



Knowledge, Practice and Attitude of Sudanese Women toward Polycystic Ovarian Syndrome In Shendi and Barbar Teaching Hospital

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Background: Polycystic Ovarian Syndrome (PCOS) is a prevalent endocrine disorder affecting women of reproductive age. Despite its increasing global prevalence and awareness, the knowledge about PCOS among Sudanese women remain limited. This study aims to assess the knowledge, practices, and attitudes of Sudanese women toward PCOS at Shendi and barbar Teaching Hospitals. **Methodology:** A descriptive cross-sectional study was conducted among 280 Sudanese women aged 15-49 attending Shendi and barbar Teaching Hospital's obstetric and gynecological outpatient department. Data was collected using a structured questionnaire administered in Arabic, covering socio-demographic variables, knowledge, attitudes, and practices toward PCOS. Statistical analysis was performed to determine associations between socio-demographic factors and PCOS awareness. **Results:** The study revealed that 72.5% of participants had heard about PCOS, the most common sources of information were from family members (24.6%) and physicians (23.2%), However, 34.6% of women lacked knowledge about hormonal causes. While 67.8% considered PCOS a serious condition, 31.1% believed there was stigma surrounding PCOS, leading to reluctance in seeking medical advice. Only 18.9% had ever been screened or treated for PCOS, demonstrating a gap between awareness and proactive healthcare behavior. **Conclusion:** Although awareness of PCOS exists among Sudanese women, significant gaps remain in understanding its causes, symptoms, complications, and management. Socio-demographic factors such as education and age were found to influence awareness levels. Addressing these gaps through health education campaigns, media outreach, and community-based interventions is crucial for improving PCOS awareness and healthcare-seeking behavior.

Keywords: Polycystic Ovarian Syndrome, Sudanese Women, Knowledge, Awareness, Attitude, Practice.

Introduction:

Polycystic ovarian syndrome (PCOS) was originally called “Stein-Leventhal syndrome” and later it was termed polycystic ovary disease (PCOD) before the name of PCOS^[1]. It is a heterogeneous, endocrine and metabolic disorder characterized by ovarian cysts, oligo- or anovulation- and hyperandrogenism that severely affects the lives of women of childbearing age^[2,3]. The exact cause of PCOS is still unclear, but researchers believe that the disorder is primarily related to hyperandrogenism and hyperinsulinemia, which are associated with insulin resistance. These two elevated hormones regulate ovarian function and interfere with the normal functioning of other hormones that regulate menstruation. A constant hormonal imbalance in the body impairs the functioning of the ovaries, leading to the formation of cysts inside the ovarian (sac). This is where the name polycystic ovary syndrome comes from^[4]. Other causes of PCOS include stress, obesity, genetics, lifestyle, and prenatal factors that cause PCOS to vary degrees of influence^[5]

According to the National Health Service (NHS), the disorder can be managed with changing lifestyle and reduction in body weight^[6]. It was reported that a mere 5% weight loss can play a significant role in improvement of PCOS symptoms. In addition, contraceptives such as progesterone tablets or combined contraceptive pill can be used to promote regular menstrual cycle. Further, fertility issues are also addressed using medications such as clomiphene, and off-label use of letrozole and metformin in women intending to conceive^[6]. It has been reported that increasing awareness about the disease led to better management of negative stigma surrounding PCOS. Colwell and

colleagues reported that following a clinical research study, women with PCOS felt empowered regarding disease knowledge and were motivated to follow preventive strategies^[7]

In a study conducted in Sudan, by Alfano et al. (2022) assessed the knowledge, prevalence, and practices regarding PCOS among Sudanese women. Their findings indicated that 41.3% of participants had a low level of knowledge about PCOS (scoring <9), 21.3% had a good level (scoring between 9 and 15), and 37.5% demonstrated an excellent level of knowledge (scoring >15). The study also identified key demographic factors influencing PCOS awareness. A significant association was observed between knowledge level and education, urban residence, health profession, marital status, and PCOS prevalence ($p < 0.001$, <0.001 , <0.001 , 0.045, and <0.001 , respectively). Furthermore, logistic regression analysis confirmed that urban residence ($p = 0.004$) and being a health professional ($p < 0.001$) were significant predictors of better PCOS knowledge. These findings highlight the disparities in PCOS awareness and the need for targeted health education programs^[8]

In contrast, Bukhari et al. (2023) conducted a study in the western region of Saudi Arabia, assessing the prevalence and awareness of PCOS among 418 female participants. The study found that 53.6% of the participants were aged between 20 and 30 years, and 31.8% had been previously diagnosed with PCOS. However, awareness levels were generally low, with only 2.9% achieving a good awareness score, 60% demonstrating moderate awareness, and 37.1% having poor awareness. Statistical analysis revealed significant associations between PCOS awareness and factors such as age,

educational level, and prior PCOS diagnosis ($P < 0.05$). These findings emphasize the urgent need for educational interventions aimed at improving PCOS awareness, particularly among younger women and those with limited educational backgrounds.^[9]

However, in a study conducted by Alatawi et al. (2024) investigating PCOS awareness among women in Tabuk City, Saudi Arabia, a higher percentage of participants (69%) reported exhibiting good knowledge of the condition. The study found significant correlations between higher awareness levels and younger age (25–34 years, $p = 0.041$), advanced education ($p = 0.010$), and employment in the healthcare sector ($p = 0.002$). Women diagnosed with PCOS had a markedly better understanding of the condition ($p < 0.001$), which highlights the role of personal experience in knowledge acquisition. Media was identified as the primary source of information (45.1%), indicating a reliance on digital platforms for health awareness but also underscoring the need for diversified educational strategies.^[10]

In 2025 a cross-sectional study conducted among the female population of Palestine, The largest age group was 25-34 years (36.2%), followed by 18-24 years (33.5%). Awareness of the term PCOS had a mean score of 1.33 (SD = 0.74), indicating that most participants had heard of PCOS. Age was significantly associated with PCOS awareness ($F = 3.67, P = 0.007$), with participants aged 35-44 years having the highest mean awareness score⁽¹¹⁾

In Sudan, particularly in Shendi and barbar, there is no available data regarding women awareness towards PCOS. Many women may experience symptoms without recognizing

them as indicators of a medical condition, leading to delays in seeking professional healthcare. Additionally, misconceptions and stigma surrounding reproductive health issues may further impact women's attitudes and practices regarding PCOS. Therefore, assessing the knowledge, practice, and attitudes of Sudanese women toward PCOS is crucial for designing effective awareness programs and improving healthcare interventions.

Methodology:

This is descriptive cross sectional study conducted in Sudan, State of River Nile at the outpatient department of Shendi and Barbar teaching hospital particularly gynecological and obstetric clinics. A total of 280 Sudanese reproductive-aged women age from 15 to 49 years old according to WHO definition who attended the outpatient department of Shendi and Barbar teaching hospital as patient or outpatient's companies. The data was collected using a self-administrated questionnaire after comprehensive literature review about polycystic ovaries syndrome and was translated into Arabic to ensure clarity and comprehension among participants. The questionnaire consists of three main parts: socio-demographic variables, knowledge on PCOS and practice toward PCOS. The socio-demographic variables included age, marital status, occupation, education, previous awareness about PCOS, and source of information.

Ethical Consideration:

Ethical consideration obtained from Alzaiem Alazhary University and from Shandi and Barbar Teaching Hospital, Also informed consent obtained from participants

Results: The sample was composed of 280 participants, the majority being young women aged between 18 and 25 years (51.4%). They were mostly married (86.4%) and unemployed (86.4%), Education was mixed, with the most prevalent groups having attended university (32.1%) and high school

(33.2%), The majority resided in urban areas (67.5%).

Evaluating knowledge (72.5%) were familiar with PCOS, commonly reported sources of information were family members (24.6%) and physicians (23.2%) (Table 1).

Table 1: knowledge of the study participants.

<i>Characteristic</i>	<i>Response Option</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>Heard of PCOS</i>	<i>Yes</i>	203	72.5%
	<i>No</i>	77	27.5%
<i>Source (If Yes)</i>	<i>Doctor</i>	65	23.2%
	<i>Family</i>	69	24.6%
	<i>Friends</i>	41	14.6%
	<i>Internet / Social Media</i>	31	11.1%
	<i>Other</i>	84	29.9%
<i>Causes of PCOS</i>	<i>Hormones</i>	153	54.6%
	<i>Genetic factors</i>	30	10.7%
	<i>I don't know</i>	97	34.6%
<i>Symptoms of PCOS</i>	<i>Irregular periods</i>	170	60.7%
	<i>Infertility</i>	42	15.0%
	<i>I don't know</i>	68	24.3%
<i>PCOS leads to Type 2 Diabetes</i>	<i>Yes</i>	94	33.6%
	<i>No</i>	70	25.0%
	<i>I don't know</i>	116	41.4%
<i>PCOS leads to Endometrial/Breast Cancer</i>	<i>Yes</i>	164	58.6%
	<i>No</i>	22	7.9%
	<i>I don't know</i>	94	33.6%
<i>PCOS leads to Anxiety/Depression</i>	<i>Yes</i>	220	78.6%
	<i>No</i>	8	2.9%
	<i>I don't know</i>	52	18.6%
<i>PCOS Diagnosable via Lab Tests</i>	<i>Yes</i>	161	57.5%
	<i>No</i>	75	26.8%
	<i>I don't know</i>	44	15.7%
<i>PCOS Treatable</i>	<i>Yes</i>	250	89.3%
	<i>No</i>	6	2.1%
	<i>I don't know</i>	24	8.6%
<i>PCOS leads to High BP/Heart Disease</i>	<i>Yes</i>	59	21.1%
	<i>No</i>	75	26.8%
	<i>I don't know</i>	146	52.1%
<i>PCOS affects Reproductive Health</i>	<i>Yes</i>	249	88.9%
	<i>No</i>	13	4.6%
	<i>I don't know</i>	18	6.4%

When asked about the cause of PCOS, 54.6% were correct about hormonal causes, and 34.6% were unaware. The most identified symptom was irregular menses (60.7%), and 24.3% were unaware of any symptoms. Participants demonstrated varying levels of awareness regarding the complications associated with PCOS (table 1). On the other hand 58.6% were familiar with the fact that PCOS leads to cancer in the endometrium or breast, The majority (57.5%) were familiar with the fact that PCOS can be detected with the assistance of lab tests, and 89.3% were correct in their report that PCOS is treatable (Table 1).

Age was significantly associated with the level of knowledge ($p = 0.034$), with the highest proportions of participants demonstrating high knowledge found in the

18–25 and above 45 age groups, at 40.3% and 64.3%, respectively." (Table 2). The educational level was also strongly correlated with the level of knowledge ($p = 0.021$), with the most educated (high school) having the highest percentage with high knowledge (49.5%), and the most educated (postgraduate studies) having the highest percentage with low knowledge (71.4%) (Table 2). Occupation was not strongly correlated with the level of knowledge ($p = 0.089$), and residence was also not strongly correlated with the level of knowledge ($p = 0.415$). Unemployed individuals and urban residents were found to have somewhat higher percentages with high knowledge (38.4% and 40.2%, respectively), but this difference was not statistically significant (Table 2).

TABLE 2 Association between Socio-demographic Status and Knowledge of PCOS
The attitude regarding PCOS and its associations with Socio-demographic Status

<i>Variable</i>	<i>Knowledge Level</i>	<i>LOW</i>	<i>MODRETE</i>	<i>HIGH</i>	<i>p-value</i>
<i>Age</i>	<i>18-25</i>	<i>36 (25.0)</i>	<i>50 (34.7)</i>	<i>58 (40.3)</i>	<i>.034</i>
	<i>26-35</i>	<i>28 (33.7)</i>	<i>34 (41.0)</i>	<i>21 (25.3)</i>	
	<i>36-45</i>	<i>6 (15.4)</i>	<i>14 (35.9)</i>	<i>19 (48.7)</i>	
	<i>Over 45</i>	<i>3 (21.4)</i>	<i>2 (14.3)</i>	<i>9 (64.3)</i>	
<i>Education Level</i>	<i>Illiterate</i>	<i>2 (28.6)</i>	<i>3 (42.9)</i>	<i>2 (28.6)</i>	<i>.021</i>
	<i>Elementary School</i>	<i>18 (34.0)</i>	<i>18 (34.0)</i>	<i>17 (32.1)</i>	
	<i>Middle School</i>	<i>4 (13.3)</i>	<i>14 (46.7)</i>	<i>12 (40.0)</i>	
	<i>High School</i>	<i>21 (22.6)</i>	<i>26 (27.9)</i>	<i>46 (49.5)</i>	
	<i>University</i>	<i>23 (25.6)</i>	<i>39 (43.3)</i>	<i>28 (31.1)</i>	
	<i>Postgraduate Studies</i>	<i>5 (71.4)</i>	<i>0 (0.0)</i>	<i>2 (28.6)</i>	
<i>Occupation</i>	<i>Employed</i>	<i>15 (39.5)</i>	<i>9 (23.7)</i>	<i>14 (36.8)</i>	<i>.089</i>
	<i>Unemployed</i>	<i>58 (23.9)</i>	<i>91 (37.6)</i>	<i>93 (38.4)</i>	
<i>Place of Residence</i>	<i>Rural</i>	<i>28 (30.8)</i>	<i>32 (35.2)</i>	<i>31 (34.1)</i>	<i>.415</i>
	<i>Urban</i>	<i>45 (23.8)</i>	<i>68 (36.0)</i>	<i>76 (40.2)</i>	

The majority of participants considered PCOS as a health concern, with 67.8% considering it "very serious" or "serious". A majority (63.6%) agreed that PCOS is a primary health concern in Sudan, and 87.9% were at ease discussing PCOS with a doctor. However, 31.1% were convinced that there is embarrassment or stigma around PCOS in their community, and 17.1% were uncomfortable discussing reproductive health with their family. When seeing a doctor, 66.1% were at ease, while 11.8% were uncomfortable (Table 3).

Age was not significantly related to PCOS

attitude ($p = 0.066$), but women in the 36-45-year and above 45-year groups reported more with favorable attitudes (44.7% and 42.9%, respectively) than the young women. Similarly, educational level did not significantly impact attitudes ($p = 0.769$), with no trend by level. Occupation and residence were not significantly related with attitude ($p = 0.056$ and $p = 0.098$, respectively), but the employed and the residents in the rural area reported more with favorable attitudes (42.1% and 35.6%, respectively) (Table 4).

TABLE 3: Attitudes and Beliefs Regarding PCOSQuestion	Response Option	Count	Percent
How serious do you consider this disease to be?	Very serious	72	25.7%
	Serious	118	42.1%
	Not serious	41	14.6%
	I don't know	49	17.5%
Do you agree that PCOS is a primary health concern in Sudan?	Yes	178	63.6%
	No	46	16.4%
	I don't know	56	20.0%
Are you comfortable discussing this health condition with a healthcare provider if needed?	Yes	246	87.9%
	No	18	6.4%
	I don't know	16	5.7%
Is it comfortable to discuss reproductive health issues like PCOS with your family?	Yes	223	79.6%
	No	48	17.1%
	I don't know	9	3.2%
What is your attitude toward seeking medical care for this disease?	Comfortable	185	66.1%
	Acceptable	46	16.4%
	Uncomfortable	33	11.8%
	I will not discuss such issues	16	5.7%
Do you think stigma or embarrassment is associated with this disease in your community?	No	177	63.2%
	Yes	87	31.1%
	I don't know	16	5.7%

TABLE 4: Association Between Sociodemographic Factors and Attitude

<i>Demographic Variable</i>	<i>Attitude</i>	<i>Unfavorable (Count)</i>	<i>Favorable (Count)</i>	<i>p-value</i>
<i>Age</i>	<i>18-25</i>	<i>107 (74.3%)</i>	<i>37 (25.7%)</i>	<i>.066</i>
	<i>26-35</i>	<i>62 (74.7%)</i>	<i>21 (25.3%)</i>	
	<i>36-45</i>	<i>21 (55.3%)</i>	<i>17 (44.7%)</i>	
	<i>Over 45</i>	<i>8 (57.1%)</i>	<i>6 (42.9%)</i>	
<i>Education Level</i>	<i>Illiterate</i>	<i>4 (57.1%)</i>	<i>3 (42.9%)</i>	<i>.769</i>
	<i>Elementary School</i>	<i>37 (69.8%)</i>	<i>16 (30.2%)</i>	
	<i>Middle School</i>	<i>21 (70.0%)</i>	<i>9 (30.0%)</i>	
	<i>High School</i>	<i>71 (76.3%)</i>	<i>22 (23.7%)</i>	
	<i>University</i>	<i>60 (67.4%)</i>	<i>29 (32.6%)</i>	
	<i>Postgraduate Studies</i>	<i>5 (71.4%)</i>	<i>2 (28.6%)</i>	
<i>Occupation</i>	<i>Employed</i>	<i>22 (57.9%)</i>	<i>16 (42.1%)</i>	<i>.056</i>
	<i>Unemployed</i>	<i>176 (73.0%)</i>	<i>65 (27.0%)</i>	
<i>Place of Residence</i>	<i>Rural</i>	<i>58 (64.4%)</i>	<i>32 (35.6%)</i>	<i>.098</i>
	<i>Urban</i>	<i>140 (74.1%)</i>	<i>49 (25.9%)</i>	

The practice regarding PCOS and its associations with Socio-demographic Status

The majority (86.8%) knew that PCOS is a reproductive health problem, but very few (18.9%) reported that they were ever screened for or treated for the condition . The majority (88.6%) reported that they would take medication prescribed by a doctor or herbal medicine if diagnosed with PCOS, and 87.1% reported that they would consult a doctor if they believed that they had symptoms of PCOS. Only 1.4% reported healthy diet and weight loss as one possible

treatment, showing lack of awareness about lifestyle treatment (Table 5).

There was no practice that was significantly related with age, educational level, occupation, and residence in respect of PCOS ($p > 0.05$ in all). However, working individuals and village residents reported slightly improved practices, and 42.1% and 35.6% reported good practices, respectively

TABLE 5: Summary of Practice

Regarding PCOS

<i>Question</i>	<i>Response Option</i>	<i>Count</i>	<i>Percent</i>
<i>Do you think PCOS can affect reproductive health?</i>	<i>Yes</i>	<i>243</i>	<i>86.8%</i>
	<i>No</i>	<i>37</i>	<i>13.2%</i>
<i>Have you ever been examined or treated for PCOS?</i>	<i>No</i>	<i>221</i>	<i>78.9%</i>
	<i>Yes</i>	<i>53</i>	<i>18.9%</i>
	<i>I don't know</i>	<i>6</i>	<i>2.1%</i>
<i>If diagnosed with PCOS, what treatments or lifestyle changes would you use?</i>	<i>Medications prescribed by a doctor</i>	<i>248</i>	<i>88.6%</i>
	<i>Herbal remedies</i>	<i>248</i>	<i>88.6%</i>
	<i>I would not use any medication</i>	<i>28</i>	<i>10.0%</i>
	<i>Healthy diet and weight loss</i>	<i>4</i>	<i>1.4%</i>
	<i>Exercise</i>	<i>22</i>	<i>7.9%</i>
	<i>Other</i>	<i>7</i>	<i>2.5%</i>
<i>If you suspect you have PCOS symptoms, what would you do first?</i>	<i>Visit a doctor</i>	<i>244</i>	<i>87.1%</i>
	<i>Search online for information</i>	<i>28</i>	<i>10.0%</i>
	<i>Talk to family or friends</i>	<i>35</i>	<i>12.5%</i>
	<i>Other</i>	<i>4</i>	<i>1.4%</i>

Proposed Strategies for Increasing Awareness of PCOS

The most frequent proposed strategy was medical consultation and treatment (36.8%), followed by education and awareness (21.8%). Other proposed methods included family and community (6.1%), online information and self-study (4.6%), and early detection and regular checkups (7.5%). A substantial proportion (22.9%) made general or miscellaneous suggestions, with a range of opinions about how awareness could be raised (Table 6).

TABLE 6: represents thematic analysis for Proposed Strategies to Raise Awareness of PCOS among Sudanese Women

<i>Category</i>	<i>Description</i>	<i>Count</i>	<i>Percent</i>
<i>Medical Consultation & Treatment</i>	<i>Visiting a doctor, consulting a doctor, seeking medical care, treatment</i>	<i>103</i>	<i>36.8%</i>
<i>Education & Awareness Programs</i>	<i>Seminars, workshops, lectures, educational programs, health education, awareness campaigns, spreading information through social media</i>	<i>61</i>	<i>21.8%</i>
<i>Family & Community Involvement</i>	<i>Discussing symptoms with family, encouraging open communication, family awareness</i>	<i>17</i>	<i>6.1%</i>
<i>Online Information & Self-Education</i>	<i>Searching online, using the internet, social media campaigns</i>	<i>13</i>	<i>4.6%</i>
<i>Early Detection & Regular Checkups</i>	<i>Periodic examination, regular checkups, early examination when symptoms are felt, monitoring menstrual cycle</i>	<i>21</i>	<i>7.5%</i>
<i>Combating Stigma & Embarrassment</i>	<i>Addressing stigma, encouraging open discussion, creating a comfortable environment to discuss reproductive health, not being ashamed to ask for help</i>	<i>11</i>	<i>3.9%</i>
<i>Other/Unspecified</i>	<i>Various other suggestions not easily categorized (e.g., "action of the acquisition of awareness", "culture of health in women", "Do not go beyond")</i>	<i>64</i>	<i>22.9%</i>

Discussion:

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age, with wide-ranging implications for reproductive, metabolic, and psychological health. Despite its high prevalence and long-term health consequences, awareness, attitudes, and practices related to PCOS remain suboptimal in many populations. This study conducted in State of River Nile at the outpatient department of Shendi and Barbar teaching hospital, The sample was

composed of 280 participants, the majority being young women aged between 15-49 and aimed to evaluate women's knowledge, perceptions, and behaviors regarding PCOS, revealing important gaps in understanding and healthcare engagement. The findings offer valuable insights into how demographic factors, educational background, and personal medical experience shape awareness and attitudes toward PCOS, as well as the extent to which women seek screening and treatment. These results highlight the urgent need for targeted health education and community-level

interventions to enhance early detection, informed decision-making, and effective management of PCOS.

Investigating knowledge this study reveal that the majority (72.5%) had heard of PCOS, the most common sources of information were (24.6%) from families and (23.2%) from physicians. That was similar to the study done among the female population of Palestine 2025^[11]. However, It was clear that while general awareness is present, deeper understanding is lacking, 34.6% of participants were unaware of the hormonal causes of PCOS. This suggests were similar to Vinaykumar et al. (2024), who reported that 66% of women had poor knowledge about PCOS.^[12]

Age was significantly associated with the level of knowledge ($p = 0.034$), with the highest proportions of participants demonstrating high knowledge found in the 18–25 and above 45 age groups, at 40.3% and 64.3%, respectively. The educational level was also strongly correlated with the level of knowledge ($p = 0.021$), with the most educated (high school) having the highest percentage with high knowledge (49.5%), This contradicts Bohsas et al. (2024), who found that university graduates had the highest knowledge scores⁽¹³⁾ interestingly postgraduate participants had lower knowledge levels (71.4% with low knowledge). One possible explanation is that in our study, the postgraduate participants were from non-health-related fields as Alfanob mention that being a health professional ($p < 0.001$) were significant predictors of better PCOS knowledge , which mean limited their

exposure to reproductive health topics. Additionally, the proportion of participants with higher education was lower compared to those with only a high school education.

In the attitude regarding PCOS and its associations with Socio-demographic Status, most women in our study considered PCOS a serious health issue (67.8%) and were comfortable discussing it with a doctor (87.9%). However, 31.1% believed there was stigma surrounding PCOS in their community, and 17.1% were uncomfortable discussing reproductive health with their families. The cultural stigma surrounding PCOS is another important issue. The fact that nearly one-third of participants believed there was embarrassment around PCOS indicates that social and cultural barriers may prevent women from seeking medical help. This aligns with Al Souheil and Chahine (2022), who reported that social stigma and body image issues affected PCOS awareness in Lebanon^[14] Similarly, Pramodh (2020) found that Emirati university students had limited reproductive health knowledge, reinforcing the idea that cultural factors influence how women perceive and discuss PCO.^[15]

Unlike knowledge, attitudes did not significantly vary by age, education, or residence, though employed women and rural residents showed slightly more favorable attitudes. This contrasts with Naz et al. (2022), who found that attitudes toward early diagnosis were significantly influenced by education and previous PCOS diagnosis. The difference may be due to cultural variations in how reproductive health is perceived in different regions.^[16]

In practice regarding PCOS there is a significant gap between knowledge and action. While 86.8% recognized PCOS as a reproductive health issue, only 18.9% had ever been screened or treated for it. The low screening rates are especially concerning, as early diagnosis and intervention are crucial in preventing long-term complications such as infertility, diabetes, and cardiovascular disease. This mirrors Vinaykumar et al. (2024), who found that 90.56% of menstruating women had poor PCOS management practices^[12] Furthermore, only 1.4% of our participants identified diet and weight loss as treatment options, indicating a lack of awareness about lifestyle interventions. This is concerning, as Lin et al. (2018) emphasized the importance of diet and exercise in managing PCOS symptoms, yet many women with PCOS fail to recognize its benefits^[17]

Despite these gaps, most participants (88.6%) stated they would take medication if diagnosed, and 87.1% would consult a doctor if they suspected symptoms. So while awareness may be limited, there is a willingness to seek medical help, provided the right information is available.

Inquired about the participant's proposed strategies for Increasing Awareness of PCOS they suggested medical consultations (36.8%) and education (21.8%) as the best ways to raise awareness about PCOS. This aligns with Alfanob et al. (2022), who found that health education significantly improved awareness in Sudanese women. ^[8] Additionally, 45.1% of women in Alatawi et al. (2024) reported using media as a primary source of information, highlighting the

potential for digital platforms in PCOS education. However, only 4.6% of our participants mentioned online sources, revealing that leveraging social media and digital campaigns could be a valuable strategy for improving awareness in Sudan.^[10]

Conclusion:

Our study explored the awareness, attitudes, and practices regarding Polycystic Ovary Syndrome (PCOS) among Sudanese women, in State of River Nile at the outpatient department of Shendi and Barbar teaching hospita The findings indicate that while many women are familiar with PCOS and its symptoms, gaps remain in knowledge about its complications and management. Additionally, socio-demographic factors such as age and education influenced awareness levels, while attitudes and practices regarding PCOS varied across different groups.

Recommendation:

Given that PCOS is closely linked to metabolic conditions such as obesity and diabetes, promoting healthy lifestyle interventions should be a priority. Community-based education programs, digital health campaigns, and physician-led discussions could help bridge this knowledge gap and encourage proactive management of PCOS.

Limitations:

- The research time was short for us to go to all hospital in Shandiand Barbar.
- While 280 participants provided meaningful data, a larger sample size from multiple hospitals would enhance the reliability and generalizability of findings

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