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IMPACT OF POLY CYSTIC OVARIAN SYNDROME ON THE QUALITY OF LIFE OF MARRIED FEMALES: A CROSS-SECTIONAL STUDY

Original Research

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ABSTRACT

Background: Polycystic Ovarian Syndrome (PCOS) is a chronic endocrine disorder characterized by reproductive, metabolic, and psychological disturbances that collectively impair women's health-related quality of life. In married women, the burden of PCOS is often intensified by fertility concerns, visible physical manifestations, and sociocultural expectations related to marriage and childbearing. Despite increasing recognition of these challenges, limited evidence is available from developing regions addressing the multidimensional impact of PCOS on married women.

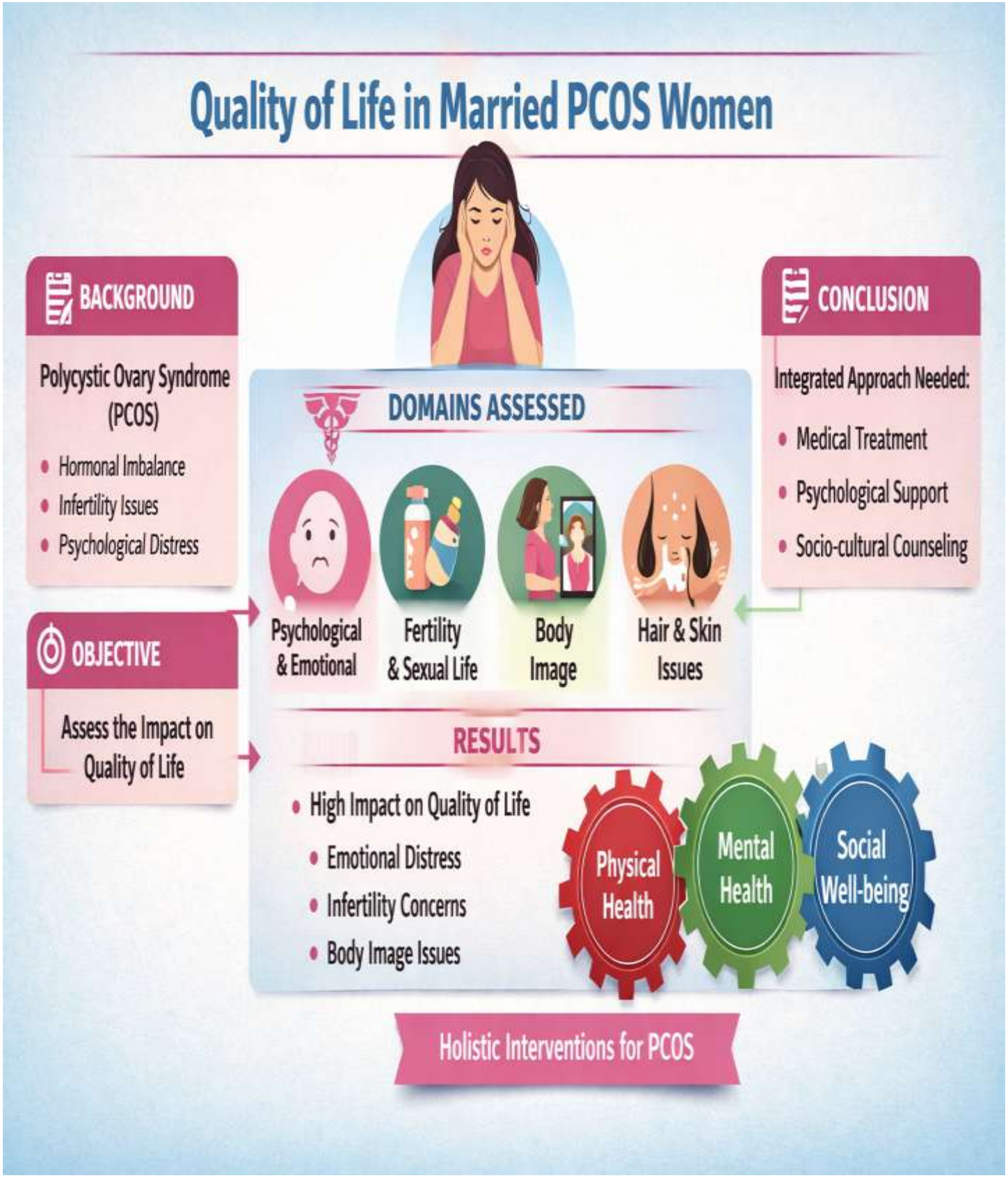
Objective: To assess the impact of Polycystic Ovarian Syndrome on the quality of life of married women across psychological, reproductive, physical, and social domains.

Methods: A cross-sectional study was conducted using purposive sampling to recruit 377 married women diagnosed with PCOS from public and private hospitals, clinical facilities, and community settings. Data were collected using the validated Polycystic Ovary Syndrome Quality of Life Scale (PCOSQOL-47), assessing five domains: psychological and emotional status, fertility and sexual life, body image, hair disorders and acne, and obesity and menstrual disturbances. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were analyzed using IBM SPSS version 26.

Results: Marked impairment in psychological and emotional status was reported by 89.9% (n=339) of participants, with a mean score of 2.37 ± 0.60. In the fertility and sexual life domain, 64.5% (n=243) experienced a marked effect and 26.8% (n=101) a marginal effect (mean = 2.85 ± 0.82). Body image was significantly affected in 68.7% (n=259) of women (mean = 2.75 ± 0.72). Hair disorders and acne showed marked impact in 56.8% (n=214) (mean = 2.97 ± 0.88). Obesity and menstrual disturbances demonstrated marked impairment in 59.4% (n=224) of participants (mean = 2.91 ± 0.78).

Conclusion: PCOS exerts a substantial negative impact on the quality of life of married women, particularly affecting psychological well-being, fertility-related concerns, and body image. These findings highlight the need for integrated medical, psychological, and socioculturally sensitive interventions to effectively address the multidimensional burden of PCOS.

Keywords: Body Image, Infertility, Menstrual Irregularities, Polycystic Ovary Syndrome, Quality of Life, Psychological Stress, Reproductive Health.



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INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is a complex and lifelong endocrinopathy that has been recognized in medical literature for centuries, with early clinical descriptions of infertility associated with enlarged, smooth ovaries dating back to the eighteenth century. The condition gained clearer clinical definition in the early twentieth century when Stein and Leventhal characterized it as a syndrome marked by enlarged polycystic ovaries and reproductive dysfunction, laying the foundation for modern understanding (1). Since then, advances in endocrinology and metabolic science have transformed PCOS from a primarily gynecological diagnosis into a multisystem disorder with far-reaching implications. Today, PCOS is considered one of the most prevalent endocrine disorders among women of reproductive age, typically manifesting during adolescence and evolving across the lifespan with changing clinical features (2). Clinically, PCOS is characterized by a constellation of hormonal imbalance, menstrual irregularities, and hyperandrogenic manifestations such as hirsutism, acne, and androgenic alopecia (3). Beneath these visible symptoms lies a complex pathophysiology involving disordered androgen synthesis, insulin resistance, ovarian dysfunction, and metabolic dysregulation. These disturbances frequently result in chronic anovulation, polycystic ovarian morphology, and altered menstrual patterns ranging from oligomenorrhea to prolonged or heavy uterine bleeding (4). The heterogeneity of presentation has led to the recognition of multiple phenotypes, including normoandrogenic, ovulatory, non-polycystic ovarian, insulin-resistant, inflammatory, and so-called full-blown forms of PCOS. This variability reflects the multifactorial nature of the disorder, driven by genetic susceptibility, environmental influences, and transgenerational effects that converge on oxidative stress, adipose tissue dysfunction, and neuroendocrine imbalance (5). Diagnostic frameworks have evolved in response to this complexity. Criteria proposed by the National Institutes of Health and later refined by the Rotterdam consensus emphasize an integrated assessment of clinical features, biochemical markers, and ultrasonographic findings to identify oligo-anovulation, hyperandrogenism, and polycystic ovarian morphology (6).

However, growing evidence highlights that PCOS extends well beyond reproductive dysfunction. Women with PCOS face an increased risk of cardiometabolic abnormalities, sleep disturbances, and mental health disorders, prompting recommendations for broader screening and long-term monitoring (7). Management strategies are therefore multifaceted and often lifelong, combining hormonal therapies, insulin-sensitizing agents, anti-androgenic treatments, and lifestyle-based interventions aimed at weight control and metabolic health (8). Despite available treatments, comorbid obesity, insulin resistance, infertility, and psychological distress frequently persist, contributing to a sustained reduction in health-related quality of life. Importantly, the burden of PCOS is not limited to physical health. The visible and chronic nature of symptoms such as hirsutism, acne, weight gain, and reproductive challenges exerts a profound psychosocial toll. Women commonly report disturbances in body image, diminished self-esteem, symptoms of depression and anxiety, and impaired sexual functioning, all of which can negatively influence interpersonal relationships and marital satisfaction (9). Persistent fatigue, sleep problems, and the long-term risk of conditions such as type 2 diabetes and metabolic syndrome further compound emotional strain and daily functioning. These interconnected physical and psychosocial consequences underscore the need to conceptualize PCOS not merely as a reproductive or hormonal disorder, but as a condition that permeates emotional well-being, social participation, intimate relationships, and overall quality of life (10). Despite increasing recognition of these broader impacts, there remains a relative gap in focused research exploring how PCOS affects the lived experiences of married women, particularly in relation to marital relationships, psychological health, and quality of life. Understanding this dimension is essential for reducing stigma, improving early identification of psychosocial distress, and developing holistic, patient-centered interventions that extend beyond symptom control. Therefore, the objective of the present research is to examine the impact of Polycystic Ovarian Syndrome on quality of life and marital well-being among married women, with the aim of informing integrated clinical and psychosocial care strategies that address the full spectrum of challenges associated with the condition.

METHODS

This cross-sectional study was conducted to evaluate the impact of Polycystic Ovarian Syndrome (PCOS) on the quality of life of married women residing in Sialkot, Sambrial, and Gujranwala. Prior to data collection, ethical approval was obtained from the Institutional Research Committee, and the study was carried out in accordance with established ethical principles for human research. All participants were fully informed about the objectives, procedures, and expected outcomes of the study, and written informed consent was obtained before enrollment. Confidentiality and anonymity were strictly maintained throughout the research process, and no personally identifiable information was recorded or disclosed. The study population comprised married women diagnosed with PCOS who were recruited from gynecology and obstetrics outpatient departments of both public and private hospitals and clinical settings

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within the selected districts (11). A purposive sampling technique was employed to identify eligible participants who met predefined diagnostic and demographic criteria. Women who declined participation or failed to complete the questionnaire were excluded from the final analysis. Data collection was carried out over a six-month period following approval of the research synopsis by the institutional committee. The sample size was calculated using the Raosoft sample size calculator, assuming an estimated population of approximately 20,000 married women with PCOS, a 95% confidence level, and a 5% margin of error, resulting in a recommended sample size of 377 participants.

Inclusion criteria required participants to be married for at least two years, aged between 20 and 35 years, and diagnosed with PCOS according to standard diagnostic criteria. Both housewives and employed women were included to ensure representation across diverse socioeconomic and occupational backgrounds. Exclusion criteria included pregnancy, puerperium, and the presence of other gynecological or reproductive conditions such as uterine or cervical malignancies that could confound quality-of-life assessment. Data were collected through face-to-face interviews conducted in hospital outpatient departments. The researcher remained present during questionnaire completion to clarify queries and ensure completeness and accuracy of responses. The data collection tool comprised three sections: demographic information, diagnostic criteria for PCOS, and the Polycystic Ovary Syndrome Quality of Life Scale (PCOSQOL-47). Participants were categorized as having PCOS if they fulfilled at least two diagnostic components. The PCOSQOL-47 is a validated instrument with high internal consistency (Cronbach's alpha ranging from 0.80 to 0.82), strong content validity, and established discriminant and convergent validity when compared with other PCOS-specific quality-of-life measures (12). Responses were recorded on a five-point Likert scale ranging from 1 (maximum negative impact on quality of life) to 5 (no impact). Domain scores were interpreted as marked effect (1–<3), marginal effect (3–<4), minimal effect (4–<5), and no effect (5). Data analysis was performed using IBM SPSS Statistics version 26. Descriptive statistics were generated for all domains of the PCOSQOL-47, including psychological and emotional status, fertility and sexual life, body image, hair disorders and acne, and obesity and menstrual disturbances. Frequencies and percentages were used to summarize participant responses across domains. While descriptive analysis provided an overview of quality-of-life patterns among married women with PCOS, the absence of inferential statistical testing limited the ability to explore associations, predictors, or causal relationships.

RESULTS

A total of 377 married women diagnosed with Polycystic Ovarian Syndrome were included in the final analysis. Quality of life was assessed across five predefined domains: psychological and emotional status, fertility and sexual life, body image, hair disorders and acne, and obesity and menstrual disturbances. Across all domains, a substantial proportion of participants reported moderate to marked impairment, indicating a pervasive impact of PCOS on daily functioning and overall quality of life. The psychological and emotional status domain demonstrated the highest level of impairment. A marked effect was observed in 89.9% (n = 339) of participants, while 9.3% (n = 35) experienced a marginal effect and only 0.8% (n = 3) reported a minimal effect. No participant reported the absence of psychological or emotional impact. These findings reflected a consistently high burden of emotional distress among married women living with PCOS. In the fertility and sexual life domain, 64.5% (n = 243) of respondents reported a marked effect, followed by a marginal effect in 26.8% (n = 101) and a minimal effect in 8.8% (n = 33). None of the participants reported no effect in this domain, indicating that reproductive and sexual concerns were widely prevalent within the study population.

Assessment of body image revealed that 68.7% (n = 259) of participants experienced a marked effect, 28.1% (n = 106) a marginal effect, and 3.2% (n = 12) a minimal effect. No participant reported complete absence of body image concerns. These results highlighted the substantial influence of PCOS-related physical changes on self-perception. Dermatological manifestations, including hair disorders and acne, were also prominent. A marked effect was reported by 56.8% (n = 214) of participants, while 32.1% (n = 121) experienced a marginal effect and 10.9% (n = 41) a minimal effect. Only 0.3% (n = 1) reported no impact in this domain. Similarly, obesity and menstrual disturbances showed considerable impairment, with 59.4% (n = 224) of participants reporting a marked effect, 37.1% (n = 140) a marginal effect, 3.2% (n = 12) a minimal effect, and 0.3% (n = 1) no effect. These findings underscored the dominant role of metabolic and hormonal disturbances in shaping quality-of-life outcomes. Descriptive statistics further supported the presence of widespread impairment across domains. The lowest mean score was observed for psychological and emotional status (mean ± SD: 2.3690 ± 0.60414), followed by body image (2.7548 ± 0.72241) and fertility and sexual life (2.8451 ± 0.82109). Higher mean scores were noted for obesity and menstrual disturbances (2.9085 ± 0.78133) and hair disorders and acne (2.9658 ± 0.87922). Overall, mean domain scores consistently reflected moderate to high levels of quality-of-life disruption among married women with PCOS.

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Table 1: Descriptive Statistics of Study Domains

Domain	N	Minimum	Maximum	Mean	Standard Deviation
Psychological and Emotional Status	377	1.00	4.78	2.3690	0.60414
Fertility and Sexual Life	377	1.20	5.00	2.8451	0.82109
Body Image	377	1.00	5.00	2.7548	0.72241
Hair Disorders and Acne	377	1.09	9.55	2.9658	0.87922
Obesity and Menstrual Disorders	377	1.00	8.17	2.9085	0.78133

Table 2: Distribution of Effects Across All Domains

Domain	Marked Effect n (%)	Marginal Effect n (%)	Minimal Effect n (%)	No Effect n (%)
Psychological and Emotional Status	339 (89.9%)	35 (9.3%)	3 (0.8%)	0 (0%)
Fertility and Sexual Life	243 (64.5%)	101 (26.8%)	33 (8.8%)	0 (0%)
Body Image	259 (68.7%)	106 (28.1%)	12 (3.2%)	0 (0%)
Hair Disorders and Acne	214 (56.8%)	121 (32.1%)	41 (10.9%)	1 (0.3%)
Obesity and Menstrual Disorders	224 (59.4%)	140 (37.1%)	12 (3.2%)	1 (0.3%)

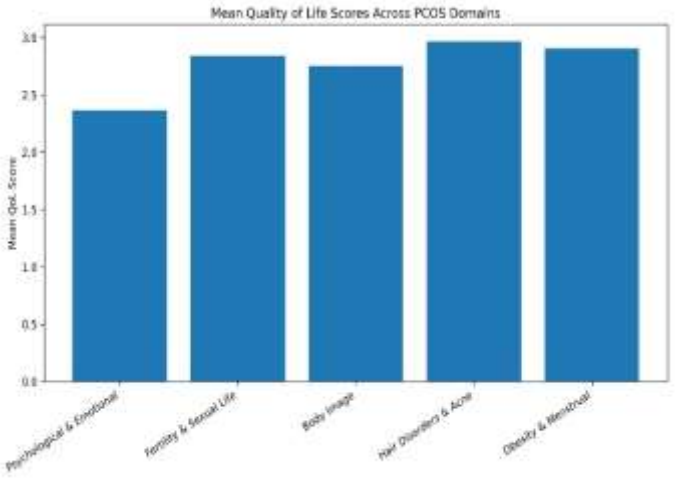

Figure 2Mean Quality of Life Scores Across PCOS Domain

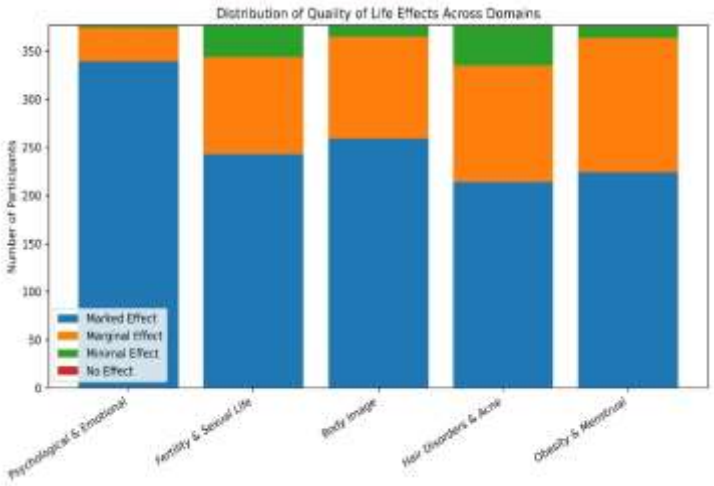

Figure 2 Distribution of Quality-of-Life Effects Across Domin

DISCUSSION

The findings of the present study provided a comprehensive perspective on the multidimensional impact of Polycystic Ovarian Syndrome on the quality of life of married women. Drawing on data from 377 participants recruited from both public and private healthcare settings as well as community-based sources, the study reflected a heterogeneous population, thereby strengthening the representativeness of the sample (13). The results reinforced the understanding of PCOS as a complex, multisystem disorder that extends

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beyond reproductive dysfunction to affect physical health, psychological well-being, and social functioning, aligning closely with existing evidence describing the endocrine, metabolic, and reproductive burden associated with the condition (14). One of the most prominent observations was the substantial impact of fertility-related concerns on quality of life. Married women with PCOS exhibited heightened anxiety related to infertility, which appeared to intersect with emotional distress and reduced marital satisfaction. Previous research has demonstrated that fertility challenges associated with PCOS remain a persistent source of psychological strain beyond adolescence and into adult married life, particularly in sociocultural contexts where childbearing is closely linked to personal identity and marital stability (15). These findings highlighted how reproductive concerns may amplify emotional vulnerability and reinforce stress within marital relationships. Body image disturbance emerged as another critical domain influencing quality of life. Physical manifestations such as acne, hirsutism, weight gain, and obesity were closely associated with reduced self-esteem, emotional distress, and impaired social interaction. Comparable studies conducted in different cultural settings have reported similar associations, where dissatisfaction with physical appearance secondary to endocrine disorders correlated strongly with depressive symptoms and poorer health-related quality of life (16). The present findings suggested that these visible symptoms acted as persistent reminders of illness, thereby compounding psychological burden and social withdrawal.

The study further emphasized that the psychosocial dimensions of PCOS were as influential as the physical symptoms themselves. Psychological distress, including symptoms of anxiety and depression, appeared to be intensified by marital expectations and societal pressures surrounding fertility and physical appearance. In culturally sensitive environments where reproductive capacity and femininity are highly valued, such pressures have been shown to significantly exacerbate emotional distress among married women (17). Evidence from younger populations with PCOS has similarly demonstrated that emotional difficulties are not confined to a particular life stage, supporting the notion that psychological vulnerability persists throughout the reproductive lifespan and requires ongoing attention. Despite the substantial negative impact observed, the findings also underscored the potential for targeted interventions to mitigate quality-of-life impairment. Existing literature has consistently shown that educational initiatives, structured counseling, lifestyle modification, and psychosocial support can improve coping strategies, emotional resilience, and overall well-being in women with PCOS (18). These observations reinforced the need for integrated care models that address both medical and psychosocial components of the disorder rather than focusing solely on symptom management (19).

Several strengths of this study warrant acknowledgment, including the relatively large sample size and the inclusion of participants from diverse healthcare settings, which enhanced the external validity of the findings. The use of a validated, PCOS-specific quality-of-life instrument further strengthened the reliability of the results. However, important limitations were also identified. Limited awareness and understanding of PCOS among some participants may have influenced their responses, potentially affecting the accuracy of self-reported data. Sensitivity surrounding topics such as fertility, body weight, and marital relationships may have led to underreporting or social desirability bias. The cross-sectional design restricted the ability to assess temporal changes or establish causal relationships between PCOS symptoms and quality-of-life outcomes (20). Additionally, sociocultural norms may have shaped response patterns, particularly regarding reproductive and marital issues. The absence of a locally translated questionnaire may also have contributed to misinterpretation of certain items, thereby introducing measurement bias (21). Taken together, these findings highlighted the intricate interplay between biological, psychological, and sociocultural factors in shaping the lived experience of married women with PCOS. The results supported the need for enhanced educational initiatives to promote early recognition and informed management of PCOS, particularly among married women who may experience heightened reproductive and societal pressures. Healthcare professionals should be equipped to deliver comprehensive counseling and psychological support alongside medical treatment to address the full spectrum of challenges associated with the disorder (22). Future research would benefit from longitudinal designs, culturally adapted assessment tools, and more diverse geographic and socioeconomic samples to deepen understanding and improve the generalizability of findings.

CONCLUSION

This study concluded that Polycystic Ovarian Syndrome exerts a substantial and multidimensional impact on the quality of life of married women, extending beyond physical symptoms to deeply affect emotional well-being, self-perception, and social and marital functioning. By highlighting the interconnected influence of fertility-related concerns, body image disturbance, and psychological distress, the findings underscored the multifactorial nature of PCOS and its close interaction with cultural and marital expectations. The study emphasized the practical importance of adopting integrated, multidisciplinary care approaches that combine medical management with psychological support and culturally sensitive counseling. Addressing these dimensions in a coordinated manner has the potential

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to improve overall well-being, reduce stigma, and enhance the quality of life of married women living with PCOS, thereby reinforcing the clinical and public health relevance of this research.

AUTHOR CONTRIBUTIONS

Author	Contribution
Isha Fatima	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Muhammad Shazib Butt*	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Maham Rasool	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published
Zarqa Mughal	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Kashaf Syeda	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Raveena Rajput	Substantial Contribution to study design and Data Analysis Has given Final Approval of the version to be published

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