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Polycystic Ovary Syndrome in Sub-Saharan Africa: A Systematic Review and Meta-Analysis of Prevalence and Associated Factors Among Women of Reproductive Age

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Abdullahi A. Diini [1], Prosper Akankwasa [1], Musa Kasujja [1], Mohamed S. Hurie [1], Jackson Kakooza [2], Theoneste Hakizimana [1], Enock Mukiibi [2], Catherine Lewis [3], Ahmed K. Kazigo [2], Ronard Musinguzi [1], Abubakar K. Abdullahi [1], Emmanuel Okurut [1]

1. Department of Obstetrics and Gynecology, Kampala International University Western Campus, Ishaka Bushenyi, UGA 2. Department of Surgery, Kampala International University Western Campus, Ishaka Bushenyi, UGA 3. Department of Surgery, St. Joseph's Hospital Kitovu, Masaka, UGA

Corresponding author: Catherine Lewis, cathymdphd@gmail.com

Abstract

Polycystic ovary syndrome (PCOS) is a common endocrine-metabolic disorder in women of reproductive age, but prevalence estimates in Sub-Saharan Africa are sparse and methodologically heterogeneous. The objective of this study was to estimate the pooled prevalence of PCOS and synthesize reported associated characteristics among women of reproductive age in Sub-Saharan Africa. We conducted a systematic review and meta-analysis guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Observational studies were identified in PubMed, Scopus, Web of Science, and Lens.org through May 2025. Eligible studies reported a denominator and PCOS cases among women aged 15-49 years in Sub-Saharan Africa. Proportions were logit-transformed and pooled using a random-effects model with restricted maximum likelihood. Eight studies comprising 2,887 women from Nigeria, Kenya, Sudan, Tanzania, and the Democratic Republic of the Congo were included. The pooled prevalence was 28.66% (95% confidence interval (CI), 21.93%-36.50%), with substantial heterogeneity (I^2 = 92.15%; Cochran's Q = 89.15, P < 0.001). Exploratory assessment did not detect funnel-plot asymmetry (Egger's P = 0.471), although power was limited by the small number of studies. Frequently reported characteristics included younger age, higher body mass index or obesity, hyperandrogenic features, menstrual dysfunction, and infertility. PCOS was common in the available Sub-Saharan African evidence, but the pooled estimate reflects facility-based, fertility-clinic, or symptom-enriched populations and should not be interpreted as population prevalence. Representative community-based studies using standardized diagnostic ascertainment are needed to define the regional burden and guide reproductive and metabolic care.

Categories: Obstetrics/Gynecology
Keywords: meta-analysis, polycystic ovary syndrome, prevalence, reproductive health, sub-saharan africa

Introduction And Background

Polycystic ovary syndrome (PCOS) is a heterogeneous endocrine-metabolic disorder in reproductive-aged women, characterized by combinations of ovulatory dysfunction, hyperandrogenism, and polycystic ovarian morphology [1,2]. Prevalence estimates vary substantially according to the diagnostic criteria and the population sampled; the broader Rotterdam definition generally identifies more cases than the stricter National Institutes of Health (NIH) or Androgen Excess Society (AES) definitions. The NIH 1990 criteria defined PCOS as clinical or biochemical evidence of hyperandrogenism and ovulatory dysfunction after exclusion of other similarly appearing disorders [3]. The Rotterdam criteria defined PCOS as two out of three of the following features: clinical or biochemical hyperandrogenism, ovulatory dysfunction, or polycystic ovarian morphology [4].

PCOS has important reproductive and metabolic consequences, including anovulatory infertility, dysglycemia, obesity-related cardiometabolic risks, and long-term healthcare needs. Global Burden of Disease analyses indicate a persistent and modeled increasing burden of PCOS among women of reproductive age, although these modeled burden estimates are methodologically distinct from directly observed prevalence in clinical or community cohorts [5-7].

In Sub-Saharan Africa, epidemiologic evidence remains limited and is concentrated in hospital, infertility clinic, or symptom-selected populations, with additional variability in access to biochemical testing and ultrasonography [1,8-10]. These limitations restrict generalizability and make it difficult to distinguish population burden from referral-pattern effects. This systematic review and meta-analysis therefore aimed to estimate the pooled prevalence of PCOS in the available Sub-Saharan African evidence and to synthesize reported associated characteristics while explicitly accounting for differences in sampling and PCOS ascertainment.

Review

Methodology

Protocol and Registration

This systematic review and meta-analysis were conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement [11]. The protocol was registered in PROSPERO (CRD420261459739).

Search Strategy and Study Selection

Comprehensive searches were conducted in PubMed, Scopus, Web of Science, and Lens.org for articles published from January 2010 to May 2025. Search concepts included "polycystic ovary syndrome," "PCOS," "prevalence," "Sub-Saharan Africa," relevant country names, and terms for associated characteristics, combined with Boolean operators as appropriate to each source. Reference lists of included studies were also screened manually. The exact source-specific search strings and filters are reproduced in Appendix A.

Eligibility Criteria

Studies were eligible if they used an observational design (cross-sectional, cohort, or case-control); included women of reproductive age (15-49 years) in a Sub-Saharan African country; and reported a denominator and number or proportion of participants with PCOS sufficient to derive prevalence. PCOS ascertainment was eligible when based on Rotterdam, NIH, or AES criteria, or when an original study explicitly reported a prior clinical PCOS diagnosis, even if the diagnostic criteria used for that prior diagnosis were not stated. Studies with no identifiable PCOS case definition were excluded. No language restriction was applied. Case reports, reviews, editorials, animal studies, and conference abstracts without sufficient primary data were excluded.

The review question was structured using population, context, ascertainment, and outcome domains appropriate for prevalence research. The population included women of reproductive age (15-49 years) in Sub-Saharan Africa. The context included community, hospital, gynecology, and fertility-care settings. PCOS ascertainment was based on Rotterdam, NIH, AES, or an explicitly reported prior clinical diagnosis. Outcomes included PCOS prevalence and reported demographic, reproductive, clinical, or metabolic characteristics associated with PCOS.

Two reviewers independently screened titles and abstracts and then assessed potentially eligible full texts. Disagreements were resolved by discussion and, when necessary, consultation with a third reviewer. Reasons for exclusion at full-text assessment were recorded against the prespecified eligibility domains.

Data Extraction

Data were extracted using a standardized form capturing the following: study characteristics (author, year, country, design, setting, and sample size); PCOS case numerator, prevalence, and diagnostic or ascertainment method; reported demographic, reproductive, clinical, and metabolic characteristics associated with PCOS; and the Joanna Briggs Institute (JBI) critical-appraisal items and summary score. Extraction was performed independently by two reviewers. Any discrepancies in extracted study characteristics, case numerators, denominators, ascertainment methods, or quality-appraisal judgments were resolved by discussion and, when necessary, consultation with a third reviewer.

Quality Assessment

Methodological quality was appraised using the Joanna Briggs Institute (JBI) tool appropriate for prevalence studies [12]. Two reviewers independently completed the appraisal and resolved disagreements by consensus. For transparency, the number of "yes" responses was summarized as a score out of nine; this score was used descriptively rather than as a threshold for study exclusion. The study-level item-by-item JBI judgments are provided in Appendix B. Judgments were based on the methods and results reported in the original studies; where reporting was insufficient to support a positive judgment, the item was classified as unclear rather than inferred.

Statistical Analysis

For each study, prevalence was calculated as x/n and transformed to the logit scale, $\log(x/(n - x))$, with a sampling variance of $1/x + 1/(n - x)$. Logit estimates were pooled using an intercept-only random-effects model with restricted maximum likelihood (REML) and back-transformed to proportions for presentation. Statistical heterogeneity was quantified using Cochran's Q, I^2, and τ^2. Funnel-plot inspection, Egger's regression, and Kendall's rank-correlation test were treated as exploratory because fewer than 10 studies were available. A sensitivity analysis excluded the study that relied on self-reported prior PCOS diagnosis without stated diagnostic criteria. Reported associated characteristics were synthesized narratively because

definitions, measurements, and adjusted analyses were not sufficiently comparable for quantitative pooling. Regional summaries were descriptive crude aggregates and were not interpreted as formal subgroup meta-analyses. Meta-analytic calculations were performed using random-effects REML methods and independently checked against the study-level case numerators and denominators. Jamovi with the MAJOR meta-analysis module was used for analytic output and graphical cross-checking. The logit transformation was selected because prevalence proportions can be bounded near 0 or 1, and the logit scale generally provides a more suitable, approximately unbounded scale for random-effects synthesis. REML was used because it estimates between-study variance while reducing small-sample bias relative to some alternative variance estimators. All eight included studies reported at least one PCOS case; therefore, no zero-event correction was required in the present analysis.

Results

Study Selection

We identified 701 records (PubMed: 16; Scopus: 49; Web of Science: 65; Lens.org: 571). After removal of 122 duplicates, 579 records were screened, and 565 were excluded at title/abstract screening. Fourteen reports were sought for retrieval; 2 could not be retrieved, leaving 12 reports assessed for eligibility. Four full-text reports were excluded because they did not meet one or more prespecified eligibility criteria concerning the population, PCOS ascertainment, extractable prevalence outcome, or eligible primary-study design. Eight studies comprising 2,887 women from Nigeria, Kenya, Sudan, Tanzania, and the Democratic Republic of the Congo (DRC) were included (Figure *1*).

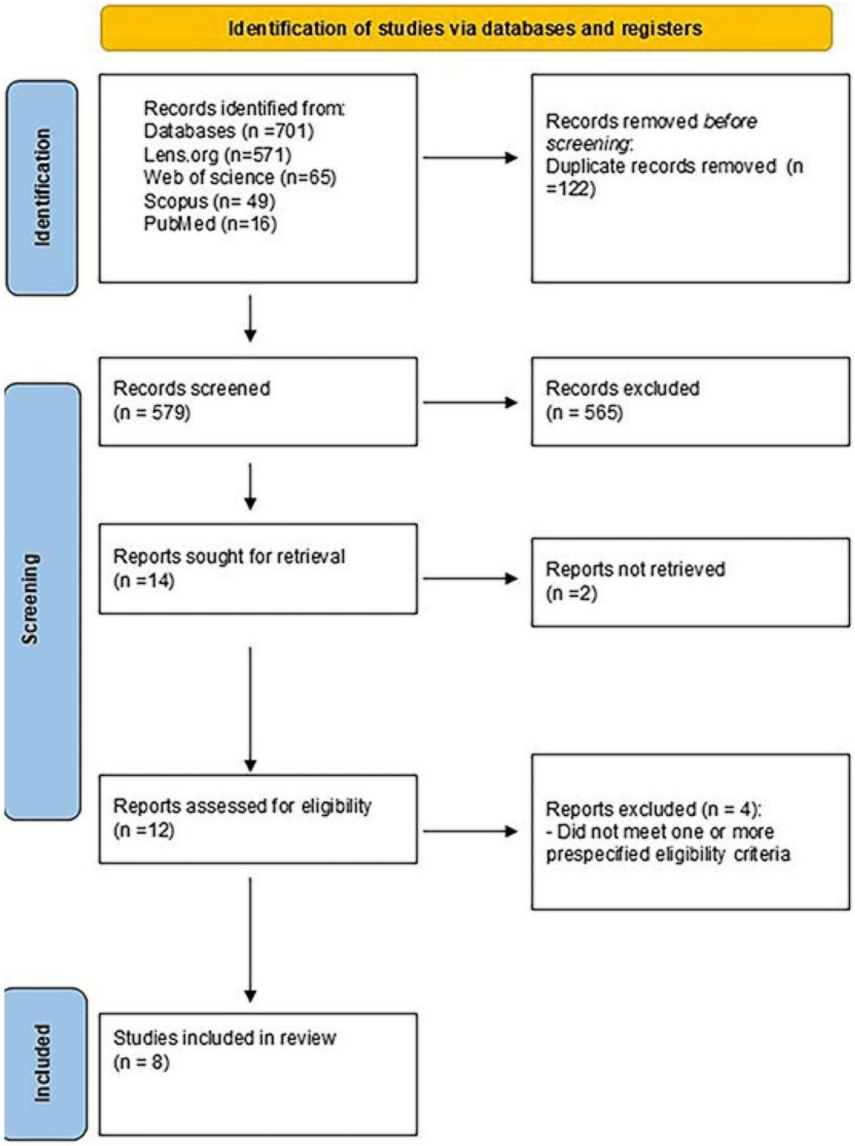


FIGURE 1: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram.

Study Characteristics

Table *1* summarizes the included studies. Study-specific prevalence ranged from 16.67% to 49.03%. The evidence base was dominated by facility-based, infertility-clinic, or symptom-selected samples. Omer Abdelbagi et al. [13] used a convenience cross-sectional survey in which PCOS prevalence reflected participants reporting a prior diagnosis rather than diagnosis within the study using Rotterdam, NIH, or AES criteria. JBI summary scores ranged from 6/9 to 8/9, with principal limitations relating to selection, ascertainment, and external validity.

Study ID	Year	Country/region	Study design	Sample size	PCOS cases (n)	PCOS ascertainment	Prevalence (%)	Reported associated characteristics	JBI appraisal score
Odera et al. [2]	2020	Kenya/Nairobi	Cross-sectional	131	49	Rotterdam (primary prevalence); NIH/AES also assessed	37.40	Age, BMI, ovarian size, testosterone	6/9
Ugwu et al. [14]	2013	Nigeria/Southeast	Prospective descriptive	342	62	Rotterdam	18.13	Infertility-clinic presentation; oligomenorrhea, BMI/obesity, LH/FSH, testosterone	7/9
Omer Abdelbagi et al. [13]	2022	Sudan/Khartoum	Cross-sectional survey	240	78	Self-reported prior PCOS diagnosis; diagnostic criteria NR	32.50	Descriptive symptoms/characteristics; standardized PCOS risk-factor model NR	6/9
Pembe and Abeid [15]	2009	Tanzania/Dar es Salaam	Cross-sectional	100	32	Rotterdam	32.00	Oligomenorrhea, acne, hirsutism, BMI, testosterone, LH/FSH	7/9
Oriji and Onwuegbulam [16]	2019	Nigeria/Port Harcourt	Cross-sectional	174	29	Rotterdam	16.67	Hirsutism, oligomenorrhea, acne, BMI, testosterone	6/9
Ogbenyalu et al. [17]	2023	Nigeria/South-South & Southeast	Prospective cross-sectional	206	101	Rotterdam	49.03	BMI, menstrual-cycle characteristics, follicular-fluid microbiology	7/9
Kalenda et al. [18]	2014	DRC/Mbuji-Mayi	Prospective observational	1,273	300	Rotterdam	23.57	Age, dietary energy intake, socioeconomic status, physical activity	8/9
Akpata et al. [1]	2018	Nigeria/Benin City	Cross-sectional	421	116	Rotterdam (primary prevalence); NIH/AES also assessed	27.55	Age, BMI, hyperandrogenism, family history of diabetes	7/9

TABLE 1: Characteristics of included studies.

AES, Androgen Excess Society; BMI, body mass index; DRC, Democratic Republic of the Congo; FSH, follicle-stimulating hormone; JBI, Joanna Briggs Institute; LH, luteinizing hormone; NIH, National Institutes of Health; NR, not reported; PCOS, polycystic ovary syndrome.

Pooled Prevalence

Across the eight studies (N = 2,887), the REML random-effects pooled prevalence of PCOS was 28.66% (95% CI: 21.93%-36.50%; pooled logit = -0.912, SE = 0.183). Study-specific estimates ranged from 16.67% to 49.03% (Figure *2*). Heterogeneity was substantial (τ^2 = 0.2433; I^2 = 92.15%; Q(7) = 89.152, P < 0.001; Table *2*), indicating that the pooled estimate represents markedly different study populations and ascertainment contexts. In a prespecified robustness check excluding Abdelbagi et al. [13], which relied on self-reported prior PCOS diagnosis without stated diagnostic criteria, the pooled prevalence was 28.13% (95% CI: 20.61%-37.10%), with heterogeneity remaining substantial (I^2 = 92.96%). Funnel-plot and regression assessments were exploratory because only eight studies were available; Egger's regression (P = 0.471) and Kendall's rank correlation (P = 1.000) did not show statistically detectable asymmetry, but these tests had limited power (Figure *3*; Table *3*). Given the magnitude of heterogeneity, the pooled estimate should be interpreted as an average across heterogeneous observed settings rather than as evidence of a single common regional prevalence. Likely contributors include differences in recruitment setting, age and adiposity, infertility status, diagnostic criteria, and access to ultrasonography and biochemical testing. These analyses should not be interpreted as evidence that publication bias is absent, because statistical power is limited when fewer than 10 studies are available.

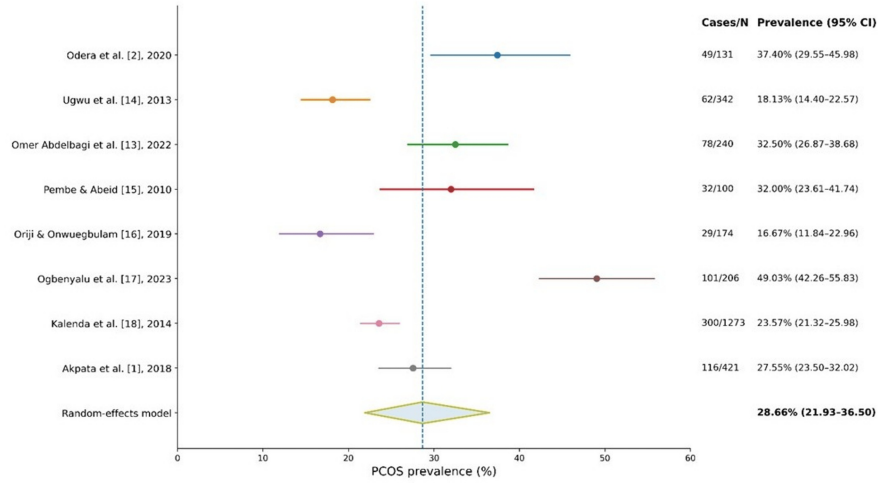


FIGURE 2: Forest plot of study-specific PCOS prevalence estimates and the pooled random-effects estimate.

Proportions were analyzed on the logit scale using restricted maximum likelihood and back-transformed to percentages. Horizontal lines show 95% confidence intervals, and the diamond shows the pooled estimate.

PCOS, polycystic ovary syndrome

Parameter	Value	95% CI	P-value
Pooled prevalence (%)	28.66	21.93-36.50	-
Pooled logit	-0.912	-1.270 to 0.554	-
Tau²	0.2433	-	-
I² (%)	92.15	-	-
Q-statistic (df = 7)	89.152	-	<0.001

TABLE 2: Meta-analysis summary statistics.

CI, confidence interval

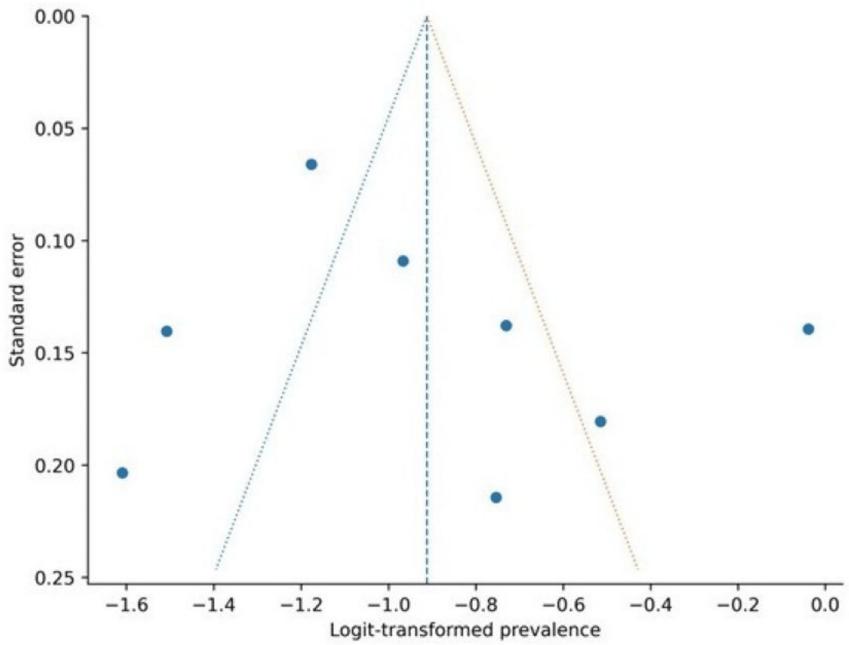


FIGURE 3: Funnel plot of logit-transformed PCOS prevalence against its standard error.

The vertical dashed line represents the pooled logit prevalence, and the dotted lines show pseudo-95% limits. Because only eight studies were available [1,2,13-18], visual and formal asymmetry assessments are exploratory and have low statistical power.

PCOS, polycystic ovary syndrome

Test	Statistic	*P*-value	Interpretation
Egger's regression	$t = 0.769$	0.471	No statistically detectable asymmetry; low power with $k = 8$
Kendall's tau	$\tau = 0.000$	1.000	No statistically detectable rank correlation; low power with $k = 8$

TABLE 3: Publication bias assessment.

k = number of studies

Associated Factors

Across the included studies, frequently reported characteristics included higher body mass index or obesity, younger age, hyperandrogenic manifestations such as hirsutism or acne, biochemical androgen-related measures, menstrual irregularity, and infertility [1,2,14,15,18]. These findings require cautious interpretation. Hyperandrogenism and ovulatory dysfunction are themselves components of standard PCOS diagnostic frameworks, while infertility was also a defining feature of several study populations. The studies used heterogeneous definitions and largely cross-sectional analyses, so the reported characteristics were synthesized narratively and should not be interpreted as causal risk factors or as independently predictive variables unless the original study reported an adjusted association.

Regional Prevalence

A descriptive regional comparison was performed by aggregating cases and denominators within broad geographic groups (Table *4*). The crude aggregate prevalence was 35.06% in the two East African studies (Kenya and Tanzania), 32.50% in the single Sudanese study, 26.95% across four Nigerian studies, and 23.57% in the single Central African study from the DRC. These values are descriptive only: most groups contained very few studies, study populations differed materially, and the Sudan and DRC estimates each came from a

single study. They should therefore not be interpreted as statistically comparable regional prevalence estimates.

Region	Studies (*k*)	Sample size	Crude aggregate prevalence (%)	Reference
Nigeria	4	1,143	26.95	[1,14,16,17]
East Africa (Kenya, Tanzania)	2	231	35.06	[2,15]
Central Africa (DRC)	1	1,273	23.57	[18]
Sudan	1	240	32.50	[13]

TABLE 4: Regional prevalence comparison.

DRC, Democratic Republic of the Congo; *k*, number of studies

Discussion

This review found a pooled PCOS prevalence of 28.66% (95% CI: 21.93%-36.50%) across eight Sub-Saharan African studies. The central interpretation, however, is not that approximately one in three women in the general regional population has PCOS. Most included samples were drawn from infertility services, gynecology clinics, or women presenting with menstrual symptoms, and these recruitment pathways enrich the study population for PCOS. The very high heterogeneity (I^2 = 92.15%) is therefore clinically and methodologically plausible and is itself an important finding: the available evidence does not represent a single, uniform underlying population prevalence. Differences in referral pathways, diagnostic ascertainment, age and adiposity distributions, infertility status, and access to ultrasonography and biochemical testing are likely to contribute to the observed dispersion. Therefore, the pooled estimate should be interpreted as the average prevalence observed across the heterogeneous clinical and symptom-enriched populations represented by the included studies, rather than as an estimate of PCOS prevalence in the general Sub-Saharan African population.

This interpretation is consistent with calls for stronger African PCOS epidemiology. Maya et al. [10] emphasized that African prevalence estimates require methodologically unbiased, population-based studies rather than extrapolation from selected clinical groups, while Sokwala and Dodia [9] highlighted diagnostic and health-system constraints that can shape recognition of PCOS across African settings. Evidence published after the May 2025 search window reinforces the importance of case mix rather than providing a reason to retrospectively alter the pooled dataset. Omar et al. [19] reported a 36% prevalence among women seeking fertility treatment at Kilimanjaro Christian Medical Centre in northern Tanzania. A 2026 multicenter Ghanaian infertility-care study by Okai et al. [20] reported a lower estimate of approximately 16%, illustrating that even within fertility-care populations the burden can vary widely. These post-search studies were not eligible for the original quantitative synthesis and are cited only to contextualize the findings.

Implications for Practice and Policy

The clinical importance of these findings lies in the concentration of PCOS within reproductive health services, where anovulatory infertility, menstrual dysfunction, hyperandrogenic symptoms, and metabolic comorbidity frequently coexist. The synthesis supports a need for consistent diagnostic pathways and metabolic assessment in women presenting with compatible symptoms, while avoiding indiscriminate population screening based on this pooled estimate. In resource-constrained settings, access to reliable ultrasonography and androgen assays is variable [9], making careful clinical assessment and standardized, context-appropriate diagnostic protocols particularly important. The recurrent reporting of higher BMI or obesity also supports integrating cardiometabolic risk assessment into PCOS care rather than treating the disorder solely as an infertility diagnosis.

Strengths and Limitations

The review has several strengths, including a prespecified protocol, PRISMA-guided reporting, searches across four accessible bibliographic sources, duplicate independent screening, explicit study-level case numerators and denominators, and a REML random-effects analysis on the logit scale. The sensitivity analysis showed that excluding the survey based on self-reported prior PCOS diagnosis had little effect on the pooled point estimate.

Important limitations remain. First, facility-based and infertility-clinic recruitment creates substantial selection bias and limits generalizability to community populations. Second, PCOS ascertainment was not uniform; one study relied on self-reported prior diagnosis, with the original diagnostic criteria not stated.

Third, heterogeneity was very high, so the pooled estimate should be interpreted as a summary of heterogeneous observed settings rather than a common regional prevalence. Fourth, only eight studies were available, making funnel-plot asymmetry tests and regional comparisons underpowered. Fifth, associated characteristics could not be quantitatively pooled because definitions and analytical adjustment differed across studies. Finally, the search ended in May 2025; later studies were therefore discussed as contextual evidence but were not added to the quantitative synthesis.

Future Research

Future research should prioritize representative community-based sampling across understudied Sub-Saharan African countries and use transparent, standardized PCOS ascertainment with clearly reported diagnostic components. Studies should report age-specific and setting-specific denominators, phenotype distributions, adiposity and metabolic measures, infertility status, and adjusted associations using harmonized definitions. Prospective cohorts are also needed to distinguish diagnostic manifestations and correlates from true predictors of reproductive and metabolic outcomes. These design improvements would permit more informative subgroup analyses and reduce the uncertainty that currently limits regional inference.

Conclusions

Among the available Sub-Saharan African studies, which were predominantly facility-based, fertility-clinic, or symptom-enriched, the pooled PCOS prevalence was 28.66%. Substantial between-study heterogeneity and nonrepresentative sampling mean that this estimate should be interpreted as an estimate of PCOS prevalence in the selected facility-based, fertility-clinic, and symptom-enriched populations represented by the included studies, not as a population prevalence for Sub-Saharan Africa. The evidence nonetheless indicates a substantial burden of PCOS within reproductive health services and recurring clinical and metabolic correlates. Representative population-based studies with standardized diagnostic ascertainment are required to establish the true regional burden and support appropriately targeted reproductive and metabolic care. Accordingly, the pooled estimate should not be used to infer the prevalence of PCOS in the general female population of Sub-Saharan Africa or to justify population-wide screening.

Appendices

Appendix A: Database search strings

("Polycystic Ovary Syndrome"[Mesh] OR "polycystic ovary syndrome"[tiab] OR "polycystic ovarian syndrome"[tiab] OR PCOS[tiab] OR "polycystic ovaries"[tiab]) AND ("Africa South of the Sahara"[Mesh] OR "Sub-Saharan Africa"[tiab] OR "sub saharan africa"[tiab] OR Nigeria[tiab] OR Kenya[tiab] OR Ghana[tiab] OR Ethiopia[tiab] OR "South Africa"[tiab] OR Uganda[tiab] OR Tanzania[tiab] OR Cameroon[tiab] OR Senegal[tiab] OR Mali[tiab] OR "Burkina Faso"[tiab] OR Niger[tiab] OR Rwanda[tiab] OR Zimbabwe[tiab] OR Zambia[tiab] OR Malawi[tiab] OR Botswana[tiab] OR Namibia[tiab] OR Sudan[tiab] OR Madagascar[tiab] OR Angola[tiab] OR Mozambique[tiab]) AND ("Prevalence"[Mesh] OR prevalence[tiab] OR "Cross-Sectional Studies"[Mesh] OR "cross sectional"[tiab] OR "cross-sectional"[tiab] OR "Epidemiologic Studies"[Mesh] OR epidemiology[tiab] OR epidemiological[tiab] OR incidence[tiab] OR frequency[tiab] OR occurrence[tiab] OR "prevalence rate"[tiab] OR "prevalence study"[tiab] OR "Surveys and Questionnaires"[Mesh] OR survey[tiab] OR "Risk Factors"[Mesh] OR "risk factors"[tiab] OR "associated factors"[tiab] OR "associated with"[tiab] OR correlates[tiab] OR determinants[tiab] OR predictors[tiab] OR associations[tiab]) AND ("Women"[Mesh] OR women[tiab] OR female[tiab] OR females[tiab] OR "Reproductive Health"[Mesh] OR "reproductive age"[tiab] OR "women of reproductive age"[tiab] OR "childbearing age"[tiab] OR "fertile women"[tiab] OR "Adolescent"[Mesh] OR adolescent[tiab] OR adolescents[tiab] OR "young women"[tiab] OR "adult women"[tiab])

Web of Science

TS=("polycystic ovary syndrome" OR "polycystic ovarian syndrome" OR PCOS OR "polycystic ovar*") AND TS=("Sub-Saharan Africa" OR "sub saharan africa" OR "Black Africa" OR "tropical Africa" OR "West Africa" OR "East Africa" OR "Central Africa" OR "Southern Africa" OR Angola OR Benin OR Botswana OR "Burkina Faso" OR Burundi OR Cameroon OR "Cape Verde" OR "Central African Republic" OR Chad OR Comoros OR "Democratic Republic of Congo" OR "Republic of Congo" OR "Cote d'Ivoire" OR "Ivory Coast" OR Djibouti OR "Equatorial Guinea" OR Eritrea OR Eswatini OR Swaziland OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR "Guinea-Bissau" OR Kenya OR Lesotho OR Liberia OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR "Sao Tome and Principe" OR Senegal OR Seychelles OR "Sierra Leone" OR Somalia OR "South Africa" OR "South Sudan" OR Sudan OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe) AND TS=(prevalence OR incidence OR epidemiology OR frequency OR occurrence OR distribution OR "cross sectional" OR "cross-sectional" OR survey OR "associated factors" OR "risk factors" OR correlat* OR determinant* OR predictor* OR characteristic* OR clinical OR phenotype OR symptom* OR manifestation* OR presentation OR metabolic OR insulin OR diabetes OR obesity OR "metabolic syndrome" OR "insulin resistance") AND TS=("reproductive age" OR "women of reproductive age" OR "childbearing age" OR "fertile women" OR adolescent* OR "young women" OR "adult women" OR female* OR women)

Scopus

TITLE-ABS-KEY("polycystic ovary syndrome" OR "polycystic ovarian syndrome" OR PCOS OR "polycystic ovar*") AND TITLE-ABS-KEY("Sub-Saharan Africa" OR "sub saharan africa" OR "Black Africa" OR "tropical Africa" OR "West Africa" OR "East Africa" OR "Central Africa" OR "Southern Africa" OR Angola OR Benin OR Botswana OR "Burkina Faso" OR Burundi OR Cameroon OR "Cape Verde" OR "Central African Republic" OR Chad OR Comoros OR "Democratic Republic of Congo" OR "Republic of Congo" OR "Cote d'Ivoire" OR "Ivory Coast" OR Djibouti OR "Equatorial Guinea" OR Eritrea OR Eswatini OR Swaziland OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR "Guinea-Bissau" OR Kenya OR Lesotho OR Liberia OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR "Sao Tome and Principe" OR Senegal OR Seychelles OR "Sierra Leone" OR Somalia OR "South Africa" OR "South Sudan" OR Sudan OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe) AND TITLE-ABS-KEY(prevalence OR incidence OR epidemiology OR frequency OR occurrence OR distribution OR "cross sectional" OR "cross-sectional" OR survey OR "associated factors" OR "risk factors" OR correlat* OR determinant* OR predictor* OR characteristic* OR clinical OR phenotype OR symptom* OR manifestation* OR presentation OR metabolic OR insulin OR diabetes OR obesity OR "metabolic syndrome" OR "insulin resistance") AND TITLE-ABS-KEY("reproductive age" OR "women of reproductive age" OR "childbearing age" OR "fertile women" OR adolescent* OR "young women" OR "adult women" OR female* OR women) AND PUBYEAR > 2009 AND PUBYEAR < 2026 AND (EXCLUDE (SUBJAREA,"VETE") OR EXCLUDE (SUBJAREA,"SOCI")) AND (EXCLUDE (DOCTYPE,"ch"))

Lens.org

("polycystic ovary syndrome" OR PCOS) AND ("Sub-Saharan Africa" OR Nigeria OR Kenya OR Ghana OR Ethiopia OR "South Africa" OR Uganda OR Tanzania) AND (prevalence OR epidemiology OR "cross sectional" OR "risk factors" OR "associated factors" OR "metabolic factors" OR "reproductive factors" OR "clinical characteristics") AND ("reproductive age" OR women OR female*)

Appendix B

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Total
Odera et al. [2]	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	6/9
Ugwu et al. [14]	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	7/9
Omer Abdelbagi et al. [13]	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	6/9
Pembe & Abeid [15]	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	7/9
Oriji & Onwuegbulam [16]	No	Yes	Yes	Yes	No	Yes	Yes	No	No	6/9
Ogbenyalu et al. [17]	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7/9
Kalenda et al. [18]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	8/9
Akpata et al. [1]	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	7/9

TABLE 5: Item-by-item Joanna Briggs Institute critical appraisal of included prevalence studies.

The Joanna Briggs Institute (JBI) checklist for prevalence studies was applied across nine domains. Judgments were reconstructed from the published methods and results of the eight included studies. “Unclear” indicates that the published report did not provide sufficient information to support a definitive positive or negative judgment. The appraisal was used descriptively and did not determine study exclusion.

JBI domains: 1. Sample frame appropriate to target population; 2. Appropriate sampling technique; 3. Adequate sample size; 4. Subjects and setting described in detail; 5. Sufficient coverage of the identified sample; 6. Valid method for identifying the condition; 7. Condition measured in a standard, reliable way; 8. Appropriate statistical analysis; 9. Adequate response rate / management of low response

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Catherine Lewis, Abdullahi A. Diini

Drafting of the manuscript: Catherine Lewis, Abdullahi A. Diini, Prosper Akankwasa, Jackson Kakooza,

Theoneste Hakizimana, Ahmed K. Kazigo, Abubakar K. Abdullahi

Critical review of the manuscript for important intellectual content: Catherine Lewis, Abdullahi A. Diini, Musa Kasujja, Mohamed S. Hurie, Jackson Kakooza, Theoneste Hakizimana, Enock Mukiibi, Ahmed K. Kazigo, Ronard Musinguzi, Abubakar K. Abdullahi, Emmanuel Okurut

Supervision: Catherine Lewis, Emmanuel Okurut

Acquisition, analysis, or interpretation of data: Abdullahi A. Diini, Prosper Akankwasa, Musa Kasujja, Mohamed S. Hurie, Jackson Kakooza, Theoneste Hakizimana, Enock Mukiibi, Ahmed K. Kazigo, Ronard Musinguzi, Abubakar K. Abdullahi, Emmanuel Okurut

Disclosures

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