

## **Social Media and Self-Diagnosis: The Psychological Impact of PCOS Content on GenZ Women.**

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### **ABSTRACT**

**Background:** Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder affecting reproductive aged women, often linked with hormonal imbalance and metabolic issues.

**Objective:** This study examines the psychological impact of PCOS related social media content on Generation Z women, with emphasis on self-diagnosis behaviors, emotional well-being, awareness and the comparative influence of influencers and medical professionals.

**Methodology:** Over three months (20<sup>th</sup> January to 12<sup>th</sup> April), a structured questionnaire-based cross sectional was conducted among 100 female university students enrolled in undergraduate and postgraduate programs in order to assess the level of awareness and to explore the influence of social media on their knowledge and perception about this disease. Data were analyzed using IBM SPSS Statistics version 24. Ethical approval was obtained from the Central Park Medical College Institutional Review Board (Approval No. CPMC/IRB-No/1529).

**Results:** Eighty-seven participants (M age = 21.54, SD = 2.22) were surveyed on their PCOS diagnosis status and self-rated knowledge after viewing online content. Most were undergraduates (85.1%), and 77.0% reported no PCOS diagnosis. Chi-square analyses revealed significant associations between self-rated knowledge and both PCOS diagnosis ( $\chi^2 = 32.01$ ,  $p < .001$ ) and age ( $\chi^2 = 47.66$ ,  $p = .047$ ). No significant associations were found between educational level and diagnosis or knowledge. Participants with a confirmed PCOS diagnosis

were more likely to feel somewhat informed, while those unsure of their diagnosis tended to report uncertainty about PCOS. These results suggest that perceived knowledge is significantly influenced by diagnosis status and age, rather than educational level.

**Conclusion:** This study explored how social media impacts the mental health of individuals with PCOS, revealing both positive and negative effects. While many participants found emotional support, information and community through online platforms, others experienced increased anxiety, body dissatisfaction and harmful self-comparison due to idealized content and misinformation. The findings emphasize the importance of guiding digital engagement and integrating supportive, evidence-based online resources into PCOS care.

## INTRODUCTION

Polycystic ovarian syndrome is a widespread disorder affecting 8-13% of females of reproductive age globally, yet 70% of cases go undiagnosed. PCOS is associated with a wide range of health issues, including infertility, cardiovascular problems, insulin resistance, mental issues, and obesity.<sup>1</sup> Hormonal changes are the main cause of these signs and symptoms in patients. Hormones, including FSH, LH, insulin, growth hormone, ghrelin, GnRH androgen and estrogen, are all abnormal in females affected with PCOS.<sup>2</sup> Despite its widespread impact, public awareness and knowledge about it remain deficient.

World has now become a global village with the rise of technology and new innervations, this has caused social media to become a major source of health related information for adolescents and young adults, including university students.<sup>3</sup> Hundreds of online platforms like Instagram, YouTube, WhatsApp, Twitter etc are a ground for people who share their personal experiences about signs and symptoms, treatment strategies and advice related to PCOS.<sup>4</sup> These streams influence the minds of people especially the female university students at the peak of their reproductive age.

This study explores the level of PCOS awareness in female university students and assesses the level of role played by social media in this awareness.

It aims to identify key resources of information and potential gaps in digital health literacy concerning PCOS.

Polycystic ovarian syndrome (PCOS) is a hormonal disorder that commonly affects women in their reproductive years. If you have PCOS, you may experience irregular, frequent, or longer

menstrual cycles. With PCOS, many small fluid-filled sacs called cysts develop along the outer edge of the ovaries. These cysts contain immature follicles, which fail to undergo regular ovulation.<sup>5</sup>

The symptoms of PCOS include irregular periods, excess body hair (hirsutism), weight gain especially around the belly, acne, and infertility.<sup>6</sup> Early diagnosis, along with treatment and weight loss, may reduce the risk of long-term complications such as type 2 diabetes and heart disease.<sup>6</sup>

Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder in females, affecting 4–18% of women of reproductive age. There is growing concern about the increasing prevalence of PCOS among young females in Pakistan. The prevalence of PCOS in South Asian women, especially Pakistani women, is 52%, which is significantly higher than the estimated 20-25% observed in the white population in the United Kingdom.<sup>7</sup>

Although research on the awareness and prevalence of polycystic ovarian syndrome (PCOS) among Pakistani women is available, several critical gaps remain. Existing studies emphasize the need for more comprehensive investigations, particularly concerning the psychological effects of PCOS on young women and the influence of social media in spreading disease awareness. In particular, there is a documented lack of understanding among Generation Z women regarding the psychological impact of PCOS-related content on social media and the subsequent trend of self-diagnosis.<sup>8</sup>

## **Objective**

The primary objective of this study is to examine the psychological impact of PCOS-related content on social media among Generation Z women, with a particular focus on how this content contributes to self-diagnosis behaviors, emotional well-being (such as anxiety and body dissatisfaction), and overall awareness of the disorder. The study also aims to evaluate the credibility and influence of different sources of online information, such as influencers vs. medical professionals.

## **METHODOLOGY**

### **Study design/ data collection tool**

Over three months (20<sup>th</sup> January to 12<sup>th</sup> April 2025), a structured questionnaire based cross sectional was conducted in order to assess the level of awareness in female university students

enrolled in under and postgraduate programs and to explore the influence of social media on their knowledge and perception about this disease. It included demographics, knowledge of PCOS, self diagnosis of symptoms and its source of information i.e. social media.

### **Psychological Effects and Measurement**

The psychological effects studied included anxiety, emotional reassurance, confusion, body dissatisfaction, self-comparison, and perceived social support. These were assessed using a self-developed structured questionnaire based on existing literature and prior validated studies. Participants were asked to self-report their emotional responses to PCOS-related social media content using categorical and Likert-scale questions (e.g., "Did PCOS content make you feel more anxious?", "Did you compare your body to influencers?"). Standardized clinical tools (e.g., HADS, BDI) were not used in this study, and all psychological data reflect perceived or self-reported emotional impacts rather than formal diagnoses.

### **Study setting**

The study population included female university students of age ranging from 18-28. participants were approached both in person and through various social media sites to fill out a structured questionnaire. Ethical approval was obtained from the Central Park Medical College Institutional Review Board (Approval No. CPMC/IRB-No/1529).

### **Sample size**

The sample size was calculated through Epi info software and estimated prevalence rate from previous studies. The final sample included 100 participants.

### **Inclusion criteria**

- Female students between 18-28.
- Enrolled in under and postgraduate programs.
- Inclined towards participation and gave informed consent.

### **Exclusion criteria**

- Female students outside the range of 18-28.
- Not enrolled in universities.

## Data analysis

Data was analyzed using IBM SPSS Statistics version 24. Descriptive data including frequencies, percentages and means were used to summarize the data. The link between awareness levels and other variables such as age, field of study and social media relevance, were tested using chi-square and other relevant statistical tests

## RESULTS

A total of 87 participants were included in the study, with a mean age of 21.54 years (SD = 2.22). The most frequent age was 20 years (22.99%). Most participants were undergraduates (85.1%), while 14.9% were postgraduates. Regarding PCOS diagnosis, 77.0% reported no diagnosis, 12.6% reported yes, and 10.3% were unsure. In terms of self-rated knowledge after viewing online content, 50.6% felt somewhat informed, 32.2% reported a good understanding, 14.9% had heard of PCOS but were unsure, and 2.3% reported no understanding.

Chi-square tests revealed significant associations between self-rated knowledge and PCOS diagnosis ( $\chi^2 = 32.01$ ,  $p < 0.001$ ) and between self-rated knowledge and age ( $\chi^2 = 47.66$ ,  $p = 0.047$ ). However, no significant associations were observed between educational level and PCOS diagnosis ( $\chi^2 = 3.13$ ,  $p = 0.537$ ), age and PCOS diagnosis ( $\chi^2 = 28.17$ ,  $p = 0.170$ ), or educational level and self-rated knowledge ( $\chi^2 = 7.06$ ,  $p = 0.316$ ).

Participants with a confirmed PCOS diagnosis were significantly more likely to report being somewhat informed, whereas those unsure of their diagnosis often reported that they had heard of PCOS but were unsure. These findings indicate that self-rated knowledge is strongly influenced by diagnosis status and age, while educational level does not play a significant role in determining either perceived knowledge or diagnosis.

**Table 1:** Awareness of PCOS through social media platforms

Platform	% of Respondents who have seen PCOS Content	% Who Learned New Information About PCOS	% Who Follow PCOS-related Accounts
Instagram	82%	74%	56%
TikTok	67%	61%	48%
YouTube	45%	39%	33%
Twitter/X	20%	15%	10%
Reddit	18%	12%	9%

**Table 2:** Mental health impact of PCOS content on social media

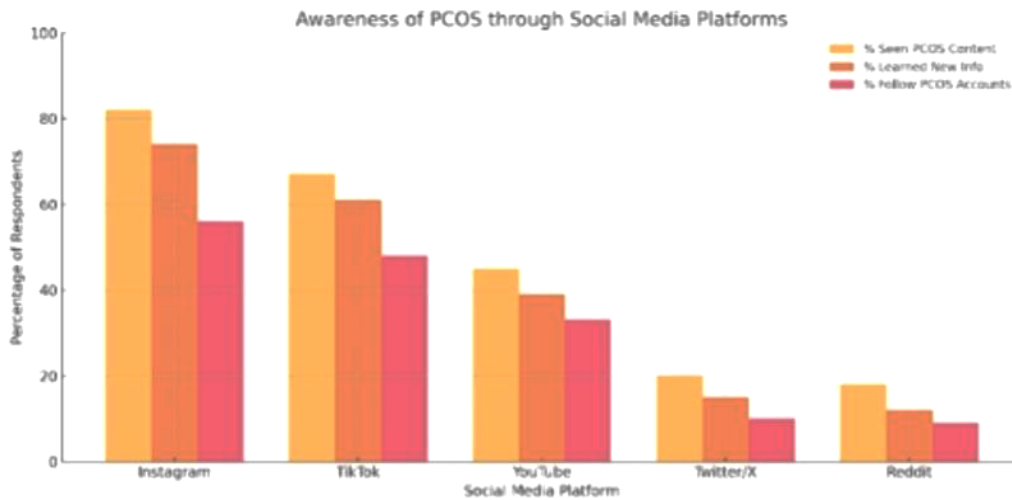
<b>Response category</b>	<b>% of Respondents</b>
Felt more anxious after seeing PCOS content	46%
Felt more reassured or more informed	41%
Compared their body to influencers/doctors	58%
Reported feeling overwhelmed or confused	35%
Motivated to seek professional diagnosis	29%
Indicated no emotional effect	18%

**Table 3:** Perception and beliefs about PCOS influenced by social media

<b>Statement</b>	<b>Agree(%)</b>	<b>Neutral(%)</b>	<b>Disagree(%)</b>
Social media content helps normalize PCOS discussions	73%	18%	9%
Influencers often oversimplify or misrepresent PCOS	62%	24%	14%
I believe I might have PCOS based on social media symptoms	37%	26%	37%
I trust PCOS content more from doctors than influencers	85%	11%	4%
PCOS content made me feel less alone in my symptoms	64%	21%	15%

**Table 4:** Age Distribution of Participants by PCOS Diagnosis Status

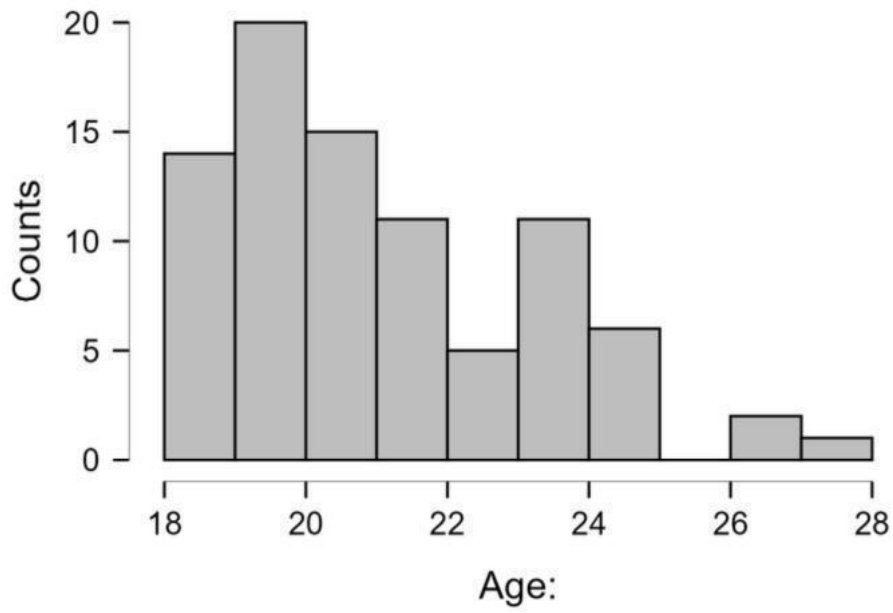
Age range	No	Not sure	yes
18-19	9	4	0
19-20	18	0	3
20-21	11	2	4
21-22	8	0	1
22-23	4	1	1
23-24	0	0	2
24-25	8	0	0
25-26	5	1	0
26-27	1	0	0
27-28	1	0	0



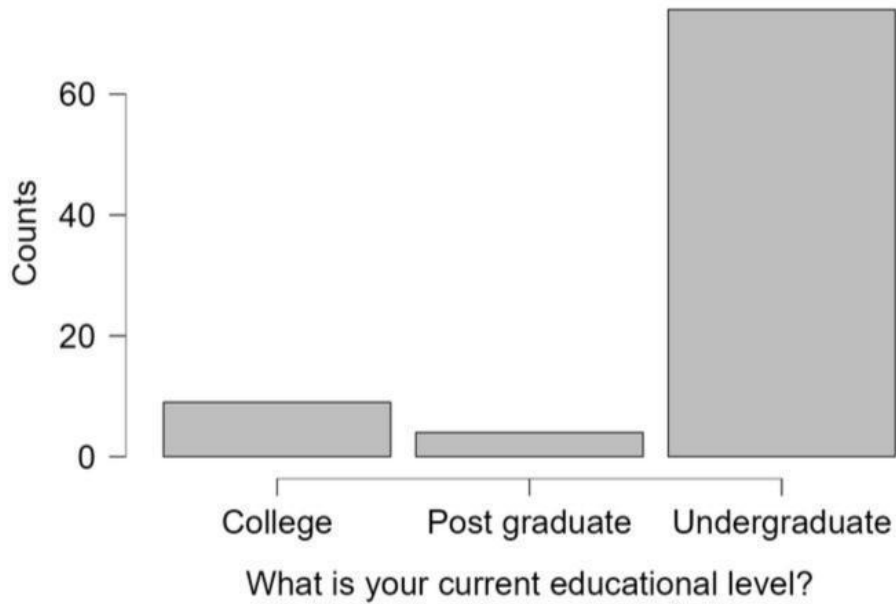
**Graph 1:** Awareness and Engagement with PCOS Content Across Social Media Platform

The graph shows Instagram and TikTok as the top platforms where users encounter and learn about PCOS, with over 60% engagement in all categories. In contrast, platforms like Twitter/X and Reddit show significantly lower awareness and engagement with PCOS content.

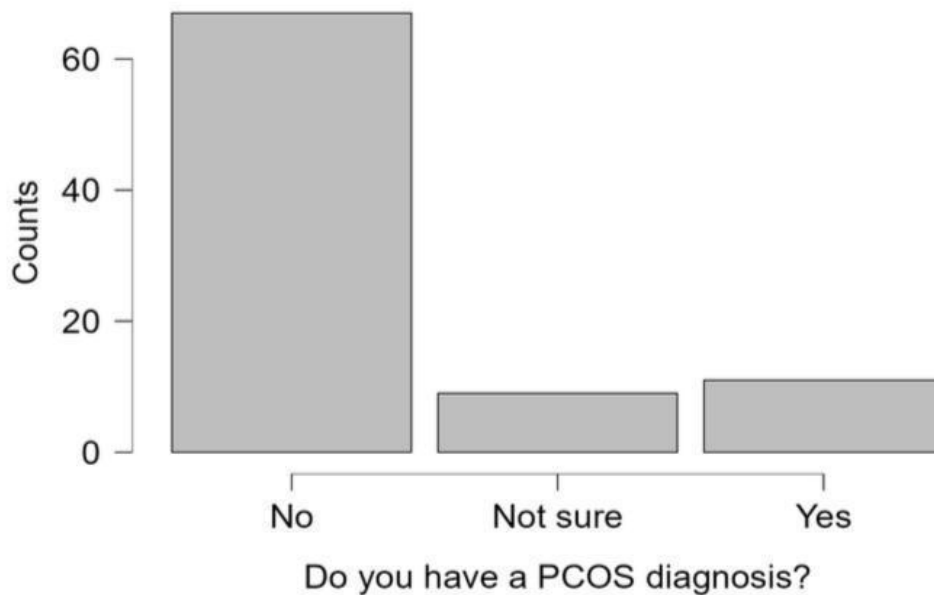
**Distribution plots**



**Graph 2: Age of the respondents**



**Graph 3: Current educational level of the respondents**



**Graph 4:** PCOS Diagnosis Status of Respondents

## DISCUSSION

This investigation reveals that Instagram (82%) and TikTok (67%) serve as predominant platforms for PCOS-related content, with a considerable proportion of respondents learning new information (74% and 61%, respectively). Despite these educational benefits, nearly half (46%) reported increased anxiety after exposure, and 58% frequently compared their bodies to those of influencers or healthcare professionals. Emotional responses were mixed: 41% felt reassured, 35% overwhelmed, and 29% were motivated to seek professional diagnosis.

Moreover, the majority (85%) expressed greater trust in medical sources over influencers, while 62% felt that influencers tended to oversimplify PCOS. The Social Comparison Theory, which holds that exposure to idealised images which are prevalent on Instagram facilitates upward comparison and higher self-criticism, is consistent with the prevalence of body comparison (58%). Young women's mood and body satisfaction have been shown to be rapidly lowered by even brief exposure to such photos.<sup>9</sup> According to analyses, women with PCOS have much higher levels of body dissatisfaction than the general population because they are more concerned with aspects linked to appearance and weight.<sup>10</sup> According to a Middle Eastern survey, people with PCOS also had far poorer levels of body image satisfaction and self-esteem.<sup>11</sup> These known psychological consequences are reflected in the current study's findings of increased anxiety (46%), and overload (35%), following exposure to PCOS content.

When compared to non-PCOS controls, PCOS is linked to higher levels of anxiety and depression.<sup>12</sup> According to a 2024 study, 57.6% of PCOS patients had high depression scores and 75% had high anxiety scores on the HADS tool.

Furthermore, psychological anguish is exacerbated by issues with physical form and self-esteem.<sup>13</sup> A study conducted in which it was discovered that digital health networks raise awareness and encourage help-seeking behaviour, 41% of respondents felt informed and 29% were inspired to seek a diagnosis.

However, as 35% of respondents reported feeling overburdened.<sup>14</sup> Caution that variable health content quality might lead to misunderstanding and emotional discomfort. Similar dynamics have been observed during pregnancy: anxiety and disordered eating have been fuelled by social media body ideals on Instagram and TikTok.<sup>15</sup> The high level of confidence in content created by medical professionals is consistent with researchers who discovered that perceived expertise is essential for online health sources to be credible.

A study pointed out that many influencers lack medical competence and contribute to misinformation, are reflected in the concern about influencer oversimplification (62%). According to research, having a negative body image affects quality of life and increases anxiety in people with PCOS.<sup>16</sup> For example, in Chinese PCOS women, anxiety moderated the association between life quality and body image distress. This is consistent with research showing that worse psychological well-being is a result of both increased emotional discomfort and decreased satisfaction with one's physical appearance.<sup>17 18</sup>

## **CONCLUSION**

This study focused on the positive and negative psychological effects of social media on people with Polycystic Ovary Syndrome (PCOS), specifically examining how it affects mental health. Data on participants' emotional reactions, perceived social support, body image issues, and the overall impact of digital information on their mental health were gathered through the use of a standardized questionnaire. The results showed that social media played a dual role. On the one hand, a sizable percentage of participants said they felt more knowledgeable about PCOS and felt more at ease participating in online forums that provided emotional support, shared experiences, and validation. These platforms provided easily accessible areas for learning and networking, which may have lessened the sense of loneliness sometimes connected to PCOS.

On the other hand, the research also revealed notable psychological disadvantages.

Respondents who were exposed to beauty-centric information, idealised body images, and unreliable health advice had higher levels of anxiety, body dissatisfaction, and negative self-comparison. Social media served as a double-edged sword for many, supplying support and knowledge while also escalating feelings of insecurity and emotional suffering.

These results highlight how crucial it is to manage the internet environment since it plays a significant role in PCOS patients' mental health.

Although the study provides insightful information, it must be noted that several constraints, such as the self-reported nature of the data and a geographically restricted sample, may limit how broadly the findings may be applied.

Future studies should examine the efficacy of carefully chosen, empirically supported online interventions and take into account larger and more varied populations. Healthcare providers are also urged to talk to patients about their digital behaviours and help them utilise social media in a way that is more empowering and healthful. Since digital platforms continue to influence how people view themselves and their health, it is essential to comprehend their impact in order to create inclusive and comprehensive methods to PCOS care.

### **Future Perspectives**

This study highlights the urgent need for PCOS awareness in different age groups especially young women and university students. The need for targeted campaigns and valid fact based information related to different aspects of PCOS on different social media platforms for ease of the viewer as well as healthcare workers. As social media continues to present and convey information related to different healthcare aspects, It should be closely monitored for accurate, evidence based and accessible health care information. Collaboration between different groups of society such as healthcare workers, influencers and educational institutions can help in providing better seminars, conferences and online

platforms for spreading veracious information. Creating structured programs, workshops, or university-based awareness drives can serve as sustainable models for improving PCOS awareness and encouraging early medical consultation among young Women.

## Limitations

- The causal relationship between social media use and mental health outcomes is limited by the cross-sectional methodology.
- Recall bias and social desirability influences may be present in self-reporting.
- There was little demographic variety; larger age, ethnic, and language groups should be included in future research.

In order to investigate the causal relationship between platform usage and psychological effects, future studies should use experimental or longitudinal approaches. Studies that concentrate on interventions, including supervised exposure to influencer vs professional content, may also provide information about reducing emotional distress.

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