



**SELF-COMPASSION, SOCIAL SUPPORT, RESILIENCE, AND HEALTH-RELATED QUALITY OF LIFE IN WOMEN WITH POLYCYSTIC OVARY SYNDROME (PCOS)**

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**Abstract**

*The purpose of this quantitative research was to examine the connection between self-compassion, social support, resilience, and health-related quality-of-life, and how resilience played a mediating role in this relationship. Correlation cross-sectional research design was used and by adopting the purposive sampling strategy the data was collected from 200 women with Polycystic Ovary Syndrome (as per Modified Rottersdam Criteria), aged 18-30 years ( $M=24.08$ ,  $SD=3.51$ ). Demographic Questionnaire, Neff's Self-Compassion Scale-Short Form (SCS-SF) (Imtiaz & Kamal, 2016), Multidimensional Scale of Perceived Social Support (MSPSS) (Jibeen, 2016), Connor-Davidson Resilience Scale (CD-RISC) (Sarwar et al., 2021) and Modified Polycystic Ovary Syndrome Quality of Life Questionnaire (MPCOSQ) (Zaman et al., 2024) were used to assess the study variables. Results showed that self-compassion, social support, resilience, and health-related quality-of-life were significantly positively correlated. Moreover, resilience acted as a partial mediator in the relationship between self-compassion, and health-related quality-of-life whereas as a full mediator in the link between social support, and health-related quality of life. All paths were shown to be significant. These findings have significant implications for clinical practice, education, and policy-making, highlighting the need for targeted interventions to improve HRQOL in women with PCOS. Future research should explore underlying mechanisms and additional factors to inform effective treatment strategies*

**Keywords:** *self-compassion, social support, resilience, health-related quality of life, polycystic ovary syndrome.*

**Introduction**

Today, most of the women at their childbearing age are suffered from Polycystic Ovary Syndrome (PCOS), a hormone-related disorders. Its causes are not yet fully explained. According to Modified Rotterdam Criteria, two out of the three findings are essential for the diagnose of PCOS; Oligo-amenorrhea, Clinical or biochemical hyperandrogenism (Ferriman Gallwey score  $>4$  to  $>8$ ), and Polycystic ovarian morphology on ultrasound (Rzońca et al., 2018). PCOS is related to severe clinical complication related reproductive and metabolic issues including menstrual irregularity, infertility, insulin resistance, type II diabetes, heart attacks, obesity, hirsutism, and acne. Moreover, many psychological concerns (anxiety, depression, or mood disorders) are also associated in this condition (Moghadam. et al., 2018). These symptoms have an adverse impact on the lives of PCOS women, particularly effecting their psychological and emotional health, self-concept, quality of life and life satisfaction (Rzońca et al., 2018).



The prevalence of PCOS is most common in reproductive age and it affects about 5-10% of women in the developed countries and over 50% in Pakistan (Aslam et al., 2023). PCOS is varying in diagnostic criteria and has different phenotypes, it requires lifelong management as women having PCOS face many psychological, sociocultural challenges (Zaman et al., 2024). The main concern of PCOS is infertility, and studies in Pakistan show that 86% of the women are considered the root cause of infertility and blamed themselves for it and also threatened with divorce or often feel rejection by their husbands due to a second wife (Ruiz-Fernández et al., 2021).

Self-compassion is important in maintaining emotional balance and well-being. Research has shown that self-compassion is beneficial for fundamental happiness, coping, and resilience (Boonlue et al., 2016). Individuals who are more compassionate to self tend to maintain emotional balance, function better in daily life, and perceive less pain due to chronic conditions (Wren et al., 2012). Research showed self-compassion had associated to resilience in adults with various health conditions, including spina bifida, breast cancer, and HIV (Hayter & Dorstyn, 2014).

Social support, particularly functional and emotional support, plays a crucial role in enhancing resilience. Studies have also shown that a higher usage of coping mechanisms, such as proactive problem resolution linked to resilience, is associated with higher social support level (Vostanis, 2016). Self-compassion may help women cope with the distress associated with symptoms and societal pressures. Preliminary research suggests that women having PCOS practice self-compassion is less likely to experience the anxiety, depression, and stress (Pérez-Aranda et al., 2021). Moreover, Self-compassion also acts as an emotional buffer against stress and negative emotions (Neff, 2003). People who are more self-compassionate tend to exhibit adaptive coping strategies and lower levels of psychological distress, which has been repeatedly linked to better mental health outcomes and higher HRQoL (Zessin et al., 2015).

Psychological resilience is a dynamic and developmental process that empowers individuals to adapt and adjust to difficult life situations, maintaining their HRQoL (Mohlin et al., 2020). Resilience is also related to an individual's capacity to cope with chronic diseases and their overall HRQoL. Fostering resilience in patients can significantly enhance their positive coping ability and increase adaptation to stressful situations (Huang et al., 2023).

Strong social networks, involving emotional, instrumental, and informational support, have been linked to better physical and mental health results (Cohen & Wills, 1985). Studies suggest that women perceiving high levels of social support report better HRQoL outcomes (Deeks et al., 2011).

Research showed that self-compassion and resilience are positively related, and both are associated with better HRQoL outcomes (Bag et al., 2022). Self-compassion promotes health-promoting behaviors, resilience, and positive psychological and physical outcomes. Similarly, psychological resilience is a crucial protective factor enhancing HRQoL in patients with chronic conditions, such as breast cancer (Mohlin et al., 2020).

In Pakistan, the prevalence of PCOS is over 50% and continues to increase among young females (Aslam et al., 2023). PCOS in young age leads to heightened anxiety about future fertility and reproductive health and has adverse effects on the mental and physical well-being of young women, affecting their health-related quality of life (HR-QoL) (Veltman-verhulst et al., 2012).

Several research highlights the detrimental impact of many maternal diseases like endometriosis on HRQoL (Skinner & Kuijer, 2024). Yet few studies have found positive



resources such as self-compassion and resilience as correlates. Especially in studying the detrimental impacts of PCOS on HRQoL of Young Women in Pakistan, taking the positive resources like self-compassion, social support and resilience as correlates is still a research gap.

As shown in previous studies, self-compassion is linked to a variety of psychological well-being factors, including happiness, reduced levels of stress, anxiety, and depression, as well as an improved quality of life (Misurya et al., 2020). Therefore, the present study aims to investigate how self-compassion, social support, and resilience relate to health-related quality-of-life in women with PCOS, how these factors affect women's HRQOL, and how resilience mediates the relationship between these factors and HRQOL.

### Method

The study used a correlational cross-sectional research methodology to examine the association of resilience, social support, self-compassion, and health-related quality-of-life (HRQoL) in women with PCOS. The research took place in Lahore Pakistan, and it obtained data from female patients at infertility treatment centers. Two hundred women with PCOS ( $N=200$ ) diagnosis included in the study whom age ranged was from 18 to 30 years old ( $M = 24.08$ ,  $SD = 3.51$ ) through purposive sampling strategy. All participants had to fulfil the Modified Rotterdam Criteria which requires minimally two of these three features: oligo-amenorrhea, clinical or biochemical hyperandrogenism (Ferriman-Gallwey score between 4 to 8) and polycystic ovarian morphology seen on ultrasound. Women who could not read Urdu together with those suffering from mental or physical disabilities were not included in the research study.

The Demographic Questionnaire gathered participant information about their age and marital status alongside their residential area, family system, occupation, and use of PCOS medications and family history of PCOS. SCS-SF contains 12 items which evaluate self-compassion through six domains including self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification, and is a 5-point Likert scale, ranging from (1) *almost never* to (5) *almost always*. Good reliability ( $\alpha = 0.72$ ) has been demonstrated by the Urdu version of this scale (Imtiaz & Kamal, 2016). The 12-item MSPSS measures how women perceive their social support from all three categories of family and friends and significant others and is a 7-point Likert scale and score ranges from 1 to 7 where "1" indicates *strongly disagree*, while "7" indicates the *strongly agree*. The Urdu translation (Jibeen, 2016) of the scale presented high reliability according to research ( $\alpha = 0.93$ ). The Connor-Davidson Resilience Scale (CD-RISC) comprises 25 items that evaluate resilience levels through scores that reflect resilience strength. It is scored on the 5-point Likert scale, ranging from "0" indicating "*not true at all*" to "4" indicating "*true nearly at all times*". The Urdu version developed by Sarwar et al. (2021) also demonstrated excellent reliability ( $\alpha = 0.93$ ). The Modified Polycystic Ovary Syndrome Quality of Life Questionnaire (MPCOSQ) contains 30 items to evaluate HRQoL in PCOS patients through hirsutism, weight, emotional disturbance, menstrual problems, infertility and acne domains. It is a 7-point Likert scale, where "1" scored *maximum impairment* and "7" indicates *least impairment*. The Urdu version also showed excellent reliability with  $\alpha = 0.95$  (Zaman et al., 2024).

The study was approved by COMSATS University, Lahore Campus and permission was obtained from authors, hospitals, and participants. Data was collected from 210 women with PCOS across four hospitals in Lahore, with a 99% response rate. Statistical analyses were performed using SPSS and AMOS to investigate the association between resilience,



social support, self-compassion, and health-related quality of life while maintaining ethical considerations.

**Table 1**

*Descriptive Statistics of the Demographic Variables of the sample (N=200)*

Variable	<i>M</i>	<i>SD</i>	<i>f</i>	%
Age	24.08	3.51		
Marital Status				
Married			91	45.5
Unmarried			109	54.5
Area of residency				
Rural Area			55	27.5
Urban Area			145	72.5
Family System				
Nuclear			73	46.5
Joint			107	53.5
Occupation				
Employed			29	14.5
Unemployed			82	41.0
Student			75	37.5
Others			14	7.0
Any Medicine for PCOS				
No			64	32.0
Yes			136	68.0
Any Family History of PCOS				
Yes			44	22.0
No			156	78.0

*Note*, For Marital Status; 1=Married, 2=Unmarried; For Area of Residency; 1=Rural area, 2=Urban area; For Family System; 1=Nuclear, 2=Joint For Occupation; 1=Employed, 2=Unemployed, 3=Student, 4=Others; For Any Medicine for PCOS; 0=No, 1=Yes; For Any Family History of PCOS; 1=Yes, 2=No'



## Results

The data analyses were conducted in three stages. Initially, reliability analyses were performed using Cronbach's alpha on all measuring tools along with descriptive measurements. Next, Pearson-product-moment correlation analysis was run to explore the association of study variables. Subsequently, mediation analysis through SEM was estimated to find out the mediating role of resilience.

**Table 2**

*Descriptive Statistics and Reliability analyses of Self-Compassion, Social Support, Resilience, and Health-related Quality of Life (N=200).*

Scales	<i>k</i>	<i>M</i>	<i>SD</i>	<i>α</i>	<i>Range</i>
SCS-SF	12	36.34	7.62	0.72	16-55
CD-RISC	25	62.26	18.74	0.93	13-100
MSPSS	12	61.17	17.93	0.93	12-84
MPCOSQ	30	99.63	38.03	0.95	30-202

*Note.* *k*=no. of items, *SD*= standard deviation, *α*=Cronbach's alpha, SCS-SF=Self-compassion Scale Short Form, CD-RISC=Connor Davidson Resilience Scale, MSPSS=Multidimensional Scale of Perceived Social Support, MPCOSQ=Modified Polycystic Ovary Syndrome Quality of Life Questionnaire

The above table shows the descriptives (range, mean, standard deviation) and reliability of all study measuring tools. Cronbach's Alpha value of all measuring tools was calculated to find the internal consistencies. All scales indicated good reliability above 0.7 (Imtiaz & Kamal, 2016; Jibeen, 2016; Sarwar et al., 2021; Zaman et al., 2024).

**Table 3**

*Inter correlation Between scales (N=200)*

Variables	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Self-Compassion	-	.41**	.31**	.42**
2. Resilience		-	.47**	.36**
3. Social Support			-	.28**
4. HRQOL				-

*Note.* HRQOL=Health related Quality of Life, \**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001

Table 3 revealed that the intercorrelation among study variables and a positive significant correlation was found between self-compassion, social-support, resilience and HRQOL in women with PCOS. Hence, the hypothesis was approved.

Table 4 reveals the model fit indices and table 5, 6, and 7 reveal direct and indirect effects of study variables.

**Table 4**

*Model Fit Indices of Self-Compassion, Social Support, Resilience, and Health-related Quality of Life (N=200)*

Model	$\chi^2$	df	p	CFI	TLI	RMSEA
Model 1	1.8	01	.18	.99	.99	.06

*Note.* N=200, Changes in the chi-square statistic are run in reference to the model,  $\chi^2$ =Chi-square, RMSEA=Root Mean Square Error of Approximation, CFI= Comparative Fit Index, TLI=Tucker Lewis Index,  $\chi^2 > 0.05$ '.

The table above shows the fit indices for Model 1, which tested the hypothesized association among Self-Compassion, Social Support, Resilience, and Health-Related Quality of Life (HRQOL). Self-compassion and social support were regarded as exogenous variables in this model, whereas HRQOL and resilience were regarded as endogenous ones. To evaluate the relationships and justify the model's assumptions, path analysis was done. As demonstrated by the Chi-square value ( $\chi^2 = 1.8, p > .05$ ), RMSEA (.063, which is below .08), and CFI (.99) .Direct and indirect effects were examined using the bootstrapping approach with a 95% confidence interval to investigate the mediation hypothesis.

It is hypothesized that self-compassion and social support will be a positive predictor of resilience.

**Table 5**

*Estimates of Direct Effect of Self-Compassion and Social-Support on Resilience in Women with PCOS (N=200).*

Variables	Resilience		
	B	$\beta$	SE
Self-Compassion	.71***	.29	.15
Social Support	.40***	.39	.07

*Note.* \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , B=Unstandardized Regression Coefficient,  $\beta$ =Standardized Regression Coefficient, SE=Standard Error'

Table 5 shows the direct effect of social support and self-compassion on mediators (resilience). The results showed that resilience is significantly predicted by both social support and self-compassion. Hence, the hypothesis was approved.



It is hypothesized that Resilience and self-compassion will be a positive predictor of HRQOL.

**Table 6**

*Direct Effect of Resilience on Health-related Quality of Life in Women with PCOS (N=200)*

Variables	Health-related Quality of Life		
	B	$\beta$	SE
Resilience	.45**	.22	.14
Self-Compassion	1.64***	.33	.34

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , B=Unstandardized Regression Coefficient,  $\beta$ =Standardized Regression Coefficient, SE=Standard Error'

Table 6 revealed the direct effect of self-compassion and resilience on HRQOL, and both were significant predictors of HRQOL. Hence, the hypothesis was approved.

It is hypothesized that self-compassion and social support will be a positive predictor of HRQOL.

**Table 7**

*Indirect Effect of Self-Compassion and Social Support on Health-related Quality of Life in Women with PCOS (N=200)*

Variables	Health-related Quality of Life		
	B	$\beta$	SE
Self-Compassion	.32**	.06	.02
Social Support	.18**	.09	.03

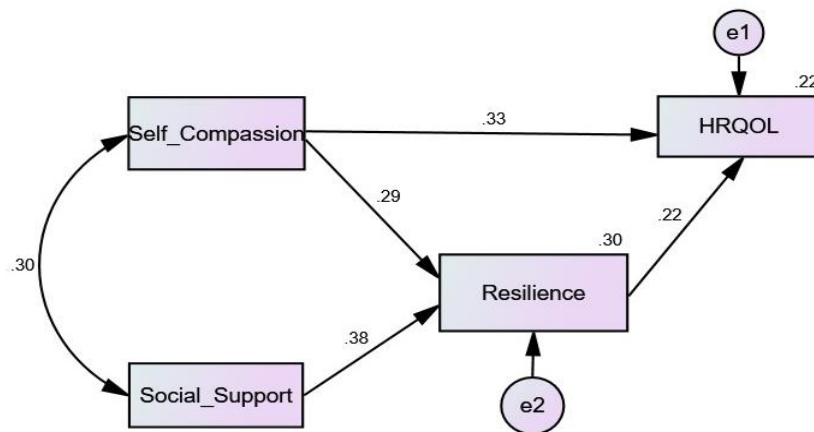
*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , B=Unstandardized Regression Coefficient,  $\beta$ =Standardized Regression Coefficient, SE=Standard Error'

Table 7 showed the indirect effect of self-compassion and social support on HRQOL, and both significantly affected HRQOL.

From the above mediation tables (5, 6, 7), it has been proved that the resilience was partially mediated the relationship between self-compassion and HRQOL as both direct and indirect effect of self-compassion on HRQOL are significant, while fully mediated the relationship between self-compassion and HRQOL. Hence, the hypothesis has been approved

**Figure 2**

*Figural Representation of Mediating Role of Resilience between Self-Compassion, Social Support, and Health-related Quality of Life (N=200).*



*Note. This figure depicts the mediation analysis examining the indirect effects of self-compassion, and social support on HRQOL through the mediator Resilience.*

*\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$*

## Discussion

The results revealed that a significant positive correlation between self-compassion, social support, resilience, and health-related quality of life was found. Furthermore, resilience was found to be a partial mediator in the connection between self-compassion, and health-related quality of life, whereas fully mediated the link between social support and HRQOL. These findings are aligned with an extensive body of literature that highlighted the interconnected nature of these constructs and their significant influence on well-being.

This study was consistent with the study of Alizadeh et al. (2018) which also shown a strong positive correlation between resilience, sense of belonging, perceived social support, and self-compassion among Iranian women with breast cancer . Another study also showed a significant association between self-compassion, compassion for others, well-being, and psychological distress. This study supported the idea that individuals who are more compassionate towards others and oneself have good mental health, and both these constructs enhance their well-being and decreases the psychological distress (García-Campayo et al., 2024). Moreover, previous research also provides data on the positive association between social support and resilience. A study conducted in 2021 in Indian adults and observed a positive correlation between social support, self-efficacy and resilience in younger adults which is also consistent with our findings (Mirchandani, 2021).

Li et al. (2021) also provided evidence that social support sources (including immediate family members, friends or social connections, communities, organizations, and institutes of society) and resilience had a positive correlation with mental health during COVID-19. By taking into consideration the studies on women with polycystic ovary syndrome, most of the studies have associated the distress, anxiety with health-related quality of life (Barberis et al., 2023) or impact of PCOS on quality of life (Aslam et al., 2023). Yet,



Huangfu et al. (2024) also found associated the positive constructs and findings revealed that enhancing self-esteem and self-compassion buffers depressive effects of body dissatisfaction, promoting positive perception related to body and emotional well-being and in accord our findings.

Moreover, in the same year a study conducted on Women with PCOS to explore the link between perceived social support and psychological wellbeing in married women with Polycystic Ovary Syndrome (PCOS) in Kashmir and findings suggested that social relationships, particularly spousal support, crucially influence PCOS women's mental health (Saqib & Rizvi, 2024). Ishfaq and Mushtaq (2024) also conducted a study on PCOS also accord to our findings that there is a significant positive correlation between mental health and resilience.

The results also resonate with the study by Mohlin et al. (2020), explaining that psychological resilience significantly predicted the HRQoL in women having Breast Cancer. A study by Chong et al. (2023) also supported our findings and suggests that psychological flexibility and self-compassion strongly predict mental health outcomes in parents of children with eczema. A teruel study by (Giménez-Llort et al., 2021) also explained that self-compassion was an explanatory factor of the global health variance in people with Multiple Sclerosis. Dowd and Jung in 2017 found that self-compassion directly predicted celiac QoL and consistent our findings that self-compassion directly predicts the HRQOL in women with PCOS (Dowd & Jung, 2017).

Another study by Friis et al. (2016) also reported that self-compassion reduces the depressive symptoms and distress related diabetes. A positive correlation between distress and HbA1c among people diagnosed with diabetes was found with lower level of self-compassion. Also, a significant positive correlation was observed between self-compassion and both HRQOL and resilience in patients with MS (Multiple Sclerosis). A similar relationship was found between resilience and HRQoL (Nery-Hurwit et al., 2018). Similarly, Santerre-Baillargeon et al. (2017) reported that women with higher level of self-compassion had lower anxiety and depression level.

Additionally, many studies have supported our results and showed that resilience enhances well-being in chronic diseases. Kovacs et al. (2015) reported that patients social support and resilience improves QOL and reduces the anxiety and depression in Congenital heart disease patients. Further studies found that resilience scores were negatively associated with anxiety and depression scores which support our findings that resilience enhance the HRQOL in women with PCOS (Robottom et al., 2012).

In prior researches, social support also enhances the resilience and improves the patient's quality of life, diagnosed with inflammatory bowel disease in China (Dai et al., 2022). Moreover, consistent with our results, a prior study also found that health literacy, spiritual well-being, and social support were positively correlated with QOL in patients undergoing hemodialysis (Hassani et al., 2022).

### **Conclusion**

In sum, the study results and findings had supported the study hypotheses, showing a positive correlation between self-compassion, social support, resilience, and HRQOL. Moreover, resilience also significantly mediated the association of self-compassion, social support and HRQOL i.e., partially in the self-compassion-HRQOL link, however fully mediated in the social support-HRQOL link. Overall, the findings highlight the benefits of these variables in improving HRQOL in women with PCOS. These findings also have implications for developing the targeted interventions aimed at fostering HRQOL in women



with PCOS. The study can also contribute to advanced research on PCOS and women's health, highlighting avenues for future investigation.

### **Limitations and Suggestions**

Like other research, the current study is also not free of limitations. Hence some of the limitations of the study are discussed below which can improve future research on it. First, it was a cross-sectional study. Self-compassion can be learned. So, there should be longitudinal study to examine the changes that occur with this condition as newly knowing about the PCOS have more drastic effects. Moreover, quasi-experimental study can also be a good approach as it involves interventions to test hypotheses and determine causality. These approaches can enable researchers to draw more accurate conclusions about factors such as infertility treatments, health behaviors, or social perceptions.

Another significant limitation is the small sample size. Moreover, the study also lacked significant differences in subgroups. It is also noted that this study may not be representative of the community at large. As the data is collected from infertility centers, and the women who are concerned about infertility and have opportunities to seek doctor are involved. Small samples can lead to biased results and reduce the study's power to analyze meaningful effects. Larger sample sizes increase the generalizability of the findings to different populations. Researchers can solve this issue improving sampling strategies, collaborating with multiple institutions, or conducting multi-center studies

Another significant and major limitation of study is the social stigma regarding PCOS which hinders data collection. In our society, discussion about periods and periods related issues are considered immoral and mostly girls are advised to mask it and resist to fill forms and participate in the study. Researchers should invest in awareness campaigns that educate participants about the importance of honest responses and reduce the social stigma associated with certain conditions.

It is also important to note that limitation related to measuring tools especial psychological rating scales which assesses the study variables didn't capture the simplicity and complexity of psychological phenomenon although these rating scales are time-and-cost effective (Uher, 2022). One of the more important limitations of using a rating scale like PCOSQ to measure health related quality of life, is just focusing on six phenotypes of PCOS (Acne, Hirsutisms, Infertility, Weight gain, Emotional Disturbance, and Menstrual Problems). These phenotypes aren't universal and present in women suffered from endometriosis, simple cyst or hyperthyroidism too.

Moreover, the Urdu translation of these rating scales is also a limitation of the study. In our population, there is lack of understanding of pure Urdu, creating challenges in data collection. Additionally, lengthy questionnaires also lead to participant fatigue and inaccurate responses. Confusion regarding certain items, such as "fear of cancer" in health-related quality of life (HRQOL) scales also limited the study.

### **Implications**

The findings in this highlight a central role of self-compassion, resilience, social support in health-related quality of life of women with polycystic ovary syndrome. Most of the implications of this study are clinical-based yet can also contribute to personal development, psychosocial and behavioral intervention, research, policy and practical applications. Self-compassion, resilience and social support improves the health-related quality of life of women suffering the PCOS and develop healthier coping mechanism to face the life challenges.



Health care professionals should be aware of that women having PCOS are also suffering the anxiety, depression and other psychological problems and be prepared for providing support. They should also shift from solely relying on traditional medical treatment to integrating psychological interventions like self-compassion/mindfulness-based intervention or interventions based on positive psychology. Research also suggests that those interventions based on targeting the positive effect give better clinical results in comparison of interventions focused on targeting negative emotions. (Craske et al., 2023).

Self-compassion enhances resilience and improves overall well-being, and social support also mediates this relationship. So, resilience-building programs can make young women to understand the severity of this condition and its effects on daily life and integrating social support mechanisms into routine care such as peer groups, counseling/psychotherapy, or community-based resources can improve adherence to treatment and increase patient satisfaction. Also, interventions or treatment programs target not only women with PCOS but also their families, healthcare providers, and the public. By increasing awareness, we can reduce stigma, promote early diagnosis and treatment, and encourage women suffering with PCOS to seek support and prioritize their overall well-being.

Gynecologists could also educate the patients and their families about PCOS, including both physical and psychological impacts, to promote better understanding and coping. This can help to alleviate their depression, anxiety, fear of social stigma and self-blame, and encourage them and their families to work together to deal with situation and healthier behaviors like consistent medical follow-ups and lifestyle modifications. Moreover, resilience training may also reduce the psychological impacts of infertility or metabolic complications, enhancing adaptive coping mechanisms. Furthermore, recognizing the role of social support understands the need for family and community engagement to reduce the feelings of isolation and improve psychological outcomes.

On large scale, this study also found implication for the need for public health policies that prioritize mental health for women with PCOS. Policy makers should include funding for integrated care models that combine endocrinological, nutritional, and psychological support. Additionally, governments could increase funding for PCOS research, education, and awareness programs, provide accessible and affordable healthcare services, support the development of PCOS support groups, and incorporate PCOS education into school curricula and healthcare provider training programs.

At individual level, this study has implications for personal development in women with polycystic ovary syndrome (PCOS). Women with PCOS can learn how to prioritize self-care, developing self-compassion, and building resilience to better manage the physical and emotional challenges related with PCOS. Social support networks and encouraging themselves through education could take an active role in managing their condition, enhancing their physical and emotional health, and overall well-being. Women with PCOS could also focus on holistic well-being, rather than just managing the physical symptoms. This can involve engaging in activities that promote joy and fulfillment and seeking medical care that addresses their physical and emotional needs and could speak up about their experiences and challenges.



## References

- Alizadeh, S., Khanahmadi, S., Vedadhir, A., & Barjasteh, S. (2018). The Relationship between Resilience with Self- Compassion, Social Support and Sense of Belonging in Women with Breast Cancer. *PubMed*, 19(9), 2469–2474. <https://doi.org/10.22034/apjcp.2018.19.9.2469>
- Aslam, M., Qurat-ul-Ain, A., & Fatima, R. (2023). Psychological Effect of Polycystic Ovary Syndrome on Health Related Quality of Life among Young Women: Moderating Role of Proactive Coping Strategies. *Review of Applied Management and Social Sciences*, 6(2), 447–458. <https://doi.org/10.47067/ramss.v6i2.340>
- Bag, S. D., Kilby, C. J., Kent, J. N., Brooker, J., & Sherman, K. A. (2022). Resilience, self-compassion, and indices of psychological wellbeing: a not so simple set of relationships. *Australian Psychologist*, 57(4), 249–257. <https://doi.org/10.1080/00050067.2022.2089543>
- Barberis, N., Calaresi, D., Cannavò, M., & Verrastro, V. (2023). Trait emotional intelligence and quality of life in women with polycystic ovary syndrome: Dysmorphic concerns and general distress as mediators. *Comprehensive Psychiatry*, 122(January), 0–5. <https://doi.org/10.1016/j.comppsy.2023.152373>
- Boonlue, T., Sillence, E., & Briggs, P. (2016). Self-compassion, psychological resilience and social media use in Thai students. *Proceedings of the 30th International BCS Human Computer Interaction Conference, HCI 2016, 2016-July(November)*. <https://doi.org/10.14236/ewic/HCI2016.4>
- Chong, Y. Y., Kwan, J. Y. M., Yau, P. T., Cheng, H. Y., & Chien, W. T. (2023). Roles of Parental Psychological Flexibility, Self-Compassion, and Self-Efficacy in Affecting Mental Health and Quality of Life in Parents of Children with Eczema. *Healthcare*, 11(20), 2708.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. <https://doi.org/10.1037/0033-2909.98.2.310>
- <https://doi.org/10.3390/healthcare11202708>
- Dai, W., Zeng, Y., Liang, E., Zhou, Q., Zhang, L., & Peng, J. (2022). The actuality of resilience, social support and quality of life among patients with inflammatory bowel disease in China. *Nursing Open*, 9(4), 2190–2198. <https://doi.org/10.1002/nop2.946>
- Deeks, A. A., Gibson-Helm, M. E., Paul, E., & Teede, H. J. (2011). Is having polycystic ovary syndrome a predictor of poor psychological function including anxiety and depression? *Human Reproduction*, 26(6), 1399–1407. <https://doi.org/10.1093/humrep/der071>
- Dowd, A. J., & Jung, M. E. (2017). Self-compassion directly and indirectly predicts dietary adherence and quality of life among adults with celiac disease. *Appetite*, 113, 293–300. <https://doi.org/10.1016/j.appet.2017.02.023>
- Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: A randomized controlled trial of a mindful Self-Compassion intervention improves depression, distress, and HBA1C among patients with diabetes. *Diabetes Care*, 39(11), 1963–1971. <https://doi.org/10.2337/dc16-0416>
- García-Campayo, J., Barceló-Soler, A., Martínez-Rubio, D., Navarrete, J., Pérez-Aranda, A., Feliu-Soler, A., Luciano, J. V., Baer, R., Kuyken, W., & Montero-Marin, J. (2024). Exploring the Relationship Between Self-Compassion and Compassion for Others: The Role of Psychological Distress and Wellbeing. *Assessment*, 31(5), 1038–1051. <https://doi.org/10.1177/10731911231203966>
- Giménez-Llort, L., Martín-González, J. J., & Maurel, S. (2021). Secondary impacts of covid-19 pandemic in fatigue, self-compassion, physical and mental health of people with multiple sclerosis and caregivers: The teruel study. *Brain Sciences*, 11(9). <https://doi.org/10.3390/brainsci11091233>



- Hassani, F., Zarea, K., Jofreh, M. G., Dashtbozorgi, Z., & Chan, S. W. C. (2022). Effect of Perceived Social Support, Spiritual Well-being, Health Literacy, and Resilience on Quality of Life in Patients Undergoing Hemodialysis: A Structural Equation Model. *Jundishapur Journal of Chronic Disease Care*, 11(2). <https://doi.org/10.5812/jjcdc.123080>
- Hayter, M. R., & Dorstyn, D. S. (2014). Resilience, self-esteem and self-compassion in adults with spina bifida. *Spinal Cord*, 52(2), 167–171. <https://doi.org/10.1038/sc.2013.152>
- Huang, C.-L., Hsu, C.-H., Hsu, S.-F., & Tung, H.-H. (2023). Dignity, Resilience, and Quality of Life in Patients With Cardiac Disease. *Journal of Cardiovascular Nursing*, 00(00), 1–9. <https://doi.org/10.1097/jcn.0000000000001071>
- Imtiaz, S., & Kamal, A. (2016). Rumination, Optimism, and Psychological Well-being. *Journal of Behavioral Sciences*, 26(1), 32–50.
- Ishfaq, W., & Mushtaq, R. (2024). Mental Health and Resilience Among Pakistani Women Suffering From Polycystic Ovary Syndrome. *Pakistan Journal of Physiology*, 20(1), 45–47. <https://doi.org/10.69656/pjp.v20i1.1608>
- Jibeen, T. (2016). Perceived Social Support and Mental Health Problems Among Pakistani University Students. *Community Mental Health Journal*, 52(8), 1004–1008. <https://doi.org/10.1007/s10597-015-9943-8>
- Kovacs, A. H., Bandyopadhyay, M., Grace, S. L., Kentner, A. C., Nolan, R. P., Silversides, C. K., & Irvine, M. J. (2015). Adult Congenital Heart Disease-Coping And RESilience (ACHD-CARE): Rationale and methodology of a pilot randomized controlled trial. *Contemporary Clinical Trials*, 45, 385–393. <https://doi.org/10.1016/j.cct.2015.11.002>
- Li, F., Luo, S., Mu, W., Li, Y., Ye, L., Zheng, X., Xu, B., Ding, Y., Ling, P., Zhou, M., & Chen, X. (2021). Effects of sources of social support and resilience on the mental health of different age groups during the COVID-19 pandemic. *BMC Psychiatry*, 21(1). <https://doi.org/10.1186/s12888-020-03012-1>
- Mirchandani, K. (2021). The relationship among social support, self-efficacy and resilience. *The International Journal of Indian Psychology*, 9(3), 1560–1576. <https://doi.org/10.25215/0903.144>
- Misurya, I., Misurya, P., & Dutta, A. (2020). The Effect of Self-Compassion on psychosocial and clinical Outcomes in patients with medical Conditions: a systematic review. *Cureus*. <https://doi.org/10.7759/cureus.10998>
- Moghadam., B., Fereidooni., B., Saffari., M., & Montazeri., A. (2018). IJWH-165794-measures-of-health-related-quality-of-life-in-pcos-women--a-. *International Journal of Women's Health*, 10, 397–408.
- Mohlin, Å., Axelsson, U., Bendahl, P. O., Borrebaeck, C., Hegardt, C., Johnsson, P., Hallberg, I. R., & Rydén, L. (2020). Psychological resilience and health-related quality of life in Swedish women with newly diagnosed breast cancer. *Cancer Management and Research*, 12, 12041–12051. <https://doi.org/10.2147/CMAR.S268774>
- Neff, K. (2003). Self-Compassion: an alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2(2), 85–101. <https://doi.org/10.1080/15298860309032>
- Nery-Hurwit, M., Yun, J., & Ebbeck, V. (2018). Examining the roles of self-compassion and resilience on health-related quality of life for individuals with Multiple Sclerosis. *Disability and Health Journal*, 11(2), 256–261. <https://doi.org/10.1016/j.dhjo.2017.10.010>
- Pérez-Aranda, A., García-Campayo, J., Gude, F., Luciano, J. V., Feliu-Soler, A., González-Quintela, A., López-del-Hoyo, Y., & Montero-Marin, J. (2021). Impact of mindfulness and self-compassion on anxiety and depression: The mediating role of resilience. *International Journal of Clinical and Health Psychology*, 21(2), 100229.



<https://doi.org/10.1016/j.ijchp.2021.100229>

- Robottom, B. J., Gruber-Baldini, A. L., Anderson, K. E., Reich, S. G., Fishman, P. S., Weiner, W. J., & Shulman, L. M. (2012). What determines resilience in patients with Parkinson's disease? *Parkinsonism and Related Disorders*, 18(2), 174–177. <https://doi.org/10.1016/j.parkreldis.2011.09.021>
- Ruiz-Fernández, M. D., Ramos-Pichardo, J. D., Ibáñez-Masero, O., Carmona-Rega, M. I., Sánchez-Ruiz, M. J., & Ortega-Galán, Á. M. (2021). Professional quality of life, self-compassion, resilience, and empathy in healthcare professionals during COVID-19 crisis in Spain. *Research in Nursing and Health*, 44(4), 620–632. <https://doi.org/10.1002/nur.22158>
- Rzońca, E., Bień, A., Wdowiak, A., Szymański, R., & Iwanowicz-Palus, G. (2018). Determinants of quality of life and satisfaction with life in women with polycystic ovary syndrome. *International Journal of Environmental Research and Public Health*, 15(2), 1–12. <https://doi.org/10.3390/ijerph15020376>
- Santerre-Baillargeon, M., Rosen, N. O., Steben, M., Pâquet, M., Perez, R. M., & Bergeron, S. (2017). Does self-compassion benefit couples coping with vulvodynia? Associations with psychological, sexual, and relationship adjustment. *Clinical Journal of Pain*, 34(7), 629–637. <https://doi.org/10.1097/ajp.0000000000000579>
- Saqib, T., & Rizvi, T. (2024). Social Support As the Predictor of Psychological Well Being Among Pcos Women in Kashmir. *Indian Journal of Psychology*, 04(April), 94–105.
- Sarwar, N. (2021). Translation And Validation Of Conner Davidson Resilience (25) Scale Among Diverse Population: Pakistan. *Psychology and Education Journal*, 58(August 2020), 4462–4468.
- Skinner, C. M., & Kuijer, R. G. (2024). Self-compassion and health-related quality of life in individuals with endometriosis. *Psychology and Health*, 1–18. <https://doi.org/10.1080/08870446.2024.2325506>
- Veltman-verhulst, S. M., Boivin, J., Eijkemans, M. J. C., & Fauser, B. J. C. M. (2012). Emotional distress is a common risk in women with polycystic ovary syndrome: A systematic review and meta-analysis of 28 studies. *Human Reproduction Update*, 18(6), 638–651. <https://doi.org/10.1093/humupd/dms029>
- Vostanis, P. (2016). New approaches to interventions for refugee children. *World Psychiatry*, 15(1), 75–77. <https://doi.org/10.1002/wps.20280>
- Wren, A. A., Somers, T. J., Wright, M. A., Goetz, M. C., Leary, M. R., Fras, A. M., Huh, B. K., Rogers, L. L., & Keefe, F. J. (2012). Self-compassion in patients with persistent musculoskeletal pain: Relationship of self-compassion to adjustment to persistent pain. *Journal of Pain and Symptom Management*, 43(4), 759–770. <https://doi.org/10.1016/j.jpainsymman.2011.04.014>
- Zaman, R., Ehsan, S., Fatima, A., Obaid, S., & Shahzadi, J. (2024). Translation and psychometric analysis of urdu version of modified polycystic ovary syndrome health related quality of life questionnaire (MPCOSQ-U). *BMC Women's Health*, 24(1), 1–15. <https://doi.org/10.1186/s12905-024-03266-x>
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The Relationship Between Self-Compassion and Well-Being: A Meta-Analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340–364. <https://doi.org/10.1111/aphw.12051>