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PSYCHOSOCIAL IMPACT OF POLYCYSTIC OVARY SYNDROME ON WOMEN'S QUALITY OF LIFE: BODY IMAGE, MENTAL HEALTH, AND FERTILITY-RELATED DISTRESS

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ABSTRACT

Background: Polycystic ovary syndrome affects 8-13% of women of reproductive age and is one of the most common endocrine disorders. Although PCOS has traditionally been viewed as a reproductive and metabolic pathology, accumulated evidence demonstrates significant psychological and social consequences affecting women's quality of life.
Aim: This literature review systematizes current scientific evidence on the psychological and social impact of PCOS on women's quality of life, with emphasis on body image concerns, mental health comorbidities, and fertility-related distress.
Methods: We searched PubMed/MEDLINE, Embase, Web of Science, PsycINFO, and Cochrane Library databases for relevant literature. The review included systematic reviews, meta-analyses, cohort studies, and qualitative studies. No time restrictions were applied; we included both recent research and foundational publications from earlier years.
Results: Women with PCOS show much higher body dissatisfaction than healthy women. Visible symptoms like excess hair growth and acne, combined with weight control problems, clash with cultural ideals of femininity and cause ongoing emotional distress. The prevalence of depressive and anxiety symptoms is elevated, with this association being multifactorial and involving both biological mechanisms (insulin resistance) and psychosocial factors. Eating disorders represent a particular area of vulnerability, with concerns about weight and body shape occupying a central role. Reproductive difficulties create a severe emotional burden, exacerbated by sociocultural contexts where motherhood is considered an essential part of female identity.
Conclusion: PCOS has significant psychosocial consequences requiring a comprehensive approach to patient management. A medical model focused exclusively on physical symptoms is insufficient. Integration of mental health screening and a multidisciplinary approach are necessary for providing quality care to women with PCOS.

KEYWORDS

Polycystic Ovary Syndrome, Mental Health, Body Image, Quality of Life, Depression, Anxiety, Infertility, Psychosocial Aspects

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Introduction

Polycystic ovary syndrome (PCOS) affects 8–13% of women of reproductive age, making it one of the most common endocrine disorders [1]. Traditionally, clinical attention has focused on the physical manifestations of the syndrome — menstrual irregularities, hyperandrogenism, metabolic disturbances, and fertility problems [2]. However, evidence accumulated in recent years demonstrates that the impact of PCOS extends far beyond somatic symptoms and has a pronounced effect on women's psychological well-being and social functioning [3].

Visible manifestations of the syndrome, including excessive facial and body hair growth, acne, and weight gain, directly affect women's appearance. In sociocultural contexts where standards of female attractiveness play a significant role in shaping self-esteem and gender identity, such symptoms can become a major source of psychological distress. A systematic review and meta-analysis published in 2023 showed that women with PCOS report significantly lower levels of appearance satisfaction and greater body-related concern compared with healthy controls [4].

Beyond body image disturbances, numerous systematic reviews and meta-analyses indicate a markedly increased prevalence of mental health disorders among women with PCOS. Patients with this syndrome exhibit substantially higher levels of depressive and anxiety symptoms compared with control groups [5]. A large meta-analysis including 46 studies and approximately 31,000 participants further confirmed elevated rates of depression and anxiety, along with a pronounced reduction in overall quality-of-life indicators among women with PCOS [6].

Fertility problems — among the most frequent clinical manifestations of PCOS — also contribute significantly to psychological burden. Longitudinal cohort data show that 51% of women with PCOS reported conception difficulties, compared with 21% of women without the syndrome [7].

Despite growing awareness of the psychosocial impact of PCOS, this area remains insufficiently explored. Understanding the full spectrum of psychosocial consequences of PCOS is essential for developing comprehensive management strategies that take into account not only the physical but also the emotional needs of women [8].

Methodology

This narrative review brings together current evidence on the psychosocial effects of PCOS on women's quality of life. A structured approach to literature evaluation was applied, following systematic search principles adapted for narrative review purposes.

Search Strategy

Relevant publications were identified through searches in the following electronic databases: PubMed/MEDLINE, Embase, Web of Science, PsycINFO, the Cochrane Library, and Google Scholar. The search strategy was not restricted by strict temporal limits: both recent studies from the past years and earlier foundational publications essential for understanding the psychosocial aspects of PCOS were included in the analysis.

The following keywords and their combinations were used: “polycystic ovary syndrome”, “PCOS”, “mental health”, “depression”, “anxiety”, “body image”, “quality of life”, “psychological distress”, “fertility distress”, “infertility”, “social stigma”, “self-esteem”, “eating disorders”, and “body dissatisfaction”.

Eligibility Criteria

The review included English-language publications reporting data on psychological or psychosocial aspects of PCOS. We prioritized studies with strong evidence: systematic reviews, meta-analyses, and clinical guidelines. We also included qualitative studies and large observational studies that examined psychological or social outcomes. Publications focused only on biomedical parameters without psychological assessment were excluded, along with single case reports and low-quality studies.

Structure of the Review

We structured the material into three main areas that cover the key psychosocial aspects of PCOS:

- body image concerns;
- mental health burden in PCOS (depression, anxiety, and eating disorders);
- fertility-related distress.

Findings across studies were compared to identify common themes and research gaps.

Body Image Concerns

Body perception problems are among the most significant but often overlooked challenges for women with PCOS. Body image is a complex concept involving thoughts, feelings, evaluations, and behaviors related to one's body [9]. Women with PCOS are particularly vulnerable to body image problems because of the visible physical symptoms of the condition. A 2023 systematic review and meta-analysis examined data from 918 women with PCOS and 865 control women across nine countries. The study showed that women with PCOS had much greater body dissatisfaction than women without the condition [4]. Women with PCOS scored lower on all body image measures, including appearance evaluation, satisfaction with body areas, and weight concerns [4]. These differences are largely driven by visible PCOS symptoms such as excess hair growth (hirsutism), acne, and weight gain [4].

Visible Symptoms and Body Dissatisfaction

Excessive male-pattern hair growth, observed in 70–80% of patients, represents one of the most visually noticeable and emotionally distressing manifestations of the syndrome. Women with pronounced hirsutism frequently report feelings of embarrassment, shame, loss of femininity, and social withdrawal [10]. According to available studies, respondents spend an average of 104 minutes per week removing unwanted hair. Moreover, 67% report checking for hair growth in the mirror, 76% do so by touch, and 40% experience discomfort in social situations. This constant preoccupation with appearance and the need to conceal symptoms creates a substantial psychological burden and may contribute to anxiety and social isolation [11].

Excess body weight and obesity also pose a considerable challenge for many patients and have a strong impact on their body image. A systematic review and meta-analysis demonstrated nearly a threefold increase in the risk of obesity compared with the control group [12].

A qualitative study involving young women with PCOS identified the theme of "physical inadequacy" related to weight concerns. Participants reported difficulties with weight management and distress associated with this issue. Respondents described discomfort when eating and fears of rapid weight gain. One participant noted that, despite engaging in regular and intensive physical activity, losing weight remained extremely difficult [13].

Acne represents another common dermatological manifestation of PCOS that negatively affects body image. A systematic review and meta-analysis including 60 studies showed that the prevalence of acne among patients was 43%, compared with 21% in the control group. These differences were particularly pronounced across age categories: among adults, the prevalence reached 42% in women with PCOS versus 17% in controls, while among adolescents the corresponding figures reached 59% and 39% [14].

Intimacy and Identity-Related Consequences of Visible Symptoms

The visible manifestations of the syndrome have a substantial impact on the intimate aspects of patients' lives. According to research findings, women with PCOS report lower satisfaction with their personal and romantic lives and perceive themselves as less attractive compared with women without the condition. They also believe that their partners share these perceptions. Respondents noted that excessive body hair negatively affects intimacy and that their appearance complicates the formation of social relationships [15]. A qualitative study involving 30 patients revealed profound changes in the perception of femininity. Nearly one-third of the participants used the term "freak" to describe their feelings associated with the condition. Three core features—excessive hair growth, menstrual irregularities, and fertility problems—were associated by respondents with a sense of being "abnormal." Participants described PCOS as a "loss of womanhood," highlighting the deep impact of the symptoms on their self-perception and identity [16]. These experiences are consistent with data on psychological gender among affected women. Women over the age of 31 with PCOS were significantly more likely to classify themselves as sexually undifferentiated compared with controls. They were also less likely to identify with a traditional feminine gender role and more likely to see themselves as androgynous [17]. An analysis of correlations between clinical manifestations and psychosocial parameters showed that higher body mass index and more pronounced hirsutism were associated with lower self-esteem and relationship difficulties. The impact of hirsutism was found to be limited to specific domains of quality of life, which may relate to disruptions in the perception of feminine identity [18].

Mental Health Burden in PCOS

This section examines the main emotional and behavioral problems associated with PCOS.

Depression and Anxiety Disorders

According to the position statement of the Androgen Excess Society, women with PCOS exhibit higher levels of depressive and anxiety symptoms compared with the healthy population [19].

A more detailed assessment of depressive manifestations was provided in a 2023 meta-analysis combining data from studies conducted in various countries. It demonstrated that depression scores in women with PCOS were statistically higher than in control groups; the pooled standardized mean difference reached 0.421 based on six studies [20].

Additional data on factors associated with depressive symptoms were obtained from an analysis of 738 women with PCOS. Insulin resistance (HOMA-IR > 2.2) was associated with more than a twofold increase in the likelihood of depression, both in univariate analysis (OR 2.32) and after adjustment for age, BMI, and other parameters [21].

Anxiety symptoms are also described as a frequent comorbid condition in PCOS. A systematic review and meta-analysis showed that the prevalence of anxiety is higher among women with PCOS compared with controls [22].

A larger meta-analysis including 4,002 participants confirmed the substantial prevalence of anxiety symptoms in PCOS. The mean prevalence reached 48%, the standardized mean difference on the HADS-A scale was 0.27, and the relative risk of anxiety was nearly twice as high compared with women without PCOS (RR 1.91) [23]. These findings highlight the considerable burden of anxiety symptoms in this population [23].

Eating Disorders

Eating disorders represent a significant domain of psychological disturbances in women with PCOS. Below is an analysis of findings from three studies included in this review.

One of the most extensively examined behavioral features is the tendency toward binge eating, and intensified food cravings. In a survey of women with PCOS, participants more frequently reported episodes of

uncontrolled food intake and higher levels of food cravings compared with the control group. These behavioral patterns may create a predisposition toward the development of eating disorders, including binge eating [24].

A clinical study using validated assessment tools demonstrated higher rates of pathological scores on the global EDE-Q index among women with PCOS. The likelihood of clinically relevant disordered eating was almost five times higher compared with controls. Elevated scores were more common on subscales related to weight and shape concerns. Women with PCOS also reported a greater number of binge-eating episodes and more frequent use of compensatory behaviors, including excessive exercise [25].

Diagnosable forms of eating disorders—including bulimia nervosa, binge eating disorder and night eating syndrome—were identified in a proportion of women with PCOS. Although differences in individual diagnoses were less pronounced, the presence of PCOS remained associated with higher pathological EDE-Q scores after statistical adjustment [25].

A large population-based study confirmed that women reporting PCOS more frequently indicated a history of eating disorders (11% versus 7.6% among women without PCOS). PCOS was associated with increased odds of having any eating disorder (adjusted OR 1.6), as well as a higher prevalence of disorders other than anorexia and bulimia (adjusted OR 1.8) [26].

These findings emphasize the importance of careful evaluation of eating behavior in women with PCOS, as identified disturbances may significantly influence quality of life and the clinical course of the syndrome.

Fertility-Related Distress

PCOS is a leading cause of anovulatory infertility, making fertility concerns a major part of the experience for many women with the condition [27].

Psychological burden of infertility

Psychological distress can occur even when reproductive function is impaired but no formal infertility diagnosis has been made. Research shows that reproductive problems cause significant emotional distress, including disrupted life plans and worries about motherhood [28].

When infertility is diagnosed, emotional distress often worsens. Studies show that women with PCOS-related infertility experience higher anxiety and depression than women with infertility from other causes, highlighting the significance of reproductive challenges for this population [29]. These findings highlight that fertility concerns occupy a distinct place in the emotional experience of women with PCOS and may become a notable source of psychological strain at different stages of their lives.

Emotional burden of fertility treatment

Infertility treatment in women with PCOS, particularly when involving assisted reproductive technologies, is accompanied by considerable emotional strain. Qualitative evidence indicates that therapy is frequently associated with uncertainty about outcomes, fear of potential failure, and tension arising from the need for regular monitoring throughout treatment [30].

During treatment, women describe emotional fluctuations that include periods of hope alternating with anxiety and disappointment. These experiences may be amplified by the need to undergo multiple therapeutic cycles, the absence of guaranteed success, and the perception of treatment as a prolonged and resource-intensive process [30].

Emotional difficulties may also emerge during the diagnostic stage. Comparative findings show that women with PCOS facing infertility report higher levels of anxiety and depression than patients with infertility from other causes, which reflects heightened emotional sensitivity to reproductive challenges in this group [29].

Social stigma and cultural pressures

Societal expectations about motherhood significantly shape the experiences of women with PCOS, especially when they face conception difficulties. A qualitative interview study reported that fertility problems were often perceived by participants as a deviation from social norms: women described feelings of “inadequacy” specifically linked to the inability to become pregnant and portrayed themselves as “different” from women for whom motherhood occurred without difficulty [16]. These experiences were frequently accompanied by a sense of social pressure, as the expectation of motherhood remained a central element of their surroundings. The research on infertility shows that childlessness may be seen as violating social and family expectations in many cultures. Women struggling to conceive may face pressure from relatives, hear comments about their duty to have children, and experience strained relationships due to not meeting cultural motherhood norms [31].

While these observations apply to infertility broadly, they illuminate the social pressures facing women with PCOS who have trouble conceiving, regardless of the specific medical cause

Partner relationships and coping strategies

Fertility challenges may affect how couples relate to each other during diagnosis and treatment. Social connections beyond the partnership also provide important support.

Evidence shows that participation in specialized support groups may reduce feelings of isolation, facilitate the exchange of experiences, and help women identify coping strategies that improve adaptation to the emotional stress associated with infertility [32].

Relationship dynamics may additionally be shaped by the broader social context. Anthropological observations indicate that in cultures where childbearing is highly valued, the absence of children can intensify tension within partnerships, contribute to external pressures, and create additional demands on the emotional resilience of both partners [31].

Discussion

This review summarizes contemporary research describing how polycystic ovary syndrome affects women's psychological well-being and social functioning. The analysis identified significant problems in three key areas: body image, mental health, and fertility-related experiences. Overall, the evidence shows that the psychosocial consequences of PCOS extend beyond physical symptoms, highlighting the need for comprehensive, multidisciplinary care.

Negative body perception as a source of psychological distress

Women with PCOS demonstrate significantly greater body dissatisfaction compared to healthy control participants. Negative body perception is a complex phenomenon that affects attractiveness assessment, perception of individual body parts, and weight-related experiences.

Hirsutism represents a feature associated with male phenotype, while acne is a cosmetic problem. Their presence conflicts with cultural perceptions of femininity and social beauty standards. When physical appearance plays a key role in shaping self-esteem and gender identity, such characteristics become a threat to self-perception. Patients describe their condition through the metaphor of "theft of womanhood" and less frequently, identify themselves with the traditional female role.

Constant preoccupation with appearance creates emotional tension. Women spend significant time on hair removal procedures, continuously monitor their reflection, and experience discomfort in social situations. This continuous focus on appearance is associated with increased anxiety and avoidance of social contact.

Weight control difficulties add an additional level of complexity. Despite efforts to reduce body weight, patients face objective physiological obstacles, which is often perceived as loss of control over their own body. In cultures that value thinness, these difficulties strongly contribute to a negative body image.

Visible symptoms affect intimate aspects of life. Lower satisfaction with personal relationships arises not only from internal perceptions but also from genuine challenges in forming close connections. Efforts to conceal symptoms, together with concerns about being judged, often hinder emotional openness and make it harder to build intimate relationships.

Depression and anxiety: multifactorial nature of associations

Across multiple study designs, women with PCOS consistently show higher rates of depressive and anxiety symptoms. This association has both biological and psychosocial causes.

The link between insulin resistance and depressive symptoms suggests metabolic mechanisms affect mental health. Insulin resistance can impact neurotransmitter systems and neuroinflammation, creating a biological predisposition to depressive disorders. However, interpretation of this association requires caution, as emotional stress itself affects metabolic parameters through eating behavior disorders and reduced physical activity.

Psychosocial pathways connecting PCOS with mental health problems involve visible physical manifestations, experiences of social stigma, and concerns about future fertility. Long-term exposure to these stressors gradually exhausts coping capacities and heightens the risk of developing depressive and anxiety conditions.

Eating behavior disorders: complex interaction of factors

Eating disorders are particularly common in PCOS. Women with PCOS show increased overeating and uncontrolled food cravings, driven by both biological factors (insulin resistance, appetite regulation problems) and psychological factors (emotional eating to cope with stress).

Weight and body image concerns play a major role in disordered eating among women with PCOS. Body image problems link physical symptoms to eating disorders. Struggles with weight control lead to

unhealthy compensation strategies: restricted eating, binge eating, or excessive exercise. These patterns can become entrenched over time.

Fertility: emotional burden and social context

Fertility issues are especially distressing for women with PCOS. Emotional burden arises even before establishing a diagnosis of infertility – awareness of reproductive dysfunction itself generates anxiety regarding future motherhood.

When infertility is diagnosed, the burden significantly intensifies. Women with PCOS-related infertility have more anxiety and depression than women with other types of infertility. This reflects the cumulative effect of multiple stressors: concerns about inability to conceive are compounded by appearance problems, metabolic disorders, and uncertainty regarding treatment effectiveness.

The treatment process itself is a source of significant tension. Uncertainty of outcomes, the need to undergo multiple therapy cycles, and emotional fluctuations between hope and disappointment exhaust patients' resources.

Cultural context strongly shapes how women experience infertility. In societies where motherhood is viewed as a central element of female identity, childlessness is perceived as a serious deviation from normative expectations. Women face social pressure and feelings of exclusion from certain social interactions. Thus, the burden of infertility is formed not only by medical but also by sociocultural factors.

Study limitations

Interpretation of this review's results requires caution. The included studies differ in design and assessment methods, which limits the possibility of direct comparisons. Further longitudinal studies are needed to establish causal relationships, as well as research in non-Western cultural contexts to understand the universality of identified patterns.

Implications for clinical practice

The review findings have important practical implications for clinical management of PCOS. A medical model focused exclusively on physical symptoms and metabolic parameters is insufficient. Patient well-being must become an integral part of clinical management and requires systematic attention.

Integration of mental health screening into routine PCOS management practice is necessary. Assessment of depression, anxiety symptoms, body image disturbances, and eating disorders should be conducted at initial diagnosis and regularly repeated during follow-up.

A multidisciplinary approach is most effective for meeting patients' complex needs. Collaboration among endocrinologists, gynecologists, psychologists, dietitians, and reproductive health specialists enables simultaneous work with physical symptoms and their emotional consequences. Interventions should address specific areas of vulnerability in PCOS: cognitive-behavioral approaches to working with body image, anxiety management strategies, support in the context of infertility treatment, and therapy for eating disorders.

Educational initiatives are also important. Raising awareness among medical specialists about psychosocial aspects of PCOS promotes a more comprehensive approach to patient management, while informing patients themselves helps normalize their experience and reduce feelings of isolation.

Conclusions

Polycystic ovary syndrome has a significant impact on women's quality of life, extending far beyond physical symptoms. Our literature review identified substantial problems in body perception, mental health, and reproductive sphere.

Women with PCOS face significant body image problems from visible symptoms. Hirsutism, acne, and weight problems conflict with cultural perceptions of femininity and social beauty standards. This chronic body dissatisfaction causes ongoing emotional distress that affects self-esteem, social life, and intimate relationships.

Mental disorders constitute a substantial part of the clinical picture of PCOS. Studies consistently show higher rates of depression and anxiety in PCOS. This association is multifactorial and includes both potential biological mechanisms related to metabolic disorders and psychosocial pathways caused by prolonged chronic stress. Eating disorders are especially common in this group, driven largely by concerns about weight and body shape.

Reproductive difficulties in PCOS create a particularly severe emotional burden. Women with PCOS-associated infertility experience more pronounced anxiety and depression than those with infertility of other origins. The infertility treatment process additionally intensifies psychological burden due to outcome uncertainty and emotional fluctuations between hope and disappointment. The sociocultural context, where motherhood is considered an important part of female identity, exacerbates these experiences.

These findings show the need to revise the traditional medical model of PCOS management. A purely biomedical approach is insufficient.

Regular psychological assessment is essential in PCOS care. Early detection of depressive and anxiety symptoms, body image disturbances, and eating disorders will enable timely initiation of necessary interventions. A multidisciplinary team approach is most effective for addressing patients' complex needs.

Interventions may include work with body image, anxiety management, support in the context of infertility treatment, and therapy for eating disorders. Educational initiatives aimed at raising awareness among medical specialists and patients themselves promote a more comprehensive approach to syndrome management.

In conclusion, it should be emphasized that polycystic ovary syndrome has significant psychosocial consequences requiring a comprehensive approach to patient management. Recognition and adequate assessment of emotional burden are key conditions for providing quality and comprehensive care to women with PCOS.

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