# Knowledge, Awareness, and Information-Seeking Behaviors Regarding Polycystic Ovary Syndrome among Women in Dar-es-Salaam, Tanzania: A Cross-Sectional Study

**Lina Ephraim Sanga[1] and Ebube Oliver Chukwunyere[2]**

[1]Institute for International Education, I.M. Sechenov First Moscow State Medical University, Moscow, Russia.
[2]Peoples' Friendship University of Russia, Moscow, Russian Federation.
**Corresponding Author Email**: sangalina97@mail.ru

**Direct Research Journal of Public Health and Environmental Technology**

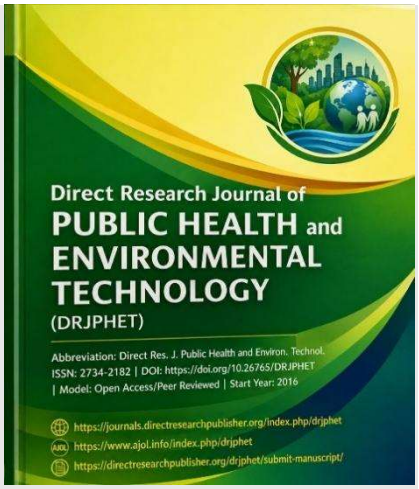
Vol. 11(2), Pp. 58-64, August 2026
Author(s) retains the copyright of this article
This article is published under the terms of the Creative Commons Attribution License 4.0.
**Research Article**
**ISSN: 2734-2182**
https://journals.directresearchpublisher.org/index.php/drjphet; https://www.ajol.info/index.php/drjphet

Received 22 June 2026, Accepted 27 July 2026, Published 18 August 2026

## ABSTRACT

*Polycystic Ovary Syndrome (PCOS) is a prevalent endocrine and metabolic disorder associated with significant reproductive and cardiometabolic morbidity. Despite its global burden, community-level awareness in Sub-Saharan Africa remains under-researched. This study assessed the knowledge, awareness, information sources, and sociodemographic correlates of PCOS among women in Dar-es-Salaam, Tanzania. A community-based cross-sectional study was conducted among 405 women of reproductive age (15–49 years) in Dar-es-Salaam using a stratified multistage sampling technique. Data were collected via a structured questionnaire and analyzed using SPSS version 26. Chi-square tests were utilized to assess associations, with statistical significance set at $p < 0.05$. Participants demonstrated moderate-to-high awareness of core symptoms, including hormonal imbalance (78.6%), multiple ovarian cysts (82.1%), irregular menstruation (75.0%), and hirsutism (71.4%). However, significant knowledge gaps persisted regarding long-term complications; only 46.4% recognized the increased risk of type 2 diabetes, and 42.9% incorrectly believed PCOS does not affect fertility. While 78.6% were aware of lifestyle modifications as a management strategy, awareness of pharmacological treatments was low (e.g., metformin, 39.3%). Over half (57.1%) had previously received PCOS information, primarily from healthcare providers, educational institutions, and social media. Notably, 53.6% had never actively sought information about PCOS. Marital status showed no significant association with knowledge or awareness ($p > 0.05$). Women in Dar-es-Salaam possess adequate awareness of primary PCOS symptoms but lack critical knowledge regarding metabolic risks, fertility implications, and medical management. Public health interventions must pivot from basic symptom recognition to comprehensive reproductive and metabolic health education, leveraging primary care and regulated digital platforms.*

**Keywords:** *Polycystic Ovary Syndrome, Health Literacy, Reproductive Health, Awareness*.




**Citation:** Sanga, L. E., & Chukwunyere, E. O. (2026). Knowledge, awareness, and information-seeking behaviors regarding polycystic ovary syndrome among women in Dar-es-Salaam, Tanzania: A cross-sectional study. *Direct Research Journal of Public Health and Environmental Technology, 11*(2), 58–64. https://doi.org/10.4314/drjphet.v11i3.8

## INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is one of the most common complex endocrine and metabolic disorders affecting women of reproductive age, characterized by ovulatory dysfunction, hyperandrogenism, and polycystic ovarian morphology (Teede et al., 2023; International PCOS Guideline Development Group, 2023). Beyond its reproductive implications, PCOS is a major public health concern due to its association with severe long-term cardiometabolic risks, including insulin resistance, type 2 diabetes mellitus (T2DM), dyslipidemia, and cardiovascular disease, as well as significant psychosocial burdens (Teede et al., 2018; Zheng et al., 2025). Global

prevalence estimates range from 8% to 13% depending on the diagnostic criteria applied (Salari et al., 2024). Despite this substantial burden, PCOS is frequently underdiagnosed, with women often experiencing a delay of 2 to 5 years from symptom onset to formal diagnosis (Hillman et al., 2020; Fernandez et al., 2021). This diagnostic delay is heavily influenced by a lack of public and provider awareness, leading to the normalization of symptoms such as irregular menstruation and hirsutism, and missed opportunities for early metabolic screening (Alshdaifat et al., 2021; Zaitoun et al., 2023). In Sub-Saharan Africa, the epidemiological landscape of PCOS is complicated by a dual burden of communicable and non-communicable diseases, limited endocrine testing capabilities, and cultural stigmas surrounding infertility and menstrual irregularities (Sokwala et al., 2024). In Tanzania, clinical data indicate that PCOS is a leading gynecological concern; a recent hospital-based study at Kilimanjaro Christian Medical Centre reported a 36% prevalence of PCOS among women seeking fertility treatment (Maya et al., 2025). Furthermore, urban centers like Dar-es-Salaam are experiencing rapid demographic and lifestyle transitions that exacerbate metabolic risk factors such as obesity and insulin resistance (Bigambo et al., 2022; Oh et al., 2023). While global studies highlight the critical role of health literacy in improving PCOS outcomes (Garad & Teede, 2020), there is a paucity of community-level data in Tanzania regarding how women perceive, understand, and seek information about PCOS. Understanding these dynamics is essential for developing culturally appropriate, evidence-based health education and screening pathways. Therefore, this study aimed to evaluate the knowledge, awareness, sources of information, and sociodemographic determinants of PCOS among women residing in Dar-es-Salaam, Tanzania.

## Methods

### Study Design and Setting

A community-based cross-sectional study was conducted in Dar-es-Salaam, Tanzania, between January and May 2026. Dar-es-Salaam is the largest city in Tanzania, administratively divided into five municipalities: Ilala, Kinondoni, Temeke, Kigamboni, and Ubungo. The city is characterized by a mix of formal and informal settlements, providing a diverse socio-economic and infrastructural backdrop (Simon & Ngereja, 2025).

### Study Population and Sampling

The target population comprised women of reproductive age (15–49 years) residing in Dar-es-Salaam. The sample size was calculated using Cochran's formula (n=Z2Pq/E2n=Z2Pq/E2), assuming a 50% population proportion (due to unknown local prevalence), a 95% confidence level, and a 5% margin of error, yielding a base sample of 385. Adjusting for a 5% non-response rate, the final sample size was 405 participants. A stratified multistage probability sampling technique was employed. In the first stage, the five municipalities served as strata, with sample sizes allocated proportionally based on the female reproductive-age population. In the second stage, wards were randomly selected within each municipality. In the third stage, systematic random sampling was used to select households, and one eligible woman per household was selected via simple random sampling (lottery method).

### Inclusion and Exclusion Criteria

Women aged 15–49 years who had resided in Dar-es-Salaam for at least six months and provided informed consent were included. Exclusion criteria comprised women outside the target age range, residents of less than six months, and those with severe cognitive impairments preventing comprehension of the questionnaire.

### Data Collection Instrument

Data were collected using a structured, pre-tested questionnaire divided into six sections: (A) Socio-demographic characteristics, (B) Reproductive and medical history, (C) Knowledge of PCOS causes, symptoms, and complications, (D) Awareness of screening, diagnosis, and treatment, (E) Sources of information, and (F) Factors influencing awareness. The instrument was validated for content and construct validity by public health and reproductive health experts. A pre-test was conducted among 40 women (10% of the sample) in Kinondoni Municipality to ensure reliability and clarity.

### Statistical Analysis

Data were entered into Microsoft Excel and analyzed using Statistical Product and Service Solutions (SPSS) version 26.0. Descriptive statistics (frequencies, percentages, means) were used to summarize socio-demographic variables and knowledge/awareness scores. Bivariate analysis using Chi-square (χ2χ2) tests was performed to examine associations between sociodemographic variables and knowledge/awareness levels. Statistical significance was defined as $p < 0.05$.

### Ethical Considerations

Ethical clearance was obtained from the Ethics Committee of the School of Public Health at the University of Dar es Salaam and the Tanzanian National Institute for Medical Research (NIMR). Written informed consent was obtained from all participants. Participation was voluntary, and confidentiality was strictly maintained.

## RESULTS

### Sociodemographic Characteristics

A total of 405 women participated in the study (response

**Table 1: Sociodemographic Characteristics of the Study Participants (N=405)**

| Variable | Category | Frequency (*n*) | Percentage (%) |
|---|---|---|---|
| Marital Status | Single | 260 | 64.3 |
| | Married / Cohabiting | 130 | 32.1 |
| | Separated / Divorced | 15 | 3.6 |
| Educational Status | University | 318 | 78.6 |
| | Elementary / No formal education | 48 | 11.9 |
| | Vocational | 20 | 4.8 |
| | Secondary | 20 | 4.8 |
| Religion | Christian | 289 | 71.4 |
| | Islam | 72 | 17.9 |
| | Other / None | 44 | 10.7 |
| Length of Stay in Dar-es-Salaam | > 5 years | 289 | 71.4 |
| | ≤ 5 years | 116 | 28.6 |
| Average Monthly Income | Not mentioned / Prefer not to say | 174 | 42.9 |
| | Reported various income levels | 231 | 57.1 |
| Parity | Childless | 318 | 78.6 |
| | Already had children | 87 | 21.4 |
| Regular Medication | Not on any regular medication | 304 | 75 |
| | Currently on regular medication | 101 | 25 |
| Occupation | Students | 87 | 21.4 |
| | Commercial / Healthcare / Others | 318 | 78.6 |

rate: 100%). The majority of the respondents were single (64.3%), possessed a university education (78.6%), and identified as Christian (71.4%). The largest occupational group was students (21.4%). Most participants (71.4%) had lived in Dar-es-Salaam for over five years, and 78.6% were nulliparous (Table 1).

## Knowledge of PCOS Causes, Symptoms, and Complications

Participants demonstrated a high level of awareness regarding the primary clinical manifestations of PCOS. The majority correctly identified multiple ovarian cysts (82.1%), hormonal imbalance (78.6%), irregular menstruation (75.0%), weight gain/difficulty losing weight (75.0%), and hirsutism (71.4%) as key features (all $p < 0.05$). Furthermore, 64.3% recognized the increased risk of hypertension and cardiovascular disease. However, significant knowledge gaps were evident regarding long-term metabolic and reproductive complications. Only 46.4% of women knew that PCOS increases the risk of developing type 2 diabetes ($p = 0.174$, not significant against null hypothesis of random guessing). Alarmingly, 42.9% held the misconception that PCOS cannot affect fertility or chances of becoming pregnant, and 50.0% were unsure if PCOS is a chronic condition that persists without treatment (Table 2).

## Awareness of Screening, Diagnosis, and Treatment Options

Awareness of diagnostic pathways was moderate. While 71.4% had heard of diagnostic tests for PCOS, specific knowledge of diagnostic modalities was fragmented; only 32.1% identified blood tests for hormone levels, and a mere 3.6% identified pelvic ultrasound as a diagnostic tool. Regarding management, there was high awareness of lifestyle modifications (diet, exercise, weight loss) as a primary management strategy (78.6%, $p = 0.001$). Conversely, awareness of pharmacological interventions was poor: only 50.0% were aware of hormonal contraceptives for symptom management, and 39.3% knew about the use of insulin-sensitizing agents like metformin. When asked about health-seeking behavior, 75.0% indicated they would first visit a primary health center or clinic if they suspected PCOS ($p < 0.001$) (Table 3).

## Sources of Information and Health-Seeking Behavior

Slightly more than half of the participants (57.1%) reported having ever received information about PCOS. Among those who received information, the sources were diverse but heavily reliant on informal and digital networks: healthcare providers (14.3%), social media (10.7%), schools/colleges (10.7%), and family/friends (7.1%). Social media emerged as a highly utilized platform for general health information, with 39.3% using it daily. Despite this high digital exposure, proactive health-seeking behavior was low; 53.6% of the women reported they had never actively sought information specifically about PCOS (Table 4).

## Sociodemographic Determinants of Knowledge

Bivariate analysis revealed no statistically significant associations between marital status and various domains of PCOS knowledge, symptom recognition, or personal reproductive history (all $p > 0.05$). For instance, marital status did not significantly correlate with knowledge of hormonal imbalance ($p = 0.597$), irregular periods ($p = 0.974$), or personal history of irregular menstrual cycles ($p= 0.440$) (Table 5).

**Table 2: Knowledge women living in Dar-es-Salaam have regarding the causes, symptoms, and complications of polycystic ovary syndrome (PCOS). 405 (100%)**

| Variable | Response | Frequency (n) | Percent (%) | $\chi^2$ | p-value | Inference |
|---|---|---|---|---|---|---|
| PCOS is caused by hormonal imbalance in women | False | 15 | 3.6 | 20.21 | <0.001 | Significant |
| | True | 318 | 78.6 | | | |
| | Don't know | 72 | 17.9 | | | |
| PCOS is always caused by poor personal hygiene | False | 231 | 57.1 | 4.57 | 0.102 | Not Significant |
| | True | 58 | 14.3 | | | |
| | Don't know | 116 | 28.6 | | | |
| Irregular periods are a common symptom of PCOS | False | 43 | 10.7 | 16.79 | <0.001 | Significant |
| | True | 304 | 75.0 | | | |
| | Don't know | 58 | 14.3 | | | |
| Women with PCOS have many small cysts on their ovaries | False | 0 | 0.0 | 28.21 | <0.001 | Significant |
| | True | 333 | 82.1 | | | |
| | Don't know | 72 | 17.9 | | | |
| Excessive hair growth (hirsutism) can be a symptom of PCOS | False | 0 | 0.0 | 14.86 | 0.001 | Significant |
| | True | 289 | 71.4 | | | |
| | Don't know | 116 | 28.6 | | | |
| PCOS can cause weight gain or difficulty losing weight | False | 0 | 0.0 | 16.00 | <0.001 | Significant |
| | True | 304 | 75.0 | | | |
| | Don't know | 101 | 25.0 | | | |
| PCOS can increase the risk of developing type 2 diabetes | False | 43 | 10.7 | 3.50 | 0.174 | Not Significant |
| | True | 188 | 46.4 | | | |
| | Don't know | 174 | 42.9 | | | |
| PCOS cannot affect fertility or chances of becoming pregnant | False | 130 | 32.1 | 1.79 | 0.409 | Not Significant |
| | True | 174 | 42.9 | | | |
| | Don't know | 101 | 25.0 | | | |
| Women with PCOS have a higher risk of high blood pressure and heart disease | False | 15 | 3.6 | 16.79 | <0.001 | Significant |
| | True | 260 | 64.3 | | | |
| | Don't know | 130 | 32.1 | | | |
| PCOS goes away without treatment as the woman gets older | False | 174 | 42.9 | 8.29 | 0.016 | Significant |
| | True | 28 | 7.1 | | | |
| | Don't know | 203 | 50.0 | | | |

**Table 3: Women's awareness of available screening, diagnosis, and treatment options for PCOS 405 (100%)**

| Variable | Response | Frequency | Percent | $\chi^2$ | p-value | Inference |
|---|---|---|---|---|---|---|
| Before today, have you heard of any tests used to diagnose PCOS? | No | 116 | 28.6 | 5.14 | 0.023 | Significant |
| | Yes | 289 | 71.4 | | | |
| Which of the following can be used to help diagnose PCOS? | Blood tests to check hormone levels | 130 | 32.1 | 18.76 | 0.016 | Significant |
| | Don't know | 101 | 25.0 | | | |
| | Blood tests to check hormone levels, Physical examination | 57 | 14.3 | | | |
| | Physical examination | 43 | 10.7 | | | |
| | Blood tests to check hormone levels, Pelvic ultrasound | 29 | 7.1 | | | |
| | Pap smear | 15 | 3.6 | | | |
| | Pelvic ultrasound | 15 | 3.6 | | | |
| | Pelvic ultrasound, Physical examination | 15 | 3.6 | | | |
| Are you aware that lifestyle changes (diet, exercise, weight loss) can help manage PCOS? | Don't know | 58 | 14.3 | 15.14 | 0.001 | Significant |
| | No | 29 | 7.1 | | | |
| | Yes | 318 | 78.6 | | | |
| Are you aware that hormonal contraceptives are used to manage some symptoms of PCOS? | Don't know | 159 | 39.3 | 5.64 | 0.060 | Not Significant |
| | No | 43 | 10.7 | | | |
| | Yes | 203 | 50.0 | | | |
| Are you aware that medication for insulin resistance (e.g., metformin) may be used in PCOS? | Don't know | 174 | 42.9 | 2.64 | 0.267 | Not Significant |
| | No | 72 | 17.9 | | | |
| | Yes | 159 | 39.3 | | | |
| If a woman suspects she has PCOS, where would she most likely go first? | Don't know | 43 | 10.7 | 33.29 | <0.001 | Significant |
| | Pharmacy/Chemist | 29 | 7.1 | | | |
| | Primary health center/Clinic | 304 | 75.0 | | | |
| | Traditional healer | 29 | 7.1 | | | |
| How confident are you that you could access diagnosis and treatment for PCOS? | Neutral | 58 | 14.3 | 3.43 | 0.489 | Not Significant |
| | Not at all confident | 116 | 28.6 | | | |
| | Somewhat confident | 130 | 32.1 | | | |
| | Somewhat not confident | 29 | 7.1 | | | |
| | Very confident | 72 | 17.9 | | | |

**Table 4: Sources of information through which women in Dar-es-Salaam learn about PCOS 405 (100%)**

| Variable | Response | Frequency (n) | Percent (%) | $\chi^2$ | p-value | Inference |
|---|---|---|---|---|---|---|
| Have you ever received information about PCOS? | No | 174 | 42.9 | 0.57 | 0.450 | Not Significant |
| | Yes | 231 | 57.1 | | | |
| | Total | 405 | 100.0 | | | |
| If YES, where did you get the information? | No response/No information received | 101 | 25.0 | 14.82 | 0.063 | Not Significant |
| | Health worker/Nurse/Doctor | 58 | 14.3 | | | |
| | Health worker/Nurse/Doctor, Social Media, School/College | 43 | 10.7 | | | |
| | School/College | 43 | 10.7 | | | |
| | Social Media | 43 | 10.7 | | | |
| | Family/Friends | 29 | 7.1 | | | |
| | Family/Friends, Social Media, Newspapers, School/College | 29 | 7.1 | | | |
| | Health worker/Nurse/Doctor, Family/Friends, Social Media, School/College | 29 | 7.1 | | | |
| | Family/Friends, Social Media, School/College | 15 | 3.6 | | | |
| | Radio/Television | 15 | 3.6 | | | |
| | Total | 405 | 100.0 | | | |
| How often do you use social media for health information? | Daily | 159 | 39.3 | 5.14 | 0.162 | Not Significant |
| | Monthly | 29 | 7.1 | | | |
| | Rarely | 130 | 32.1 | | | |
| | Weekly | 87 | 21.4 | | | |
| | Total | 405 | 100.0 | | | |
| Have you ever sought information specifically about PCOS? | No | 217 | 53.6 | 0.14 | 0.705 | Not Significant |
| | Yes | 188 | 46.4 | | | |
| | Total | 28 | 100.0 | | | |

**Table 5: Marital factors associated with the level of knowledge and awareness of PCOS among women in Dar-es-Salaam. 405 (100%)**

| Variable | $\chi^2$ | df | p-value | Inference |
|---|---|---|---|---|
| Have you ever been diagnosed by a health professional with PCOS or "Polycystic Ovaries"? | 2.765 | 4 | 0.598 | Not Significant |
| Have you ever experienced irregular menstrual cycles (irregular timing or missed periods)? | 3.759 | 4 | 0.440 | Not Significant |
| Have you ever experienced excessive hair growth (e.g., face, chest, back)? | 4.603 | 4 | 0.331 | Not Significant |
| Do you have difficulty getting pregnant (if tried)? | 7.940 | 4 | 0.094 | Not Significant |
| Have you ever been tested for blood glucose/diabetes? | 1.458 | 2 | 0.482 | Not Significant |
| PCOS is caused by hormonal imbalance in women | 2.772 | 4 | 0.597 | Not Significant |
| PCOS is always caused by poor personal hygiene | 0.972 | 4 | 0.914 | Not Significant |
| Irregular periods are a common symptom of PCOS | 0.500 | 4 | 0.974 | Not Significant |
| Women with PCOS have many small cysts on their ovaries | 0.730 | 2 | 0.694 | Not Significant |
| Excessive hair growth (hirsutism) can be a symptom of PCOS | 0.778 | 2 | 0.678 | Not Significant |

## DISCUSSION

This study provides critical community-level insights into the knowledge and awareness of PCOS among women in Dar-es-Salaam, Tanzania. The findings reveal a paradoxical landscape: while urban Tanzanian women exhibit a strong awareness of the overt reproductive and dermatological symptoms of PCOS, there are profound deficits in understanding its long-term metabolic consequences, chronicity, and specific medical management options.

### Symptom Recognition vs. Metabolic Literacy

The high recognition of symptoms such as ovarian cysts (82.1%), irregular periods (75.0%), and hirsutism (71.4%) aligns with global trends where overt reproductive abnormalities are more readily identified than metabolic signs (Alshdaifat et al., 2021; Goh et al., 2022). This relatively high baseline awareness in Dar-es-Salaam may be attributed to the high educational attainment of the sample (78.6% university-educated) and the proliferation of digital health information in urban African settings.

However, the finding that only 46.4% of participants recognized the link between PCOS and type 2 diabetes is deeply concerning. International evidence-based guidelines emphasize that metabolic screening and lifestyle interventions are paramount to preventing long-term cardiometabolic morbidity (Teede et al., 2023). Furthermore, the misconception held by 42.9% of respondents that PCOS does not affect fertility contradicts the reality that PCOS is the leading cause of anovulatory

infertility globally (Zheng et al., 2025). This lack of "metabolic and fertility literacy" suggests that current health messaging in Tanzania may be overly focused on cosmetic or immediate menstrual issues, failing to communicate the systemic, chronic nature of the syndrome.

### Awareness of Management and Diagnostic Pathways

The strong awareness of lifestyle modifications (78.6%) reflects the successful global translation of the "first-line lifestyle" approach to PCOS management (Gautam et al., 2025; Colombo et al., 2023). However, the low awareness of specific diagnostic tools (e.g., pelvic ultrasound, hormonal blood panels) and pharmacological treatments (e.g., metformin) indicates a superficial understanding of the condition. This mirrors findings from Jordan and Ethiopia, where even educated cohorts and healthcare providers demonstrate fragmented knowledge of diagnostic criteria (Erku et al., 2025; Alshdaifat et al., 2021). The reliance on primary health centers (75.0%) as the first point of contact is a positive indicator for integrating PCOS screening into primary care, provided that primary care providers are adequately trained in current diagnostic guidelines.

### The Role of Digital Media and Passive Information Consumption

A striking finding of this study is the passive nature of information consumption. Although social media is heavily utilized (39.3% daily), over half (53.6%) of the women had never actively sought information about PCOS. This highlights a critical gap in perceived susceptibility and cues to action, core constructs of the Health Belief Model (Rosenstock, 1974; Jones et al., 2015). Women may be exposed to PCOS content passively via algorithms but lack the health literacy or perceived personal risk to engage in proactive information-seeking. Furthermore, as noted by Chiu et al. (2018) and Vågenes and Pranić (2023), online PCOS content is frequently commercialized, oversimplified, or written at inaccessible reading levels, which may inadvertently foster misconceptions rather than empower patients.

### Sociodemographic Determinants

Contrary to several global studies that identify marital status and reproductive history as key determinants of PCOS awareness (Sharma et al., 2025; Alenzi et al., 2024), this study found no significant association between marital status and PCOS knowledge. This suggests that in highly connected urban environments like Dar-es-Salaam, the dissemination of reproductive health information via mass media and digital platforms may be democratizing awareness across different marital and reproductive cohorts, bypassing traditional demographic barriers.

### Strengths and Limitations

**Strengths:** This study is one of the first to assess community-level PCOS awareness in Tanzania using a robust stratified multistage sampling design across all five municipalities of Dar-es-Salaam.

**Limitations**: The cross-sectional design precludes causal inferences. The high proportion of university-educated women may introduce selection bias, potentially overestimating awareness levels compared to rural or less educated populations in Tanzania. Additionally, the reliance on self-reported knowledge is subject to social desirability and recall biases. Future research should incorporate objective health literacy assessments and include rural cohorts.

### Conclusion and Public Health Implications

Women in Dar-es-Salaam possess a moderate understanding of the primary symptoms of PCOS but exhibit significant knowledge gaps regarding its metabolic risks, fertility implications, and medical management. The passive consumption of health information, particularly via social media, underscores a missed opportunity for proactive health engagement.

## RECOMMENDATIONS

1. **Curriculum and Campaign Redesign:** Public health campaigns must pivot from basic symptom recognition to comprehensive education on the metabolic and fertility consequences of PCOS.

2. **Primary Care Integration:** Primary healthcare workers in Tanzania require targeted training and standardized counseling protocols to effectively communicate PCOS risks and diagnostic pathways to patients.

3. **Digital Health Regulation and Partnership:** Health authorities should collaborate with digital content creators to disseminate accurate, culturally relevant, and easily understandable PCOS information on social media platforms to counter misinformation and stimulate proactive health-seeking behaviors.

4. **Future Research:** Subsequent studies should explore the knowledge gaps in rural Tanzanian populations and assess the actual clinical diagnostic practices of local healthcare providers.

## REFERENCES

Alshdaifat, E., Sindiani, A., Amarin, Z., Absy, N., AlOsta, N., Abuhayyeh, H. A., & Alwani, M. (2021). Awareness of polycystic ovary syndrome: a university students' perspective. *Annals of Medicine and Surgery*, *72*, 103123. https://doi.org/10.1016/j.amsu.2021.103123

Alenzi, E. O., Alqntash, N. H., Almajed, E. H., & AlZabin, A. K. (2024).

Risk of polycystic ovary syndrome: a population-based analysis of sociodemographic factors, healthcare access, health behaviors, and health status. *BMC Women's Health*, *24*(1), 623. https://doi.org/10.1186/s12905-024-03446-9

Bigambo, F. M., Wang, D., Zhang, Y., et al. (2022). Current situation of menstruation and gynecological diseases prevalence among Chinese women: A cross-sectional study. *BMC Women's Health, 22*, 270. https://doi.org/10.1186/s12905-022-01860-5

Chiu, W. L., Kuczynska-Burggraf, M., Gibson-Helm, M., Teede, H. J., Vincent, A., & Boyle, J. A. (2018, January). What can you find about polycystic ovary syndrome (PCOS) online? Assessing online information on PCOS: quality, content, and user-friendliness. In *Seminars in reproductive medicine* (Vol. 36, No. 01, pp. 050-058). Thieme Medical Publishers. https://doi.org/10.1055/s-0038-1667186

Colombo, A., et al. (2023). Diet and Exercise in the Management of PCOS. Seminars in Reproductive Medicine. Advance online publication. https://doi.org/10.1055/s-0043-1777116

Erku, E. W., Yanni, M. M., Mohamed, H. M., Weldehawaria, S. F., Asfaw, E. M., Tibebu, M., ... & Negash, M. (2025). Knowledge, attitude, and practice of polycystic ovarian syndrome diagnosis among health care providers in Addis Ababa, Ethiopia. *BMC Women's Health*, *25*(1), 414. https://doi.org/10.1186/s12905-025-03948-0

Fernandez, R. C., Moore, V. M., Rumbold, A. R., Whitrow, M. J., Avery, J. C., & Davies, M. J. (2021). Diagnosis delayed: health profile differences between women with undiagnosed polycystic ovary syndrome and those with a clinical diagnosis by age 35 years. *Human Reproduction*, *36*(8), 2275-2284. https://doi.org/10.1093/humrep/deab101

Garad, R. M., & Teede, H. J. (2020). Polycystic ovary syndrome: improving policies, awareness, and clinical care. *Current Opinion in Endocrine and Metabolic Research*, *12*, 112-118. https://doi.org/10.1016/j.coemr.2020.04.007

Gautam, R., Maan, P., Jyoti, A., Kumar, A., Malhotra, N., & Arora, T. (2025). The role of lifestyle interventions in PCOS management: a systematic review. *Nutrients*, *17*(2), 310. https://doi.org/10.3390/nu17020310

Goh, J. E., Farrukh, M. J., Keshavarzi, F., Yap, C. S., Saleem, Z., Salman, M., ... & Ming, L. C. (2022). Assessment of prevalence, knowledge of polycystic ovary syndrome and health-related practices among women in klang valley: A cross-sectional survey. *Frontiers in Endocrinology*, *13*, 985588. https://doi.org/10.3389/fendo.2022.985588

Hillman, S. C., Bryce, C., Caleychetty, R., & Dale, J. (2020). Women's experiences of diagnosis and management of polycystic ovary syndrome: a mixed-methods study in general practice. *British Journal of General Practice*. https://doi.org/10.3399/bjgp20X708881

International PCOS Guideline Development Group. (2023). International evidence-based guideline for the assessment and management of polycystic ovary syndrome (2023 update). Monash University. https://www.monash.edu/__data/assets/pdf_file/0004/1412644/PCOS_Evidence-Based-Guidelines_20181009.pdf

Jones, C. L., et al. (2015). The Health Belief Model as an explanatory framework in communication research. Health Communication, 30(6), 566–576. https://doi.org/10.1080/10410236.2013.873363

Omar, H. S., Batchu, N., Ali, A. M., Uisso, F. G., Maro, E., Msuya, B., Mfugale, S., Opondo, S., Mchome, B., & Mlay, P. (2025). Prevalence, clinical patterns, and associated risk factors of polycystic ovarian syndrome among women seeking fertility treatment at Kilimanjaro Christian Medical Centre Hospital, Northern Tanzania. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*, *170*(3), 1205–1213. https://doi.org/10.1002/ijgo.70131

Oh, K. K., Mfaume, R. S., Mbise, U. A., & Kapologwe, N. A. (2023). Urban health issues of the marginalised in Dar es Salaam, Tanzania: A resonant voice calling for action. *Journal of Global Health*, *13*, 03060. https://doi.org/10.7189/jogh.13.03060

Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health education monographs*, *2*(4), 328-335. https://doi.org/10.1177/109019817400200403 https://doi.org/10.1177/109019817400200405

Salari, N., Nankali, A., Ghanbari, A., Jafarpour, S., Ghasemi, H., Dokaneheifard, S., & Mohammadi, M. (2024). Global prevalence of polycystic ovary syndrome in women worldwide: a comprehensive systematic review and meta-analysis. *Archives of gynecology and obstetrics*, *310*(3), 1303-1314. https://doi.org/10.1007/s00404-024-07607-x

Sharma, A., Sarwal, Y., Devi, N. K., & Saraswathy, K. N. (2025). Polycystic Ovary Syndrome prevalence and associated sociodemographic risk factors: a study among young adults in Delhi NCR, India. *Reproductive health*, *22*(1), 61. https://doi.org/10.1186/s12978-025-02019-9

Simon, O., & Ngereja, Z. R. (2025). Drivers of Informal Settlement Growth and Land Use Change in Dar es Salaam: Insights from Remote Sensing and GIS (1995-2024): Drivers of Informal Settlement Growth and Land Use Change in Dar es Salaam: Insights from Remote Sensing and GIS (1995-2024). *Journal of the Geographical Association of Tanzania*, *45*(1), 23-43. https://doi.org/10.56279/jgat.v45i1.333

Sokwala, S. B. M. R., & Dodia, R. (2024). Global approach to polycystic ovary syndrome in Africa. In *Polycystic Ovary Syndrome* (pp. 220-228). Elsevier. https://doi.org/10.1016/B978-0-323-87932-3.00038-4

Teede, H. J., Misso, M. L., Costello, M. F., Dokras, A., Laven, J., Moran, L., Piltonen, T., Norman, R. J., & International PCOS Network (2018). Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. *Fertility and sterility*, *110*(3), 364–379. https://doi.org/10.1016/j.fertnstert.2018.05.004

Teede, H. J., Tay, C. T., Laven, J. J. E., Dokras, A., Moran, L. J., Piltonen, T. T., Costello, M. F., Boivin, J., Redman, L. M., Boyle, J. A., Norman, R. J., Mousa, A., & Joham, A. E. (2023). Recommendations From the 2023 International Evidence-based Guideline for the Assessment and Management of Polycystic Ovary Syndrome. *The Journal of clinical endocrinology and metabolism*, *108*(10), 2447–2469. https://doi.org/10.1210/clinem/dgad463

Vågenes, H., & Pranić, S. M. (2023). Analysis of the quality, accuracy, and readability of patient information on polycystic ovarian syndrome (PCOS) on the internet available in English: a cross-sectional study. *Reproductive biology and endocrinology : RB&E*, *21*(1), 44. https://doi.org/10.1186/s12958-023-01100-x

Zaitoun, B., Al Kubaisi, A., AlQattan, N., Alassouli, Y., Mohammad, A., Alameeri, H., & Mohammed, G. (2023). Polycystic ovarian syndrome awareness among females in the UAE: a cross-sectional study. *BMC women's health*, *23*(1), 181. https://doi.org/10.1186/s12905-023-02318-y

Zheng, X., Liu, M., Bai, Z., Wu, L., Geng, L., Shen, Y., ... & Xi, Y. (2025). Global burden of polycystic ovary syndrome in women of reproductive age, 1990–2021: Analysis of the global burden of disease study 2021 with projections to 2050. *Plos one*, *20*(10), e0333000. https://doi.org/10.1371/journal.pone.0333000