

Case Report

Body Image Perception In A Patient With Polycystic Ovary Syndrome Over A Decade: A Case Report.

Alvado Lolwen and Sabrina Aran-Guerre.

Department of Psychiatry and Mental Health, Hospital Universitario Fundación Jiménez Díaz, 28008 Madrid, Spain

Abstract

Up to 10% of women suffer with PCOS, a condition linked to weight gain, insulin resistance, and maybe a negative body image. Because of the psychological effects of PCOS's physical symptoms, eating disorders like anorexia nervosa can occasionally result from the illness. Preventing long-term health effects requires early detection and management. Detailed Description of the Case: A 25-year-old woman who was diagnosed with PCOS at the age of 15 started to restrict her food consumption in an attempt to prevent weight gain, which led to the development of anorexia nervosa. Her body mass index (BMI) decreased to 16.65 by the age of 17, suggesting moderate thinness. With a lot of social support, she began cognitive behavioral treatment (CBT) at that time.

Her eating habits eventually became more normal, and ten years later, her BMI was 21.16. Additionally, she had a healthy body image with a score of 4.3/5 on the Body Appreciation Scale-2 (BAS-2). Conclusions: For women with PCOS who are at risk of eating disorders and body image problems, early screening and management are essential. Cognitive behavioral therapy (CBT) is essential for correcting cognitive distortions, and recovery is reinforced by a supportive social network. Continuous evaluation of psychological and physical health, including BMI and BAS-2, guarantees these patients better long-term results and efficient treatment.

Keywords: polycystic ovary syndrome; body image; BMI; eating disorders; self-esteem.

INTRODUCTION

Up to 10% of women of reproductive age suffer with PCOS, a complex endocrine condition that manifests as polycystic ovaries, hyperandrogenism, and irregular menstruation [1]. A complex interaction of environmental, hormonal, and genetic factors characterizes the condition and contributes to its varied appearance. Disruption of normal metabolic processes is one of the main problems that people with PCOS experience. This often leads to insulin resistance and an elevated risk of obesity, type 2 diabetes, and cardiovascular diseases. In addition to the substantial health risks associated with this metabolic dysregulation, weight gain and trouble controlling weight can have detrimental effects on one's self-esteem and body image [2, 3].

Chronic low-grade inflammation has been shown to play a major role in PCOS, contributing to metabolic dysfunctions like insulin resistance and dyslipidemia and negatively impacting psychological well-being by raising the risk of anxiety and

depression. Furthermore, hormonal abnormalities, such as impaired insulin sensitivity and sex hormone levels, have been connected to changes in the composition of the gut microbiota in PCOS patients. These changes may have an additional effect on mental health. According to these results, addressing gut microbiota and inflammation may be effective ways to treat PCOS's psychosocial and metabolic components [4].

The cornerstone of treating PCOS in young women is hormonal therapy, especially the use of combination oral contraceptives (COCs). COCs offer endometrial protection, lessen hyperandrogenic symptoms such as hirsutism and acne, and assist in regulating menstrual cycles. Beyond these health advantages, treating hyperandrogenism can have a good impact on psychological health and body image because high levels of androgen are frequently linked to mood swings and low self-esteem. Hormonal treatment may improve young women with PCOS's general quality of life by reducing these symptoms. Treatment for PCOS must be approached

***Corresponding Author:** Alvado Lolwen, Department of Psychiatry and Mental Health, Hospital Universitario Fundación Jiménez Díaz, 28008 Madrid, Spain. Received: 22-Feb-2025, ; Editor Assigned: 23-Feb-2025 ; Reviewed: 07-Feb-2025, ; Published: 10-Mar-2025.

Citation: Alvado Lolwen. Body Image Perception in a Patient with Polycystic Ovary Syndrome over a Decade: A Case Report. World Journal of Eating Disorders 2025 March; 1(1).

Copyright © 2025 Alvado Lolwen. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

holistically, including lifestyle changes, psychological support, and medicinal interventions to fully address the emotional and physical components of the condition [5].

Anorexia nervosa, bulimia nervosa, and binge eating disorder are among the eating disorders that PCOS has occasionally been connected to. These disorders could develop as unhealthy coping strategies in reaction to the syndrome's emotional and psychological suffering. Persistent weight issues, together with symptoms like hirsutism, acne, and alopecia, can have a major negative influence on one's self-esteem and lead to the adoption of disordered eating practices as a way to gain control over one's body [6,7]. Given how common eating disorders are among women with PCOS, it's critical to comprehend the psychological and physiological processes that underlie these behaviors. Hormonal abnormalities, such as high insulin and testosterone levels, have been linked to impulsivity, emotional reactivity, and hunger regulation, which increases the likelihood of developing disordered eating patterns [8].

PCOS is linked to increased levels of psychological discomfort, such as anxiety and depression, in addition to its effects on eating habits. Among women with PCOS, anxiety in particular has been found to be a strong mediator between general quality of life and body image dissatisfaction. Increased emotional strain and psychological vulnerability are caused by the syndrome's chronic nature and erratic symptom swings. Studies have shown that women with PCOS who struggle with body image are more likely to report higher anxiety levels, which have a detrimental effect on their everyday functioning, interactions with others, and general well-being. [9–11]

Weight gain and body image in PCOS have a complex and individual-specific relationship. Despite their metabolic and dermatological problems, some women with PCOS may have a strong body image, but others may suffer from significant concern over their looks. People's perceptions of their bodies are also influenced by social comparisons, cultural beauty standards, and individual experiences of prejudice and stigma. Interventions targeted at enhancing body image and self-perception are essential given the substantial negative effects that body dissatisfaction can have on mental health [12,13].

One popular tool for evaluating body appreciation, a crucial component of healthy body image, is the Body Appreciation Scale-2 (BAS-2). It has ten items and strong psychometric qualities that have been verified in a variety of demographics. Better mental health outcomes, such as increased self-esteem and intuitive eating habits, as well as decreased levels of body dissatisfaction and depressive symptoms, are linked to higher BAS-2 scores. The BAS-2 is a tool that clinicians can use to find people who have low body appreciation and who can benefit from body image-enhancing interventions [14].

To address these issues and foster mental health resilience,

comprehensive psychological interventions are essential. These include acceptance and commitment therapy (ACT), mindfulness-based practices, and cognitive behavioral therapy (CBT). CBT has shown long-term effectiveness in treating eating disorders, such as anorexia nervosa, and issues related to body image [15]. According to this metaanalysis, which assessed CBT's efficacy across a range of eating disorders, CBT was superior to alternative psychological therapies in lowering eating disorder symptoms, and its effects persisted at a 12-month follow-up. These results highlight the value of cognitive behavioral therapy in promoting long-term changes in eating disorder symptoms and body image.

Additionally, the effectiveness of group counseling based on ACT for women with PCOS was assessed in a randomized controlled experiment [16]. According to the study, ACT-based group counseling significantly improved participants' self-esteem and body image when compared to a control group. Reducing the negative impacts of PCOS on mental and physical health requires early detection of these vulnerabilities and the application of focused interventions. In order to improve patient outcomes, integrative treatment approaches that address the hormonal, metabolic, and psychological elements of PCOS are crucial. Nutritional counseling, behavioral therapy, and medical management are all components of holistic care models that may improve quality of life and enable people to deal with the difficulties of having PCOS [17].

DETAILED CASE DESCRIPTION

A 25-year-old woman's physical and mental health significantly changed after receiving a PCOS diagnosis ten years ago. She was categorized as underweight, mildly thin, at the age of 15 due to her height of 1.68 m and weight of 50 kg, which translated into a body mass index (BMI) of 17.71. She started limiting her food intake after learning about the possible weight implications of PCOS, which greatly alarmed her. This behavior eventually evolved into a pattern that is typical of anorexia nervosa, which is marked by severe calorie restriction and an overwhelming dread of gaining weight. She began taking dienogest/ethinylestradiol daily for PCOS at the same time in an effort to control the hormonal imbalance and the symptoms that go along with it.

Her weight decreased to 47 kg at the age of 17, maintaining the same height of 1.68 m, giving her a BMI of 16.65, which is considered moderate thinness. Her family and social circle were becoming quite concerned about her because of her severe dread of gaining weight and her ongoing calorie restriction. They strongly intervened, advising her to get expert assistance, acknowledging the gravity of the problem. Access to a psychologist who specializes in eating problems was made possible thanks in large part to their

assistance. With the constant support of her family and two years of weekly cognitive behavioral therapy (CBT) without a maintenance period in between, she was able to address her underlying concerns and compulsive eating patterns.

At the age of 25, she continues to weigh 61 kg and stand 1.68 m tall, giving her a BMI of 21.16, which is within the normal range. Her physical health has not been the only aspect of her recovery; her mental health has also greatly improved. She completed the physique Appreciation Scale-2 (BAS-2) to assess her assessment of her physique, and she received an average score of 4.3 out of 5. The BAS-2 has shown high psychometric qualities in evaluating positive body image and has been validated as a meaningful measure of body appreciation across a variety of populations, including those in recovery from disordered eating. Her high score further supports the efficacy of the interventions she got by indicating a good self-image and an enhanced view of her physique.

Her experience serves as a reminder of the value of early diagnosis, expert psychological treatment, and robust social support in reducing the psychological impacts of PCOS. Additionally, it highlights how multidisciplinary approaches promote long-term health and self-acceptance.

DISCUSSION

PCOS is a very common endocrine condition that has a major effect on people's physical and emotional health, especially when they are fertile. PCOS, which affects a significant percentage of women, is linked to a wide range of clinical symptoms, including as hirsutism, irregular menstrual cycles, infertility, and metabolic disorders like obesity and insulin resistance [1]. One of the most significant and widespread of these issues is how PCOS affects how people see their bodies, particularly in relation to weight gain and metabolic dysfunction [2,3]. PCOS-diagnosed women often struggle with body image, which can result in psychological discomfort, increased weight gain concern, and the emergence of disordered eating patterns [6,7,9,10].

Given the difficulties in treating the disorder's physical symptoms as well as its effects on mental health, the relationship between PCOS and eating disorders is a serious cause for concern. Given the hormonal fluctuations and obvious physical changes that PCOS frequently causes, patients may be more susceptible to eating disorders and related psychological issues. This case highlights the significance of early intervention and ongoing monitoring. In this instance, a widespread fear of weight gain—a typical and upsetting worry for many women with PCOS—had a major impact on the patient's eating habits and body image [6,7].

The patient was underweight when she was first diagnosed, but her restricted eating habits, which closely resemble those of anorexia nervosa, were caused by her fear of gaining

weight. This conclusion is consistent with findings from other studies that indicate women with PCOS are more likely to develop disordered eating patterns, mostly as a result of the hormonal and metabolic issues they deal with [2,3]. Insulin resistance and hyperandrogenism, a frequent hormonal imbalance in PCOS, both heighten worries about weight gain and may even be a contributing factor in the development of eating disorders. These physiological factors produce a vicious cycle whereby restricted eating habits brought on by a fear of gaining weight exacerbate hormonal imbalances and metabolic dysfunctions, making managing PCOS more difficult on both a psychological and physical level [8,11].

However, the patient's wellbeing and body image may have improved as a result of hormone therapy, particularly COCs. COCs also aid in addressing mental disorders and low self-esteem associated with increased testosterone levels by controlling menstrual cycles and lowering hyperandrogenic symptoms including acne and hirsutism. Her general quality of life might have been improved by these consequences [5]. A cognitive behavioral therapy (CBT)-based strategy was put into place in response to these worries. In addition to promoting a healthier, more balanced relationship with food and body image, this therapy strategy proved to be essential in stopping the eating disorder's growth. By focusing on the cognitive distortions and maladaptive beliefs that support disordered eating behaviors, cognitive behavioral therapy (CBT) has continuously shown promise in the treatment of eating disorders, especially anorexia nervosa [18].

The patient was able to gradually transition towards more adaptive coping mechanisms by challenging the negative thought patterns associated with food and body image using cognitive behavioral therapy. Furthermore, it has been demonstrated that therapy approaches that improve self-compassion and emotional regulation dramatically lower anxiety, despair, and body image distress, increasing the subjective well-being of PCOS-afflicted women [3,19]. Though CBT is useful, other therapeutic modalities like mindfulness-based therapies and acceptance and commitment therapy (ACT) have also demonstrated encouraging outcomes in treating body image issues in long-term disorders like PCOS [12,16]. These methods provide supplementary or alternate tactics that could improve therapy results even more.

The successful outcome in this instance, demonstrated by a normalized body mass index (BMI) of 21.16 and a remarkable Body Appreciation Scale-2 (BAS-2) score, highlights the efficacy of the intervention [13]. These enhancements imply that the patient was able to develop a more balanced and positive body image and that the restricted eating habits were effectively stopped [10,20]. In addition to addressing short-term issues with eating habits, cognitive behavioral therapy (CBT) also supported long-term mental health advantages, such as the development of self-compassion and emotional

control. This case highlights the significance of a holistic, multifaceted treatment approach to address both the physical and psychological aspects of the condition and demonstrates the significant impact that early, targeted intervention can have on preventing the escalation of eating disorders in women with PCOS.

CONCLUSIONS

For women with PCOS, particularly those who are at risk of eating disorders or who are undergoing major changes in their body image, this instance emphasizes the vital need of early detection and care. PCOS's outward manifestations, such weight gain, insulin resistance, and hyperandrogenism, can have a significant psychological impact by fostering worry, a poor body image, and the emergence of disordered eating patterns. Clinicians can take action before these problems worsen and have longer-lasting effects by recognizing them early. A crucial element of this strategy was the application of CBT. Through the promotion of more adaptive behaviors and healthier thought patterns, cognitive behavioral therapy (CBT) assists patients in addressing the cognitive distortions and maladaptive beliefs that underlie eating disorders and body image issues.

CBT by itself, though, might not be enough. A strong social network is also necessary because the therapeutic process is strengthened and continuous encouragement is given by the emotional support of friends, family, and medical professionals. Additionally, for individuals with body image disorders who have received cognitive behavioral therapy, longitudinal follow-up is essential since it aids in tracking and maintaining therapeutic improvements. Furthermore, continuous tracking of psychological and physical markers, such as the Body Appreciation Scale-2 (BAS-2) and Body Mass Index (BMI), enables therapists to assess patient progress and modify treatment regimens as needed. Women with PCOS can greatly improve their physical and mental health with early help for disordered eating and body image issues, which will improve their long-term results.

REFERENCES

1. Azziz, R.; Carmina, E.; Dewailly, D.; Diamanti-Kandarakis, E.; Lobo, R.; Oberfield, S.E. The Polycystic Ovary Syndrome: A Position Statement from the European Society of Human Reproduction and Embryology. *Hum. Reprod.* 2004, 19, 537–547.
2. Rosenfield, R.L. Clinical Review: The Pathophysiology of Polycystic Ovary Syndrome. *J. Clin. Endocrinol. Metab.*
3. Deeks, A.A.; Gibson-Helm, M.E.; Teede, H.J. Psychological Impact of Polycystic Ovary Syndrome on Quality of Life and Psychological Well-Being. *Hum. Reprod.* 2010, 25, 2135–2143.
4. Rao, H.C.; Meyer, M.L.; Kominiarek, M.A.; Daviglus, M.L.; Gallo, L.C.; Cordero, C.; Syan, R.; Perreira, K.M.; Talavera, G.A.; Fernández-Rhodes, L. Polycystic Ovary Syndrome, Metabolic Syndrome, and Inflammation in the Hispanic Community Health Study/Study of Latinos. *J. Clin. Endocrinol. Metab.* 2024, dgae426, Epub ahead of print. [CrossRef] [PubMed]
5. Nicandri, K.F.; Hoeger, K. Diagnosis and treatment of polycystic ovarian syndrome in adolescents. *Curr. Opin. Endocrinol. Diabetes Obes.* 2012, 19, 497–504. [CrossRef] [PubMed]
6. Moran, L.J.; Misso, M.L.; Wild, R.A.; Norman, R.J. Obesity and Polycystic Ovary Syndrome: A Review of the Evidence and Impact of Weight Loss. *Endocr. Rev.* 2011, 32, 1–16.
7. Wild, R.A.; Carmina, E. PCOS and Eating Disorders: A Review of the Literature. *J. Am. Med. Assoc.* 2012, 307, 1413–1419.
8. Fauser, B.C.; Tarlatzis, B.C.; Rebar, R.W. PCOS: A Consensus on Diagnosis and Management. *Hum. Reprod.* 2012, 27, 2141–2153.
9. Sun, M.; Yi, Q. Mediating role of anxiety between body image distress and quality of life among women with polycystic ovary syndrome: A multicentre cross-sectional study. *BMC Women's Health* 2024, 24, 658. [CrossRef] [PubMed]
10. Gonzalez, M.; Lopez, R.; Paredes, A. Psychological Impact of Polycystic Ovary Syndrome on Women's Quality of Life. *Int. J. Eat. Disord.* 2014, 47, 213–221.
11. Bouldin, E.D.; McCullough, M.E.; Sandberg, D.E. Psychological Functioning in Women with Polycystic Ovary Syndrome: The Role of Depression, Anxiety, and Self-Esteem. *J. Women's Health* 2012, 21, 528–536.
12. Bafghi, Z.R.; Ahmadi, A.; Mirzaee, F.; Ghazanfarpour, M. The effect of mindfulness-based art therapy (MBAT) on the body image of women with polycystic ovary syndrome (PCOS): A randomized controlled trial. *BMC Psychiatry* 2024, 24, 611. [CrossRef] [PubMed]
13. Alkheyr, Z.; Murad, M.; Das, P.; Aljenaee, K.; Kamel, C.; Hajji, S.A.; Flood, J.; Atkin, S.L.; Ali, K.F. Self-esteem and

- body image satisfaction in women with PCOS in the Middle East: Cross-sectional social media study. *PLoS ONE* 2024, 19, e0301707. [CrossRef] [PubMed]
14. Tylka, T.L.; Wood-Barcalow, N.L. The Body Appreciation Scale-2: Item refinement and psychometric evaluation. *Body Image* 2015, 12, 53–67. [CrossRef] [PubMed]
 15. Linardon, J.; Wade, T.D.; de la Piedad Garcia, X.; Brennan, L. The efficacy of cognitive-behavioral therapy for eating disorders: A systematic review and meta-analysis. *J. Consult. Clin. Psychol.* 2017, 85, 1080–1094. [CrossRef]
 16. Moradi, F.; Ghadiri-Anari, A.; Dehghani, A.; Reza Vaziri, S.; Enjezab, B. The effectiveness of counseling based on acceptance and commitment therapy on body image and self-esteem in polycystic ovary syndrome: An RCT. *Int. J. Reprod. Biomed.* 2020, 18, 243–252. [CrossRef] [PubMed] [PubMed Central]
 17. Kuehner, C.; Kuehner, A. Depression in Women with Polycystic Ovary Syndrome: The Role of Social and Familial Support. *Psychol. Med.* 2014, 44, 2541–2552.
 18. Fairburn, C.G.; Cooper, Z.; Shafran, R. *Cognitive Behavior Therapy for Eating Disorders: A Comprehensive Treatment Guide*; The Guilford Press: New York, NY, USA, 2009.
 19. Wang, G.; Liu, X.; Zhu, S.; Lei, J. Regulatory emotional self-efficacy and self-compassion mediate anxiety, depression, body image distress and subjective well-being in women with polycystic ovary syndrome: A cross-sectional study. *J. Adv. Nurs.* 2025, 81, 286–299. [CrossRef] [PubMed]
 20. Cash, T.F.; Smolak, L. *Body Image: A Handbook of Theory, Research, and Clinical Practice*; The Guilford Press: New York, NY, USA, 2012.