tool for assessing mental health problems. This instrument helps in the measure of overall emotional functioning. Respondent uses 6-point Likert rating scale ranging from 1 (all of the time) to 6 (none of the time) while only two items 9 and 28 were rated on 5-point Likert scale ranging from 1 (very often) to 5 (none of the time) to measure statements. Mental Health inventory-18 in which: (a) Four Items 3, 11, 13 and 15, for the Anxiety; (b) one item (9) for Loss of Behavioral / Emotional Control; (c) six items (4, 5, 6, 7, 12, 17) for General Positive Affect; (d) one item

(10) for Emotional Ties; (e) and 1 item (1) for Life Satisfaction. All the scores have good internal consistency. The total scale's Cronbach's alpha coefficient was .96. The MHI has been extensively studied in large populations and has substantial evidence for its validity.

### Procedure

The research was started after the topic was chosen. The permission of the original authors of the tools for use in the current study was obtained via e-mail for the main study. The permission letter for data collection was obtained from the Applied Psychology department at Islamia University in Bahawalpur. After the permission procedure was completed, the data collection procedure began. The data collection procedure was initiated after the permission procedure was completed. Data was collected from people aged 14 to 50 years old while keeping the current study's inclusion and exclusion criteria in mind. Before administering measures, participants were assured of their confidentiality, that their data would not be used for any other purpose than research, that they could withdraw at any time, and that they would be briefed on the purpose of the research. Following agreement to participate in the current study, each participant was asked to sign a consent form indicating their willingness to participate in the current study. The research tools, as well as the informed consent, were distributed to the participants. Participants were recruited via questionnaire. Then the consenting participants were requested to fill the demographic information form. The demographic information form included variables such as age, gender, starting of PCOS; duration of PCOS, socioeconomic status, Physical weight, Hirsutism (excessive hair growth), Menstrual Problem, Body image perception, Frontal Hair fall, Acne, Hyper-pigmentation, mood swings, and confidential information was also gathered. Following that, each participant was asked to complete the research valid and reliable measures: The Self-Compassion Scale, the Body Image Concern Scale, and the Mental Health Inventory-18. It took the participants 15-20 mints to complete the process. Participants were thanked for their participation and cooperation at the end of the process. Following the data collection process, the data was statistically analyzed using scoring keys according to the manual of each scale and after results.

### Results

The current study intended to explore the role of self-Compassion, body image concern and mental health among females with PCOS. The result section in this study was comprised of reliability analysis, descriptive and inferential statistics. Reliability analysis estimated the Cronbach's alpha reliability coefficients, means, standard deviation, skewness, kurtosis and range of the study measures and their subscales of the participants (n=123). Descriptive analysis computed mean, standard deviation, percentages and frequencies of demographic characteristics of the participants (n=123). Inferential statistics computed the different statistical analysis for testing study hypotheses in which collected data was analyzed by using SPSS version 22. Suitable statistical analyses were Pearson product moment correlation, independent sample t-test and one-way of an ova test with the aim of testing hypotheses.

**Table: 1 Frequency Distribution of Demographic Variables (N= 123)**

Demographic Variables		F(%)
Gender	Female	123(98.4)
Marital Status	Married	56 (44.8)
	Unmarried	44 (35.2)
	Separated	2 (1.6)
	Single	21 (16.8)
SES	Low	8 (6.4)
	Middle	108 (80.8)
	Upper	14 (11.2)

<b>Occupation</b>	House wife	47 (37.6)
	Jobian	36 (28.2)
	Student	36 (28.2)
<b>MP</b>	Regular	9 (7.2)
	Irregular	114 (91.2)
<b>BIP</b>	Negative	57 (45.6)
	Positive	66 (52.8)
<b>Front Hair Fall</b>	Yes	63 (50.4)
	No	60 (48.0)
<b>Acne on Body</b>	Yes	89 (71.2)
	No	34 (27.2)
<b>Hyperpigmentation</b>	Yes	58 (46.8)
	No	52(41.2)
<b>Hirsutism</b>	Yes	86(68.8)
	No	37(29.8)

In the above table MP stand for (Menstruation problem) , SES, stand for (socioeconomic status) and BIP stand for (Body Image perception). The above table shows the frequency distribution of demographic variants from the sample of 123 Females. They were collected from married, unmarried, separated and single females. The participants of frequency distribution percentage like as 56 (44.8), 44 (35.2), 2 (1.6) and 21 (16.8). The 47 participants were house wife, 36 were Jobian and 36 were students. The 114 participants with menstrual problem and 9 were regular menstruation. The 57 participants with were negative and 66 with were positive body image perception. The 86 participants with were hirsutism and 37 participants without were hirsutism. The 63 participants with were frontal hair fall and 66 participants without were frontal hair fall.

**Table 2. Reliability analysis and descriptive statistics of study variables (N=123)**

Demographic Variables	Range					
	M	SD	Alpha	Potential	Actual	Skew
Self-Compassion	67.19	11.73	.84	20-100	25-93	-1.63
Body Image	211.94	22.01	.82	56-280	154-275	.07
Mental Health	26.18	7.93	.96	0-32	4-32	-1.41

The results in the table tell us that about all scales (Self – compassion scale, Body image concern scale and mental health inventory) of this research that showed us Cronbach's alpha in acceptable range (.84 to .96) for analysis reliability whereas the skew's values including all scales were shown in range which is acceptable.

**Table 3. Variable Correlation of all variables (N=123)**

	1	2	3	4
Self-Compassion	-			
Body image concern	.52***	-		
Psychologically Wellbeing	.49***	.69***	-	
Psychological distress	.41***	.51***	.57***	-

\*\*\*p ≤ .001

**Table 4** Independent sample t-test used for comparison between females with mensuration problem and female without mensuration problem sample for SCS, BICS & MHI.

Variable	Female With MP (n=86)		Female Without MP (n=37)		95% CI				
	M	SD	M	SD	T(123)	P	LL	UL	Cohen's d
SC	29.43	4.47	27.40	4.17	3.78	.00	1.24	6.25	.47
BIC	119.19	17.31	112.25	15.39	3.40	.00	2.36	14.92	.42
P. Wellbeing	106.16	16.61	103.46	12.03	2.38	.07	.34	15.33	.19
P. Distress	18.02	4.21	19.82	4.01	-1.58	.23	-2.79	-.81	.23

Note: In this above table SC stand for Self-compassion and BIC stand for body image.

The above table showed that means of self-Compassion and Body image concern were significantly higher among females with menstrual problem than without menstrual problem. While psychologically wellbeing was non-significantly higher in females with menstrual problem as compared to without menstrual problem. Moreover, psychologically distress was non-significantly higher among females with menstrual problem than females without menstrual problem.

**Table 5.** One way ANOVA used for comparison between females were with menstrual problem and without menstrual problem for self-compassion, body image concern and mental health.

Variable	Female With MP (n=86)		Female without MP (n=37)		F	P
	M	SD	M	SD		
SC	27.29	4.314	27.86	4.034	16.43	.00
BIC	119.19	17.31	112.25	15.39	27.50	.00
P. Wellbeing	106.16	16.61	103.46	12.03	90.28	.00
P. Distress	18.02	4.21	19.82	4.01	37.53	.00

Note: In this above table: SC means (Self-compassion) and BIC means (Body Image Concern).

The above table presented that Menstural cycle with females played an important role of significant differences in self –compassion, body image concern and mental health. While the mean of self-compassion, body image concern, psychologically wellbeing and psychologically distress were higher with menstrual problem as compared to respondents of without menstrual problem.

## Conclusion

According to the study, self-compassion is significantly positively correlated with body image concern, psychological well-being, and psychological distress. Both psychological well-being

and psychological distress were negatively associated with body image concerns. Furthermore, there is a significant negative relationship between psychological well-being and psychological distress. The study showed that women's with polycystic syndrome have Menstural cycle irregular, frontal hair fall, hirsutism (excessive hair growth), negative body image concern (obesity, overweight) and have mental health problems (distress, anxiety).

## **Discussion**

The present study aimed to examine the role of self-compassion, body image concern, and mental health in females suffering from PCOS. For the purpose of identifying inter-correlations of demographics and study variables among each other and to find out the differences in women with regular menstrual cycles and irregular menstrual cycles, married and unmarried among study variables, different statistical analysis was computed for generating results. Preliminary analysis, descriptive analysis of demographics, and further reliability of scales measures were estimated. Results showed that all of the scales have optimal internal consistency.

The current research, therefore, aims at exploring how the demographic variables, Self-compassion, Body image concern, and Mental Health Problems psychologically being well and psychologically distressed are related to each other and varied between married and unmarried females with different effects. The analysis has been done further in order to explore the impact of different demographic variables on the Mental Health problems psychologically wellbeing and psychological distress. Besides this, marital status differences have also been explored and showed significant differences in study variables in with regular menstrual and irregular and non-schooled children. The findings of the study have provided a wide range of insights into the impact of Self-compassion, body image concern on the development of Mental Health Problems psychologically wellbeing and psychological distress in females with were menstrual cycle irregular.

As a protective factor against both poor psychological health and impaired body image, self-compassion is said to weaken links between self-objectification and negative body attitudes (Liss & Erchull, 2015). Higher levels of self-compassion have also been associated with positive health behaviours (Dunne et al., 2018), increased psychological wellbeing (MacBeth & Gumley, 2012), adaptive responses to physical illness (Brion et al., 2014), fewer symptoms related to illness (Hall et al., 2013) & lower pain intensity (Allen et al., 2012), all of which have been associated with PCOS.

In general, the psychological well-being of the patients presenting with the syndrome needs to be recognized more fully, particularly in relation to the low self-esteem, poor body image and struggles with weight, menstrual irregularities, hirsutism and infertility. A study conducted by Bazarganipour et al. (2013). Findings support that hirsute women experienced poorer self-esteem than women without hirsutism. Women with menstrual irregularities had higher body dissatisfaction. Moreover, women with higher body mass index scores had poorer body satisfaction but were not associated with self-esteem. Women with polycystic ovary syndrome (PCOS) have various mental health problems and lowered health-related quality of life issues and state that treatment must address these concerns. A study conducted by Himelein et al, (2006). PCOS is linked to psychiatric morbidity as well as an increased risk of ADHD and ASD in their children. A study conducted by Thomas et al, (2018). According to present study results, high proportion of women suffering from PCOS experience several mental disorders in Pakistan. Although several sociodemographic and lifestyle-related factors were found to be associated with the poor mental health of women with PCOS; however, PCOS itself is a condition that favors poor physical and psychological health. According to researches Research has demonstrated that PCOS can severely affect women's mental well-being and mental health, and cause psychological problems among them (Davari et al., 2009) Results has shown that

women with PCOS revealed lower and poorer performance in certain aspects of quality of life compared to healthy women (Dunaif et al., 2018). As a result, a number of studies in this field have sought to study quality of life, lifestyle, and emotional and physical characteristics affecting these patients so as to identify the factors influencing the disease (Dunaif et al., 2018).

Coping strategies are a set of cognitive and behavioral efforts that are employed to interpret and rectify a stressful situation (Kheirabadi et al., 2018). In fact, strategies are dynamic and continuous processes that are generally divided into two types of problem solving strategy and emotional strategy. Problem-solving coping strategy includes individuals' constructive actions in relation to stressful situations aimed at changing or reducing such situations, hence striving to eliminate or alter the source of stress (Talepasand, 2018). An emotion coping strategy, however, is used when the situation or event is unchangeable or the individual imagines so. This strategy includes efforts to regulate emotional consequences of a stressful event, and maintains emotional balance by controlling the emotions resulting from stressful situations (Vollman et al., 2007). Problem-solving-based coping skills are driven by both individual and environment while emotion-based coping skills are only guided by individuals. In general, the way of coping with problem plays an essential role in ability to adapt to stressful life situations, and using coping strategies to cope with stress and problems exerts major impact on individuals' quality of life (Nedaei et al., 2016). According to research, coping mechanisms can affect the quality of life for women with PCOS. Furthermore, studies have shown a strong correlation between mental health and quality of life and coping mechanisms for issue solving. It has been shown that employing problem-oriented methods can help these individuals improve their quality of life by assisting them in managing the demanding and stressful conditions of their surroundings (Kline & Nedaei, 2017). It is crucial to identify efficient coping mechanisms as a mediating factor in the relationship between illness stress. Numerous pressures weaken people's resilience and have long-term detrimental effects on their physical and mental health due to their detrimental effects on societal and personal coping mechanisms. Therefore, it is crucial that people use a certain technique and coping mechanism (Nedaei et al., 2017).

### **Implications of the study**

1. The present study has an implication to provide the basis of the solution for those problems which could be arise from PCOS (polycystic ovary syndrome).
2. The present study was beneficial for the females to explore what extent self-compassion strategies and cognitive behavioral are common determinants of mental health problems.
3. The study was also beneficial for the insight building of females in understanding the reasons behind psychological, behavioral and physical issues and to define effective strategies for them.
4. Furthermore, findings helped the females to make effective strategies for two different sample regarding management to overcome mental health problems.

### **Limitations of the Study**

Although, the study has provided the significant results and has contributed to the field of Psychology, yet a few limitations were noted during current study. Those limitations are given below.

1. Because, in our society, menstruation is considered as a disease that has negative effects, so female do not want to talk about it.
2. The sample was rich in diversity, but no more awareness among females therefore it was collected from aesthetic and skin center and Gyne hospital of Bahawalpur. So, the generalizability is low.
3. Also, the sample size was small so it is difficult to generalize the results.

4. Women do not want to talk about the PCOS disorder because it causes infertility in females if not proper treatment was not taken.

## **Recommendation**

Recommendations have been identified during research process, which need to be considered in future studies related to the same population and variables. The following are main recommendations:

1. It is recommended that the sample should be replicated with a larger sample size to make more valid and reliable generalization.
2. It is also recommended that various campaigns, programs, and organizations be implemented until awareness among females and teenage girls is achieved.
3. It is also recommended that in further research the researcher should control the type of work, as different types of work have different effects on mental health of females.
4. It is also recommended that confounding variables must be controlled for future studies.
5. It is also recommended that future research should be conducted to see the difference of mental health between the rural females, teenage girl and urban females and teenage girl.
6. Indigenous scales in the native language of the girls should be developed with respect to their age and understanding.
7. It is also suggested that qualitative study should be conducted to identify the major demographic predictors of mental health and body image perception.
8. It is recommending proper treatment, public awareness, and a healthy lifestyle to promote the good mental health of women suffering from PCOS.

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