



# Mindful Breathing and Positive Affirmations: Empowering Body Image among Women with Polycystic Ovarian Syndrome – A Case Study

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## KEYWORDS

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## ABSTRACT:

Introduction: Polycystic Ovarian Syndrome (PCOS) is a prevalent condition affecting women of reproductive age and often remains undiagnosed. Beyond its impact on the endocrine system, PCOS significantly affects various aspects of women's health. The visible symptoms merely scratch the surface, as untreated and undiagnosed PCOS leads to a range of associated conditions. This case report shares a journey of a young woman with PCOS, Emphasizing the importance of timely diagnosis and the effectiveness of mindful breathing and positive affirmations. Aim: - To study the efficacy of the Mindful Breathing technique and Positive affirmations on body image concerns in a woman with Polycystic ovary syndrome. Objectives: - To identify the body image concerns in a woman with Polycystic Ovary Syndrome and to study the effectiveness of Mindful breathing and positive affirmations on body image concerns in a woman with Polycystic ovary syndrome. Methodology: - Mixed methods approach has been used, combining both qualitative and quantitative methods. Discussion: The 6-week intervention program of mindful breathing exercises and positive affirmations has shown promising results, improving the subject's body image concerns, perception of weight, and satisfaction with her body. It has increased her confidence and promoted a healthier body image and well-being. Further improvement is possible. Conclusion: The findings highlight the benefits of incorporating alternative therapies and mind-body techniques in PCOS management, emphasizing the importance of addressing psychological well-being and promoting a positive body image.

## Introduction

Polycystic ovarian syndrome (PCOS), also known as Stein-Leventhal syndrome, is a prevalent endocrine disorder that affects women from their teenage years to menopause. This syndrome disrupts the balance of estrogen and progesterone hormones, leading to irregular menstrual cycles and various physical manifestations. Women with PCOS commonly experience infertility, obesity, excessive hair growth, and acne, which can have profound effects on their mental health, including depression, anxiety, and body image concerns. Recent research conducted by Rajeev Devu (2022) has shed light on the psychological implications of PCOS, highlighting higher levels of depression, anxiety, stress, body dissatisfaction, lower self-esteem, and reduced quality of life among women with PCOS compared to those without the condition.

In response to the multifaceted challenges faced by individuals with PCOS, incorporating holistic approaches such as mindfulness and positive affirmations has gained attention in mental health care. Mindfulness, derived from Eastern meditation traditions, involves purposefully paying attention to one's thoughts, emotions, and bodily sensations in the present moment, without judgment. Studies, such as the one by Karl et al. (2018), have shown that mindfulness practice reduces amygdala activation, enhancing cognitive awareness and facilitating stress regulation, ultimately promoting a sense of calm, peace, and balance. The immediate benefits of mindfulness make it a promising intervention for managing PCOS-related psychological distress.

Self-affirmations, rooted in Claude Steele's self-affirmation theory (Steele, C. M. (1988)), offer another holistic approach



to address mental health issues. According to this theory, individuals possess a motivation to uphold their self-integrity and perceive themselves as capable, virtuous, and in control of important outcomes. Self-affirmations play a pivotal role in shaping one's identity by fostering positive responses in various circumstances. By repeating empowering statements, individuals can instill confidence and beliefs that improve their relationship with their bodies, resulting in increased self-esteem, resilience when facing psychological challenges, and enhanced interpersonal relationships. The theory of affirmations aligns with the concept of the Law of Attraction, which suggests that thoughts and intentions manifest in our lives, emphasizing the role of self-created reality.

This research paper aims to explore the effectiveness of mindfulness and positive affirmations in managing mental health issues and body image concerns in women with PCOS. By examining a unique case study of a 20-year-old adolescent girl with PCOS and body image concerns, who has transitioned through various treatment modalities including allopathic medicines, homeopathic remedies, and Ayurvedic treatment, this study aims to shed light on the complexities of PCOS management and its impact on the patient's physical and psychological well-being. Additionally, the integration of mindfulness-based interventions, such as mindful breathing exercises, and the efficacy of positive affirmations present novel approaches to addressing body image concerns in the context of PCOS. The significance of this research lies in its contribution to the scientific literature, particularly in India, where limited work has been done on the combination of mental health, mindful breathing, positive affirmations, and polycystic ovarian syndrome. By understanding the experiences and outcomes of this case study, mental healthcare professionals can gain valuable insights into identifying women with PCOS who are at risk for psychological distress. Moreover, this comprehensive approach highlights the importance of patient-centered care in managing PCOS and emphasizes the need for a holistic understanding of the condition.

## Case Study Presentation

The patient is a 23-year-old adolescent girl with a height of 5'3" and weight of 64 kilograms, presented to a gynaecologist in September 2018 with complaints of facial pimples, weight gain, hair loss, and irregular periods. Upon examination, the gynaecologist suggested the patient to undergo a blood test and an ultrasound. The ultrasound revealed the presence of more than 15 small follicles in both

ovaries. After a comprehensive evaluation, the gynaecologist diagnosed her with Amenorrhea due to PCOS and overweight. The gynaecologist recommended lifestyle modifications, including regular exercise and dietary changes, particularly avoiding sugar, chocolates, ice creams, oily foods, foods including preservatives, etc. In addition to these recommendations, the patient was prescribed allopathic medicines. The patient adhered to the prescribed allopathic treatment plan. From September 2018 to June 2020, she experienced improved symptoms, with regular periods, reduced weight to 62 kgs, and fewer facial pimples. However, the patient observed that her periods became irregular again whenever she stopped taking the prescribed medication. Due to the COVID-19 pandemic, the patient had to discontinue allopathic medicines in 2020 and lost contact with her gynaecologist. Consequently, her symptoms resurfaced, including weight gain, hair loss, facial pimples, and irregular periods. The irregularity of her menstrual cycles worsened, with the absence of periods for up to six months or longer. Despite engaging in regular exercises, such as treadmill workouts and cycling, and maintaining a healthy homemade diet, her symptoms persisted leading to various psychological problems. One notable issue was the development of body image concerns, as the patient experienced weight gain, hair loss, facial pimples, and irregular periods. These physical changes significantly impacted her self-perception and led to increased anxiety about her appearance. In addition to body image concerns, the patient also experienced mood swings, indicating emotional instability. As a response to these psychological challenges, the patient engaged in certain behaviors related to her psychological issues, such as constantly comparing herself to others, excessively monitoring her appearance, and experiencing reduced self-esteem.

Concerned about the side effects associated with allopathic medications, the patient sought alternative treatment options. Initially, she consulted an online homeopathic doctor and switched to homeopathic medicines for a period of six months. However, she discontinued the homeopathic treatment due to difficulties in obtaining the prescribed medicines. Subsequently, in February 2022, she sought consultation with an Ayurvedic doctor but due to the sudden demise of the doctor in April 2023 her treatment plan was unexpectedly disrupted. As a consequence, the patient has been without medication since April 2023.

*Family history and genetic information:* - The patient's family dynamics and medical history provide valuable



insights into her health condition. She resides in a nuclear family comprising her parents, younger brother, and herself. The family members have exhibited a supportive attitude towards her health concerns, which has likely contributed to her seeking medical assistance and adhering to treatment recommendations. The patient's mother, who maintains a moderate weight, has no history of menstrual irregularities or other health issues such as diabetes, obesity, or thyroid problems. On the other hand, her father has been diagnosed with multiple health conditions, including diabetes, uric acid, and high blood pressure. His initial diagnosis of diabetes occurred at the age of 52 in 2016, followed by the emergence of additional health problems. Given the presence of these health issues in the father, medical professionals have ruled out no genetic link between the patient's PCOS and her familial predisposition. Instead, lifestyle factors can be considered the probable cause. Understanding the familial context and health history contributes to a comprehensive understanding of the patient's condition and underscores the significance of addressing lifestyle factors in managing PCOS effectively.

**Medical History:** - After the gynaecologist's diagnosis of PCOS, the patient was prescribed a combination of allopathic medicines to manage her condition. The prescribed medications included:

- *Metformin 500 mg*: This medication is commonly used to treat insulin resistance and regulate blood sugar levels in individuals with PCOS.
- *Correctia-M (once daily)*: This medicine likely contains a combination of hormonal components such as progestin and estrogen to regulate the menstrual cycle and address hormonal imbalances associated with PCOS.
- *Dronis-30 (once daily for 21 days)*: Dronis-30 is a contraceptive pill that helps regulate menstrual cycles and reduce the symptoms of PCOS by providing hormonal support.

- *Amycordial syrup (2 teaspoons twice a day)*: Amycordial syrup is an Ayurvedic preparation that may help manage symptoms of PCOS, such as irregular periods and hormonal imbalances.

## Homeopathic Medicines

- *Pulsatilla-30*: - 4 drops in the morning.
- *Sepia-30*: - 4 drops in the afternoon and evening.
- *Bio Comb-17*: - 4 tablets, thrice a day.
- *Janosia Ashoka-Q*: -20 drops in half a cup of water, four times a day.

## Ayurvedic Medicines

- *Kamni Mundan Ras*: - 2 tablets in the morning and evening (after breakfast and dinner)
- *Ashokaristha*: - 2 Tablespoons in warm water in the morning and evening (after breakfast and dinner)
- *Kumaryasav*: - 2 tablespoons in warm water in the morning and evening (after breakfast and dinner)

## Objectives

- To identify the body image concerns in a woman with Polycystic Ovary Syndrome
- To study the effectiveness of Mindful breathing and positive affirmations on body image concerns in a woman with Polycystic ovary syndrome.

## Hypothesis

Null Hypothesis: There will be no difference in the body image concerns post-intervention.

H1: There will be a significant difference in body image concerns post-intervention in a woman with polycystic ovarian syndrome.

## Methods

In this research mixed methods approach has been used, combining both qualitative and quantitative methods.

## Research Design

The research design is represented as a flow chart (Figure 1). The Flow chart illustrates the various steps and processes involved in the study.

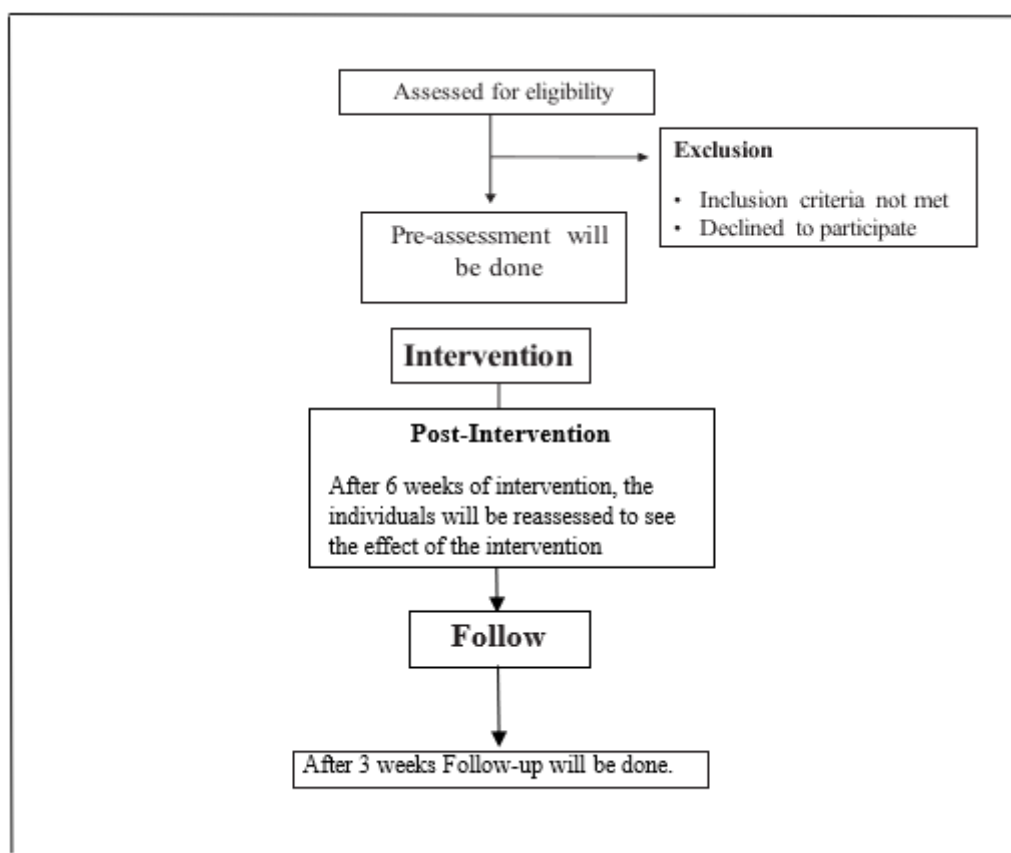


FIGURE 1: Flow chart of research design

### Sample

The present study consists of a 23-year-old adolescent girl diagnosed with polycystic ovarian syndrome (PCOS). This research is based on a case study whose name is not revealed due to ethical considerations.

### Procedure

The subject was briefed regarding the research to be conducted. Then, an informed consent form was provided to her for her permission. The research participant was given written informed consent to take part in the study.

- **Initial Assessment:** The participant's demographic information, medical history, and specific symptoms related to PCOS were collected during an initial assessment session. Height and weight measurements were taken to determine the participant's body mass index (BMI). The Body Image Scale (BIS) assessed the participant's body image concerns.
- **Interview Method:** A semi-structured interview was conducted with the participant to better understand her experiences with PCOS, body image concerns, and treatment history. The interview aimed to explore the

impact of PCOS on the participant's body image and her perceptions of self-esteem and well-being.

- **Intervention:** Mindful Breathing Exercises and Positive affirmations
  - i) **Mindful Breathing Exercises:** The participant was introduced to mindful breathing techniques, which involved bringing awareness to her breath and focusing on the sensations associated with each inhalation and exhalation. She was guided through regular practice sessions to cultivate mindfulness and promote relaxation.
  - ii) **Positive Affirmations:** The participant was encouraged to practice positive affirmations to address her body image concerns. She was provided with a list of affirmations tailored to her specific needs, emphasizing self-acceptance, self-love, and body positivity. The participant was instructed to repeat these affirmations daily, either silently or aloud.
- **Intervention Monitoring and Evaluation:** The participant's progress was monitored throughout the intervention period. Regular check-ins were conducted to assess her engagement with mindful



breathing exercises and the practice of positive affirmations. The participant's self-reported experiences, including any changes in body image concerns, mood, and overall well-being, were documented.

- **Post-intervention Assessment:** Following the intervention period, a post-intervention assessment was conducted after 3 weeks of the intervention program to re-evaluate the participant's body image concerns using the BIS. The participant's feedback was also obtained regarding the effectiveness of mindful breathing exercises and positive affirmations in reducing body image concerns.

#### Ethical considerations

It was ensured to the participant of the study in person that her participation in this research will not affect her privacy and also confidentiality will be maintained throughout the study. To ensure the privacy of the respondent, interviews were conducted separately without entertaining the presence of others. The personal information of the

respondent was kept confidential. Consent for participation was obtained from the participant for the study.

#### Tools

**The Body Image Scale (BIS):** - A BIS was developed in 2018 by Ramesh Kumar Taani and Rakesh Kumar Behmani. This BIS is composed of 28 items. Each item in this scale measures self-related body image. In order to collect the subjects' feelings about their bodies, all questions are graded on a five-point Likert scale. Responses range from strongly agree to strongly disagree. Raw scores are calculated by adding the scores of all questions. High raw scores indicate greater dissatisfaction with the body, with 140 being the highest possible score.

#### Results

The pre-intervention results are presented in Table 1, representing the scores and interpretation for each dimension of the Body Image Scale (Table 1). On the other hand, the post-intervention results are represented in Table 2, which shows the scores and interpretations for each dimension of BIS after the intervention (Table 2).

**Table 1:** Pre-Intervention Results

Dimensions of BIS	Scores	Interpretation
Weight Perception	42	Average Scores
Wish for Fit Body	16	High Scores
Satisfaction with Body	17	High Scores
Body Part Dissatisfaction	21	Average Scores
Health Consciousness	5	Low scores

**Table 2:** Post- Intervention Results

Dimensions of BIS	Scores	Interpretation
Weight Perception	36	Average Scores
Wish for Fit Body	18	High Scores
Satisfaction with Body	14	Average Scores
Body Part Dissatisfaction	16	Low Scores
Health Consciousness	4	Low Scores

#### Discussion

The case report emphasizes the importance and significance of patient education and continuous engagement. The patient's search for an alternative treatment demonstrates her active involvement in her own healthcare journey. The case report also highlights the case complexities of PCOS management and individualized and comprehensive treatment approaches for managing PCOS. The experiences and outcomes of this case also contribute to the existing literature by shedding light on the potential barriers that can

hinder patients' adherence to alternative therapies. It also contributes to our understanding of the impact of PCOS on mental health and emphasizes the need for a holistic approach that includes both physical and mental well-being.

#### Pre-intervention Analysis

The Body image scale has been used to assess body image concerns (BIS) for the above case report. The BIS measures the body image of an individual thinking about their body at present. It is not intended to diagnose any psychiatric disorders. However, it gives some idea about their attitude





towards their body image and what they think or feel about their body. The discussion of the results drawn is intended to give a general idea of the subjects thinking/ feelings about her body. According to the subject's responses in the weight perception domain, it is evident that she holds some negative thoughts about her body. However, the interpretation of the scores for this domain suggests that her perception of her weight is on average, yet leaning towards the negative side. The subject expresses a desire to be thin and exhibits significant concerns about weight gain, particularly consuming fatty foods. She demonstrates persistent efforts to explore different methods for weight loss, indicating a strong motivation to achieve her desired body weight. Notably, the subject experiences a boost in confidence when she succeeds in losing weight.

In the wish for fit body dimension, the subject's score indicates a desirability to get a fit body. she demonstrates a strong desire for a perfect body. she often finds herself preoccupied with thoughts of achieving an ideal body shape. This reveals her goal to attain a body that aligns with societal standards of perfection. Moreover, the subject's responses and scores in satisfaction with her body indicate a negative attitude towards her body. She expresses dissatisfaction with her body parts and it is important to note that the subject does not consider her body to be attractive and feels discomfort because of her some body parts.

The soring and interpretation in the dimension of body part dissatisfaction revealed that she neither expresses satisfaction nor dissatisfaction with her body parts and takes a neutral stance towards her body parts. She firmly believes that there is no need to alter or remove parts of her body through surgery/operation to improve her body. However, it is important to note that she feels shy to meet people because of her body shape. She feels a sense of deformity and discomfort because of her body parts. These feelings of self-consciousness and unease highlight the impact of body image concerns.

The health consciousness dimension deals with thoughts about good physical health, illness protection, and trying to lead a healthy lifestyle. The subject's score indicates that she is conscious of her health and is well aware of the factors which may affect her health. She also tries to follow a healthy lifestyle.

### **Post-Intervention Analysis**

Looking at the pre-intervention analysis it is very evident that the subject has concerns about her body image therefore to address these concerns, a 6-week intervention program involving mindful breathing and positive affirmations was

conducted for a duration of 6 weeks, consisting of weekly meetings held twice a week. In the initial sessions, the subject was educated about the intervention program followed by guidance on practicing mindful breathing and utilizing positive affirmations. Each session lasted for half an hour. The subject was instructed to engage in mindful breathing exercises for 15 minutes every morning and practice positive affirmations 3-4 times a day. She was also asked to maintain a journal to keep the record. Regular reminders were given to the subject through phone calls to ensure continued practice. Post-intervention a follow-up assessment was conducted 3 weeks after the completion of the 6 weeks intervention program. The purpose of the follow-up was to evaluate the sustainability of the positive changes observed in the subject's body image concerns and to assess any long-term effects of the intervention.

Before the intervention period, the negative affirmations that the subject used to say or repeat in her head, such as "I am not attractive, I have flaws in my body, I am not beautiful enough, I am not happy with my body, I am fat", were replaced by Positive Affirmations. These positive affirmations included statements such as "I am worthy of love, I deserve to feel good and happy, I have an abundance of positive energy to offer everyone, I am kind and gentle to myself, I prioritize my happiness, I am perfect, I am feeling good about myself, I love my body as it is, I love myself, I am comfortable in my skin, I appreciate my body, I have a beautiful body" etc. Initially, the subject experienced little difficulty in controlling her negative thoughts and replacing them with positive but with practice and commitment, she was gradually able to feel the difference. The subject also faced difficulty in focusing on her breath. She expressed that while focusing on breathing she was easily distracted either by external factors or by her own thoughts. After some sessions of mindful breathing, she felt very calm and relaxed. Mindful breathing helped her cultivate a sense of gratitude, self-acceptance, and confidence in her body. During the follow-up assessment, the subject reported that she continued practicing mindful breathing exercises and using positive affirmations regularly even after the completion of the intervention program. She mentioned that these practices had become a part of her daily routine and had helped her maintain a more positive mindset and body image.

The analysis of post-intervention results indicates significant improvements, particularly in two dimensions. Firstly, in the dimension of body part dissatisfaction, the subject shifts her neutral stance to a positive stance towards



her body parts and expresses satisfaction with her body parts. She experiences a sense of comfort and became less self-conscious about her body parts. Secondly, regarding satisfaction with her body, the subject initially expressed dissatisfaction and discomfort with her body. However, post-intervention scores indicate a neutral stance toward her body. The intervention may have contributed to a shift in her perception, leading to decrease feelings of self-consciousness and increased acceptance.

In the weight perception domain, post-intervention the subject has shown little improvement in her perception of her weight. Although, her perception still leans towards the neutral side but shown some improvement. The subject's stance on the wish for a fit body and health consciousness remains almost the same.

Overall, the 6-week intervention program including mindful breathing exercises and positive affirmations has shown promising results in improving the subject's body image concerns. The follow-up assessment confirmed the sustainability of the positive changes and highlighted the importance of continued practice to maintain a healthy body image. While there is still room for further improvement, the intervention has facilitated positive changes in her perception of weight, and satisfaction with her body and body parts. The subject's improved mindset and increased confidence are encouraging indicators of the effectiveness of intervention in promoting a healthier body image and overall well-being.

## Hypothesis Testing

The null hypothesis has been rejected

## Conclusion

In this case study, a 23-year-old woman with polycystic ovary syndrome (PCOS) experienced body image concerns and psychological issues related to her condition. A 6-week intervention program involving mindful breathing exercises and positive affirmations was implemented. Post-intervention analysis showed significant improvements in her perception of body parts, leading to increased satisfaction and reduced self-consciousness. While her perception of weight showed slight improvement, overall body satisfaction improved. The findings highlight the benefits of incorporating alternative therapies and mind-body techniques in PCOS management, emphasizing the importance of addressing psychological well-being and promoting a positive body image. This case study contributes to our understanding of the effectiveness of

interventions targeting body image concerns in individuals with PCOS and underscores the need for a comprehensive approach to treatment.

## Limitations

This study has a few limitations that should be considered. Firstly, the small sample size and lack of a control group limit the generalizability of the results. Secondly, the use of self-report measures for assessing body image concerns introduces the potential for bias and subjective interpretation. Additionally, the short duration of the intervention prevents an understanding of the sustained effects. These limitations highlight the need for further research with larger sample sizes, control groups, longer intervention periods, and diverse populations to confirm the effectiveness of mindful breathing and positive affirmations in addressing body image concerns among individuals with PCOS.

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