

Point prevalence of common mental health conditions in Nigeria: a systematic review and meta-analysis

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Abstract

Nigerian mental health prevalence data are dispersed across conditions, instruments, and high-risk settings, limiting their use for research planning. This review synthesized current and point prevalence for 10 mental health condition families in Nigerian populations. PubMed/MEDLINE and Europe PMC were the core bibliographic sources, supplemented by African Journals Online and Google Scholar. Searches ran on 6 August 2026. Eligible reports used validated current or ≤ 30 -day measures. Joanna Briggs Institute prevalence criteria informed risk-of-bias judgements. Logit-transformed inverse-variance random-effects models with restricted maximum likelihood variance were fitted in R; screening and diagnostic estimates were analyzed separately. A total of 103 reports contributed 133 estimates. Pooled screening prevalence was 30.2% (95% confidence interval 24.6-36.5%) for depression and 34.8% (25.9-44.9%) for anxiety; diagnosed depression was 20.2% (15.4-26.0%). Current substance-use disorder prevalence was 16.4% (11.9-22.3%), diagnosed dementia 2.2% (0.7-6.9%), cognitive-impairment screening 24.1% (21.7-26.6%), psychosis 4.2% (1.3-12.7%), antenatal depression 16.7% (8.4-30.4%), postpartum screening 18.5% (9.0-34.4%), diagnosed post-traumatic stress disorder 12.2% (4.5-29.3%; trauma-exposed screening 58.8%, 37.1-77.5%), current suicidal ideation 20.4% (11.6-33.4%), current attempts 2.3% (0.7-6.9%), and attention-deficit/hyperactivity disorder 8.5% (5.3-13.4%). No eligible bipolar estimate was found. Heterogeneity was usually substantial (I² 58.0-99.3%). These are planning values for populations resembling the contributing studies, not national rates. Researchers should match *p* to the target population and measurement method; sparse, heterogeneous outcomes require conservative sensitivity calculations.

Key words: Nigeria, prevalence, mental disorders, depression, anxiety, post-traumatic stress disorder, meta-analysis.

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Introduction

Mental health is integral to functioning, education, productivity and social inclusion. Mental disorders remain major contributors to years lived with disability, while many affected people receive no timely or appropriate care.¹⁻³ Reliable epidemiological estimates are needed to anticipate service demand, plan studies and select an anticipated proportion, *p*, for sample-size calculation. Such estimates must correspond to the population and measurement method in which they will be used.

Nigeria is a particularly important setting because its large and youthful population spans diverse cultural, economic and geographic contexts, with marked differences in urbanization, conflict exposure, displacement and access to care. Research has expanded across communities, hospitals, primary care, schools, universities, maternal-health services and correctional or trauma-affected settings. The evidence is valuable but dispersed, and many estimates arise from risk-enriched samples that are not nationally representative.

Prevalence is not a fixed property of a disorder. It changes with the population, case definition, instrument, cutoff, and recall

window. A symptom screen identifies probable cases above a threshold, whereas a diagnostic interview applies explicit criteria and usually measures a narrower construct. Current caseness also differs from lifetime or 12-month occurrence. Combining these quantities can obscure genuine differences and produce a *p* with no clear operational meaning.

The Nigerian Survey of Mental Health and Well-Being remains foundational, but its lifetime and 12-month diagnostic estimates answer a different question from point or current prevalence.⁴ The wider African literature is also uneven by country, population and diagnosis, with substantial heterogeneity in ascertainment and study design.⁵ A useful Nigerian synthesis must therefore preserve clinically and methodologically meaningful strata rather than maximize the number of studies pooled into a single calculation.

This review addressed 10 prespecified condition families: depression, anxiety, substance-use disorders (SUD), dementia and cognitive impairment, schizophrenia and psychosis, bipolar disorder, perinatal depression, post-traumatic stress disorder (PTSD), suicidal ideation and behavior, and attention-deficit/hyperactivity disorder (ADHD) with other child and adolescent mental disorders. Each was treated as a mini review. Diagnoses were separated

from screens, current outcomes from longer recall periods, and risk-enriched settings were interpreted within their source populations. This approach preserved the meaning of *p* as used in prevalence-study sample-size calculations. The objective was to estimate Nigerian point or current prevalence for each condition, quantify heterogeneity and provide defensible planning proportions. The PECO question asked what proportion of people in Nigeria currently met a validated screening threshold or diagnostic definition. Secondary objectives assessed instrument, setting, era, risk of bias, small-study effects and evidence gaps.

Methods

Protocol, registration and reporting

The review followed a prospectively agreed protocol and approved condition-specific refinements, registered with PROSPERO before full synthesis began. Reporting followed PRISMA 2020 and PRISMA-S.^{6,7}

Eligibility criteria

Primary human studies conducted in Nigeria were eligible when a current diagnosis or validated screening threshold was reported with an extractable denominator. Cross-sectional studies and baseline/first-wave cohort data were eligible; peer-reviewed articles and accessible English-language theses were permitted. Reviews, editorials, qualitative-only studies, case reports/series, unvalidated ad hoc checklists, unclear denominators, non-isolatable multinational data and lifetime-only estimates were excluded.

Current was operationalized as present-state diagnosis or a validated recall window of ≤ 30 days. Depression and anxiety screens were separated from diagnoses. Alcohol Use Disorders Identification Test (AUDIT) 12-month and Alcohol, Smoking and Substance Involvement Screening Test 3-month estimates were secondary, not primary current SUD estimates. Dementia was restricted primarily to adults aged ≥ 60 and never pooled with cognitive-impairment screens. Psychotic-like experiences alone and lifetime Mood Disorder Questionnaire (MDQ) bipolar screens were excluded. Perinatal depression covered pregnancy to 12 months postpartum, with antenatal and postpartum strata kept separate. PTSD required a qualifying trauma and current/1-month assessment. Suicidal ideation and attempts were separated, and a single item was eligible only when part of a validated instrument. ADHD and broad child/adolescent disorder outcomes remained separate.

Information sources and search strategy

On 6 August 2026, fixed Boolean strings combining (Nigeria OR Nigerian), condition terms, and (prevalence OR epidemiology OR frequency OR burden) were run for all 10 conditions. PubMed/MEDLINE returned 3154 records across condition searches, and Europe PMC exported 10,000 ranked records. African Journals Online (AJOL) returned 617 records, and Google Scholar returned 862 records from the first 20 requested pages per condition, subject to suppression and rank instability. Embase, PsycINFO, CINAHL, Web of Science and Scopus were not searched because no authenticated institutional access was available. Exact strings, dates, hits and retrieval notes are provided in *Supplementary Data* (Search_Strategies and Search_Log sheets).

Selection and data collection

Records were de-duplicated by PMID, DOI and normalized title. Rule-based title/abstract triage was followed by report-level adjudication against the protocol, with direct full-text review for open-access reports and structured-abstract/metadata adjudication where full text was inaccessible. A single reviewer conducted final human adjudication with computational checks for duplicates, numerator/denominator consistency and condition-specific rules; this does not equal independent dual screening and is treated as a limitation.

Extraction fields were author/year, setting, population, sample size, cases, prevalence, tool and cutoff, recall window, measure type, identifiers, event provenance and Joanna Briggs Institute (JBI) score. When a publication reported only a rounded percentage and sample size, the event count was reconstructed by rounding $n \times p$ and flagged; 65 of 133 estimate rows used such reconstruction. A study could contribute to different conditions or distinct measurement strata, but only once within a given outcome synthesis. Linked reports and overlapping cohorts were retained only in their most complete form.

Risk of bias

The 9-item JBI checklist for prevalence studies assessed the sampling frame, recruitment, sample size, description, data coverage, valid condition identification, standardized measurement, statistical analysis and response handling.⁸ Scores of 7-9, 5-6 and 0-4 were categorized as low, moderate and high risk, respectively. Item-level judgments and decision rules are reported in *Supplementary Data* (JBI_Appraisal sheet).

Statistical synthesis

For groups with at least 2 independent estimates, event counts and denominators were transformed to logits and pooled with an inverse-variance random-effects model. Between-study variance was estimated by restricted maximum likelihood (REML); a 0.5 continuity correction was applied only to zero or all-event cells. Estimates were backtransformed to proportions. This logit strategy avoided known inverse back-transformation problems of the Freeman-Tukey approach.^{9,10} Cochran *Q*, *I*², τ^2 and, for $k \geq 3$, 95% prediction intervals were calculated; prediction intervals were interpreted descriptively given instability with few studies.⁹

Screens and diagnoses were not combined. Prespecified secondary syntheses included AUDIT estimates, risk-of-bias, era, setting and tool strata; low thresholds explicitly flagged for sensitivity analysis were excluded from primary pooling. Leave-one-out analyses were run for $k \geq 5$. Univariable random-effects meta-regressions for year, low-risk status and healthcare setting were exploratory when $k \geq 10$. Funnel plots and Egger tests were limited to $k \geq 10$.¹¹ Analyses used base R 4.6.1;¹² the executable script is auditable in the project working files. Study-level estimates, subgroup and meta-regression outputs, and detailed forest and funnel plots are in the *Supplementary Files*.

Results

Study selection

The core PubMed/Europe PMC exports contained 13,153 records; 5079 duplicates were removed, 8074 remained after de-duplication, and 2195 explicitly Nigerian records entered

title/abstract screening. A total of 904 unique reports reached report-level eligibility assessment. Of these, 103 reports contributed 133 condition-specific estimates; all included reports had PubMed identifiers, and none was unique only to the supplementary AJOL/Scholar results. The remaining 801 reports were

excluded for the primary reasons displayed in Figure 1 and logged in *Supplementary Data* (Excluded_Reports sheet). Full text was available for 390 assessed reports; 514 were assessed from sufficiently detailed structured abstracts and metadata (Figure 1).

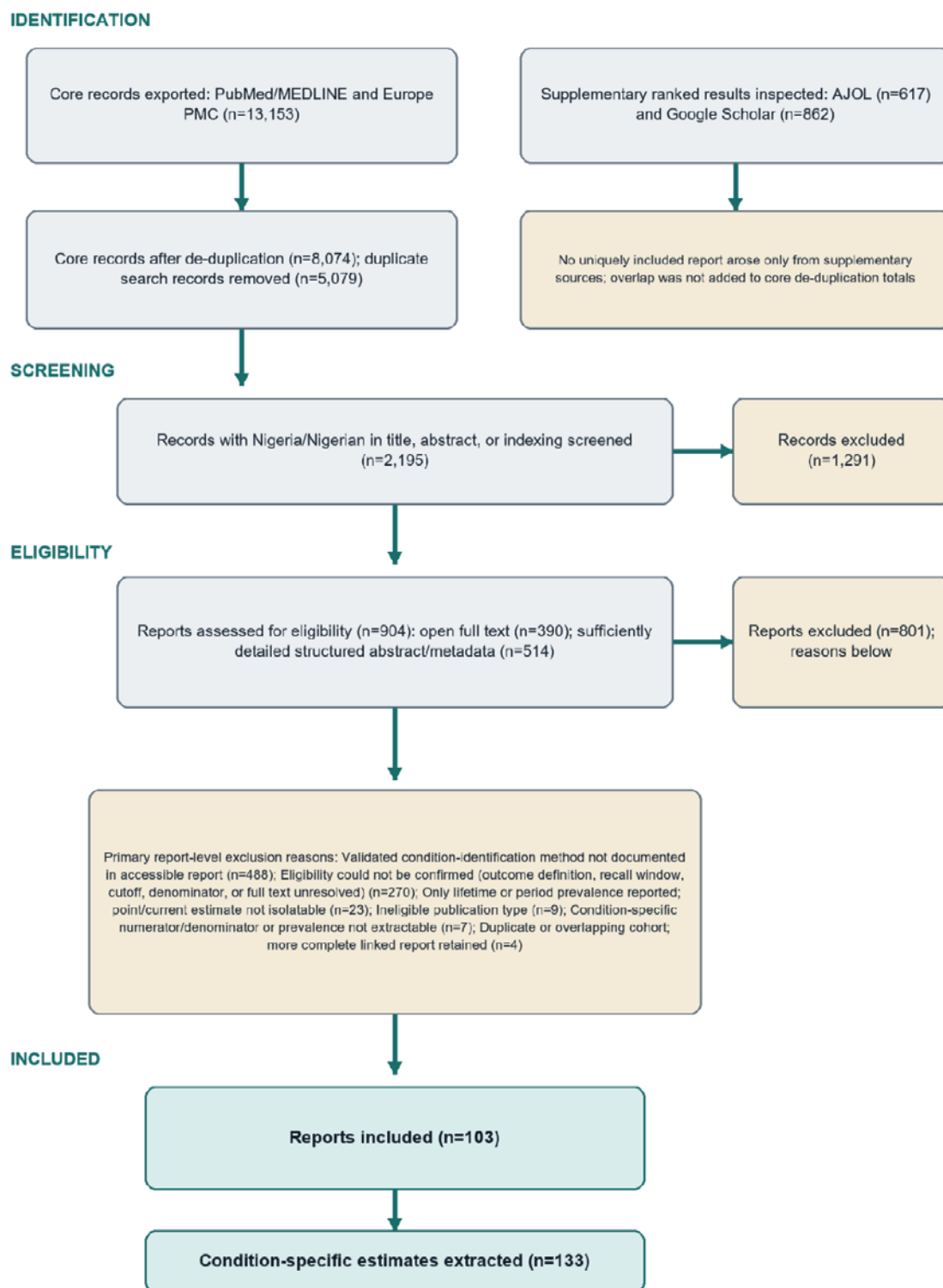


Figure 1. PRISMA 2020 study-selection flow.

Table 1. Included evidence by condition.

Condition family	Reports	Estimates	Outcome strata	Years
Depression	34	36	Screen (k=30) [27 pooled]*; diagnosis (k=6)	2004-2026
Anxiety	21	21	Screen (k=20) [19 pooled]*; diagnosis (k=1)	2006-2026
Substance use	10	11	Nicotine current (k=1); any SUD current (k=2); alcohol disorder current (k=2); other SUD current (k=1); AUDIT secondary (k=5)	2009-2025
Dementia/cognitive impairment	8	8	Dementia diagnosis (k=6); cognitive impairment screen (k=2)	1992-2026
Psychosis	2	2	Diagnosis (k=2)	1998-2021
Bipolar disorder	0	0	No eligible current point-prevalence estimate	---
Perinatal depression	15	16	Postpartum screen (k=8); postpartum diagnosis (k=2); antenatal diagnosis (k=2); antenatal screen (k=4)	2004-2026
PTSD	12	12	Diagnosis (k=6); screen (k=6)	2006-2026
Suicidality	11	14	Ideation current (k=11); attempt current (k=3)	2012-2026
ADHD/child	11	13	ADHD (k=9); any child mental disorder (k=4)	2006-2026

Reports may contribute to more than one condition; estimate counts are therefore not additive as unique studies. Table 1 estimate counts include every condition/outcome-group row meeting eligibility criteria; not all entered primary pooling. Three depression screening estimates and one anxiety screening estimate used a mild-or-higher threshold prespecified for sensitivity analysis only (Statistical synthesis) and were excluded from primary pooling (depression screen: 30 extracted, 27 pooled; anxiety screen: 20 extracted, 19 pooled). Every other condition/outcome-group row in this table has identical extracted and pooled counts; this was checked against the Study_Estimates sheet (primary column) in the Supplementary Data for all 21 condition/outcome-group rows shown here. PTSD, post-traumatic stress disorder; SUD, substance-use disorders; ADHD, attention-deficit/hyperactivity disorder; AUDIT, Alcohol Use Disorders Identification Test.

Included-study characteristics

The 103 reports were published from 1992 to 2026 and contributed samples ranging from 41 to 44,238 participants. Settings included community surveys, schools and universities, primary and specialist care, correctional facilities, displacement camps and perinatal services. Validated instruments included Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7, Hospital Anxiety and Depression Scale, 21-item Depression Anxiety Stress Scales, Mini International Neuropsychiatric Interview, Structured Clinical Interview for DSM Disorders (SCID), Schedules for Clinical Assessment in Neuropsychiatry, Composite International Diagnostic Interview, Edinburgh Postnatal Depression Scale, AUDIT, Mini-Mental State Examination, Montreal Cognitive Assessment, Kiddie Schedule for Affective Disorders and Schizophrenia, Post-traumatic Stress Disorder Checklist-family measures and trauma-specific diagnostic modules. Table 1 summarizes the number and definition of estimates by condition; the full extraction ledger is in *Supplementary Data* (Extraction sheet).

Risk of bias

At report level, 20 studies were categorized as low risk and 83 as moderate risk; no included report scored in the high-risk range (Table 2). The most frequent limitations were convenience or clinical sampling, incomplete response-rate reporting, and limited evidence that the sampling frame represented the population to which authors generalized. Low-risk restricted pooling was estimable for ADHD and dementia only; most other strata contained fewer than 3 low-risk studies.

Table 2. Report-level JBI risk-of-bias categories.

Risk category	Reports	Percentage
Low (7-9)	20	19.4
Moderate (5-6)	83	80.6
High (0-4)	0	0.0

Condition-specific synthesis

Depression

Twenty-seven primary screening estimates pooled to 30.2% [95% confidence interval (CI) 24.6-36.5%; k=27; n=52,183; I²=98.4%], prediction interval 8.6-66.7%. Six diagnostic estimates pooled to 20.2% (95% CI 15.4-26.0%; k=6; n=1,504; I²=85.7%), prediction interval 7.4-44.4%. The screen-diagnosis difference is compatible with broader caseness captured by symptom scales, though population composition also differed. Leave-one-out screening estimates ranged from 29.0% to 31.2%. Egger's test indicated asymmetry (p<0.001), which may reflect genuine setting differences as well as small-study effects.¹³⁻¹⁷ Table 1 lists 30 extracted depression screening estimates; 3 meeting a mild-or-higher threshold were reserved for the prespecified sensitivity analysis and are not part of this primary pooled estimate. Detailed depression forest plots and the screening funnel plot are provided in *Supplementary Figures 1-3*.

Anxiety disorders

Nineteen screening estimates pooled to 34.8% (95% CI 25.9-44.9%; k=19; n=7,775; I²=98.3%), prediction interval 6.7-79.7%. One current SCID diagnosis estimate in adults living with HIV was 8.1% (24/295; 95% Wilson CI 5.5-11.8%) and was not pooled. Egger's test did not indicate asymmetry (p=0.859). Exploratory meta-regression suggested lower estimates among a small low-risk subset (p=0.007), based on only 2 low-risk estimates and not to be treated as causal.¹⁸⁻²⁰ Table 1 lists 20 extracted anxiety screening estimates; one meeting a mild-or-higher threshold was reserved for the prespecified sensitivity analysis and is not part of this primary pooled estimate. The anxiety forest and funnel plots are provided in *Supplementary Figures 4 and 5*.

Substance-use disorders

Two current any-SUD estimates were pooled to 16.4% (95% CI 11.9-22.3%; k=2; n=195; I²=0.0%) and 2 current alcohol-disorder estimates to 13.1% (95% CI 8.7-19.1%; k=2; n=406; I²=58.0%).

Single estimates were 11.6% for current nicotine use and 17.2% for other current SUD in inmates. Five secondary AUDIT estimates (12-month window) pooled to 28.7% (95% CI 15.5–47.0%; $k=5$; $n=2505$; $I^2=98.3\%$), prediction interval 1.8–90.1%; this secondary estimate must not be substituted for current SUD.^{21–23} Detailed forest plots are provided in *Supplementary Figures 6–8*.

Dementia and cognitive impairment

Six diagnostic dementia estimates pooled to 2.2% (95% CI 0.7–6.9%; $k=6$; $n=4,495$; $I^2=90.1\%$), prediction interval 0.0–56.0%. Two cognitive-impairment screening estimates pooled separately to 24.1% (95% CI 21.7–26.6%; $k=2$; $n=1,140$; $I^2=0.0\%$). The low-risk diagnostic subset ($k=3$) pooled to 1.3%, with a wide confidence interval. Cognitive impairment should not be interpreted as dementia.^{24,25} Detailed forest plots are provided in *Supplementary Figures 9 and 10*.

Schizophrenia and psychosis

Only 2 eligible current diagnostic estimates were found, both from correctional or justice-involved populations. The sparse pooled estimate was 4.2% (95% CI 1.3–12.7%; $k=2$; $n=220$; $I^2=59.0\%$) — a high-risk-setting value, not a general-population prevalence. Isolated psychotic-like experiences and cohorts pre-selected for a schizophrenia diagnosis were excluded.^{26,27} The detailed forest plot is provided in *Supplementary Figure 11*.

Bipolar disorder

No study met the approved definition of current bipolar diagnosis or separately reportable current mania/hypomania screening in an unselected Nigerian sample. Samples composed entirely of people already diagnosed with bipolar disorder and lifetime MDQ screens were excluded. No pooled p can therefore be recommended without fabrication.

Perinatal depression

Antenatal screens pooled to 16.7% (95% CI 8.4–30.4%; $k=4$; $n=2,564$; $I^2=96.6\%$), prediction interval 0.5–89.8%; antenatal diagnoses pooled to 12.8% (95% CI 5.8–26.0%; $k=2$; $n=1,539$; $I^2=90.2\%$). Postpartum screens pooled to 18.5% (95% CI 9.0–34.4%; $k=8$; $n=2,731$; $I^2=96.3\%$), prediction interval 1.0–83.4%; postpartum diagnoses were more consistent at 14.8% (95% CI 13.0–16.9%; $k=2$; $n=1,284$; $I^2=0.0\%$). Antenatal and postpartum assessments were not combined, and the first eligible assessment from longitudinal cohorts was used in primary pooling.^{28–30} Detailed forest plots are provided in *Supplementary Figures 12–15*.

Post-traumatic stress disorder

Six diagnostic estimates pooled to 12.2% (95% CI 4.5–29.3%; $k=6$; $n=2,010$; $I^2=98.7\%$), prediction interval 0.3–88.1%; 6 validated screening estimates pooled to 58.8% (95% CI 37.1–77.5%; $k=6$; $n=2,820$; $I^2=99.3\%$), prediction interval 5.0–97.5%. The very high screening estimate reflects concentration of studies in conflict-, displacement-, terrorism- and justice-exposed populations and should not be generalized to all Nigerians.^{31–33} Detailed forest plots are provided in *Supplementary Figures 16 and 17*.

Suicidal ideation and behavior

Eleven current ideation estimates pooled to 20.4% (95% CI 11.6–33.4%; $k=11$; $n=3,938$; $I^2=98.2\%$), prediction interval 1.8–

78.5%. Three past-month attempt estimates pooled to 2.3% (95% CI 0.7–6.9%; $k=3$; $n=968$; $I^2=76.8\%$); its prediction interval (0.0–100.0%) was effectively uninformative given small k and substantial heterogeneity. Egger's test for ideation did not indicate asymmetry ($p=0.513$). Composite suicidality measures that could not separate ideation from attempt were not pooled.^{34,35} The attempt and ideation forest plots and the ideation funnel plot are provided in *Supplementary Figures 18–20*.

Attention-deficit/hyperactivity disorder and child/adolescent mental disorders

Nine ADHD estimates pooled to 8.5% (95% CI 5.3–13.4%; $k=9$; $n=6,664$; $I^2=97.7\%$), prediction interval 1.4–37.2%. Four broad any-child/adolescent-disorder estimates pooled to 46.7% (95% CI 12.3–84.6%; $k=4$; $n=1,280$; $I^2=99.3\%$); the near-0%-to-100% prediction interval shows that high-risk justice/SUD samples and routine care/school samples estimate different underlying quantities. In the low-risk ADHD subset ($k=4$), pooled prevalence was 7.1% (95% CI 5.5–9.2%).^{36–38} Detailed forest plots are provided in *Supplementary Figures 21 and 22*.

Sensitivity analyses

Sixty-five of 133 extracted estimate rows (49%) reconstructed event counts from a rounded percentage and sample size (Extraction; Study_Estimates, event_source). To test whether this affected the pooled estimates, every primary condition/outcome-group synthesis with $k \geq 2$ was re-run restricted to directly reported event counts only, using the same logit-transformed, inverse-variance, REML random-effects model described in *Statistical Synthesis*; full results for every condition/outcome group are reported in *Supplementary Data* (Sensitivity_DirectEvents sheet). For the 2 largest syntheses, restricting to directly reported counts changed the pooled estimate only modestly and confidence intervals overlapped: depression screen moved from $k=27$ (30.2%, 95% CI 24.6–36.5%) to $k=12$ direct-count estimates (32.6%, 95% CI 24.7–41.7%); anxiety screen moved from $k=19$ (34.8%, 95% CI 25.9–44.9%) to $k=7$ direct-count estimates (32.7%, 95% CI 20.2–48.3%). Larger, less stable shifts occurred only in strata already flagged as sparse in Table 3 (e.g., PTSD screen fell from 58.8% at $k=6$ to 43.5% at $k=2$ direct-count estimates; AUDIT secondary fell from 28.7% at $k=5$ to 11.8% at a single direct-count study), and 2 strata (cognitive-impairment screen; nicotine current) had no directly reported estimates remaining after restriction. These sparse-stratum shifts should be read with the same caution already applied to their primary estimates rather than as evidence that reconstruction biased the headline depression and anxiety findings.

A parallel sensitivity analysis restricted to reports assessed from full text only requires knowing which of the 103 included reports were adjudicated from full text versus structured abstract/metadata. This distinction was recorded for exclusion decisions among the 801 excluded reports (270 of which were excluded because eligibility could not be confirmed from an inaccessible full text) but was not systematically retained at the report level for the 103 included reports during the original screening pass. This classification is being reconstructed retrospectively for the included reports and will be reported as a supplementary table once complete (Figure 2).

Table 3. Recommended planning estimates.

Condition	Definition	k	p (%)	95% CI	I ² (%)	Planning note	95% Prediction interval
Depression	Screen	27	30.2	24.6-36.5%	98.4	Very heterogeneous	8.6-66.7%
Depression	Diagnosis	6	20.2	15.4-26.0%	85.7	Very heterogeneous	7.4-44.4%
Anxiety	Screen	19	34.8	25.9-44.9%	98.3	Very heterogeneous	6.7-79.7%
Substance use	Any SUD, current	2	16.4	11.9-22.3%	0.0	Sparse	Not estimable (k<3)
Substance use	Alcohol disorder, current	2	13.1	8.7-19.1%	58.0	Sparse	Not estimable (k<3)
Dementia/cognitive	Dementia diagnosis	6	2.2	0.7-6.9%	90.1	Very heterogeneous	0.0-56.0%
Dementia/cognitive	Cognitive screen	2	24.1	21.7-26.6%	0.0	Sparse	Not estimable (k<3)
Bipolar disorder	No eligible estimate	0	---	---	---	Evidence gap	n/a
Psychosis	Diagnosis	2	4.2	1.3-12.7%	59.0	Sparse	Not estimable (k<3)
Perinatal depression	Antenatal screen	4	16.7	8.4-30.4%	96.6	Sparse	0.5-89.8%
Perinatal depression	Postpartum screen	8	18.5	9.0-34.4%	96.3	Very heterogeneous	1.0-83.4%
PTSD	Diagnosis	6	12.2	4.5-29.3%	98.7	Very heterogeneous	0.3-88.1%
PTSD	Screen	6	58.8	37.1-77.5%	99.3	Very heterogeneous	5.0-97.5%
Suicidality	Ideation	11	20.4	11.6-33.4%	98.2	Very heterogeneous	1.8-78.5%
Suicidality	Attempt	3	2.3	0.7-6.9%	76.8	Sparse	0.0-100.0%
ADHD/child	ADHD	9	8.5	5.3-13.4%	97.7	Very heterogeneous	1.4-37.2%
ADHD/child	Any child disorder	4	46.7	12.3-84.6%	99.3	Sparse	0.0-100.0%

Select the row matching the intended population and case definition; these are not interchangeable national rates. The 95% prediction interval (final column, added in revision) shows the range within which a new Nigerian study of similar design could plausibly fall and should be read together with, not instead of, the point estimate and confidence interval when planning conservative sample sizes. CI, confidence interval; PTSD, post-traumatic stress disorder; SUD, substance-use disorders; ADHD, attention-deficit/hyperactivity disorder.

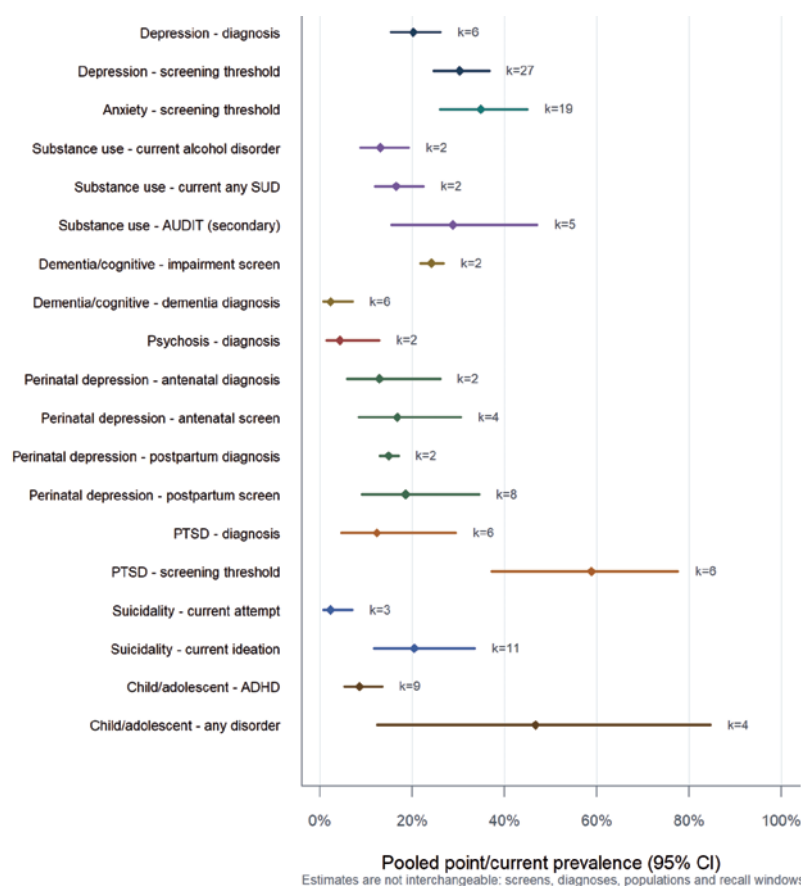


Figure 2. Overview of pooled point/current prevalence estimates. Diamonds show random-effects pooled estimates and horizontal lines show 95% confidence intervals. Detailed study-level forest and funnel plots are provided in *Supplementary Data*.

Discussion

This review demonstrates that the central methodological decision is not merely which condition to pool, but which definition and population the pooled value represents. Screening estimates exceeded diagnostic estimates for depression and PTSD, and trauma-enriched PTSD screens were especially high. Cognitive-impairment screens were an order of magnitude higher than diagnosed dementia. Broad child/adolescent disorder estimates varied from routine-care levels to very high prevalence in justice- and substance-affected samples. These contrasts are expected consequences of threshold, spectrum and setting differences, not necessarily contradictions.

The depression and anxiety syntheses provide the largest evidence bases, but I^2 above 98% and wide prediction intervals mean their pooled means should be interpreted as averages across systematically different settings. The consolidated African literature likewise shows uneven national and diagnostic coverage.⁵ Compared with lifetime or 12-month Nigerian survey estimates,⁴ the current symptom-screening proportions here are higher because many contributing samples were clinical, student, displaced, incarcerated or otherwise risk-enriched, and because screens do not equal diagnoses.

Stratifying by setting offers a partial answer to how meaningful pooling remains across such different populations. For depression screens, healthcare-setting estimates (31.6%, $k=20$), community/other estimates (25.2%, $k=4$, dominated by one large community survey), and institutional/displacement estimates (27.5%, $k=2$) were reasonably close both to one another and to the overall pooled value, suggesting that the very high I^2 partly reflects measurement and threshold variation within settings rather than setting alone; a similar pattern held for anxiety screens (healthcare 38.4%, $k=11$; community/other 37.9%, $k=5$). Where such setting-specific strata are available (*Supplementary Data*, Subgroups sheet), researchers planning a study in a specific setting should prefer the matching stratum-specific value and its own confidence interval over the overall pooled mean and should treat the wide prediction interval, rather than the pooled point estimate alone, as the more honest description of the range a newly sampled Nigerian population could plausibly show.

Sparse estimates should be used conservatively. Psychosis, current any SUD, current alcohol disorder, cognitive-impairment screening, and several perinatal diagnosis strata had only 2 studies; bipolar disorder had none. Pooled values for $k=2$ were calculated but are explicitly marked sparse. For sample-size planning, researchers should run sensitivity scenarios around the confidence interval and consider $p=0.50$ when uncertainty is extreme, and no defensible target-specific estimate exists.

For outcomes with $k \geq 10$, year and healthcare setting did not explain heterogeneity in exploratory meta-regressions. Low-risk status was associated with lower anxiety-screen prevalence, but only 2 low-risk estimates contributed, so the coefficient is unstable. Funnel asymmetry occurred for depression screens but not anxiety or suicidal ideation; with substantial heterogeneity, asymmetry can reflect case mix and measurement differences rather than publication bias alone.

A practical strength is the consistent separation of screens from diagnoses and of current from longer recall windows. This preserves the meaning of p in Cochran's formula, $n=Z^2p(1-p)/e^2$. A future community PHQ-9 survey should not use the PTSD screen value from displaced populations, nor should a diagnostic dementia study use cognitive-screen prevalence. Planning must match age, setting, instrument, cutoff, and recall period.

Limitations

Authenticated Embase, PsycINFO, CINAHL, Web of Science and Scopus access was unavailable. Google Scholar retrieval was rank-limited and intermittently suppressed, and grey-literature full text was often inaccessible. Although all included reports had PubMed identifiers, Nigerian journals not indexed there may have been missed. The search end date was 6 August 2026; any later publication requires an updated search. The likely impact plausibly differs across condition families: for sparse evidence bases with very few included reports (e.g., psychosis, $k=2$ reports; no eligible bipolar disorder estimate), missing coverage in these databases more likely affects whether the observed evidence gap is real or an artifact of retrieval, since no pooling was possible regardless. For depression and anxiety, which already draw on 27-30 pooled estimates across multiple, partly overlapping index sources (PubMed/MEDLINE, Europe PMC, AJOL, Google Scholar), additional records from unsearched databases would more plausibly narrow the already-wide prediction intervals and heterogeneity than materially shift the pooled point estimate, though this expectation cannot be confirmed without conducting the additional searches.

Final adjudication and JBI scoring were performed by one reviewer with computational cross-checks, not 2 independent human reviewers. For 514 of 904 assessed reports, eligibility decisions relied on structured abstracts and metadata because full text was inaccessible; these reports were excluded when a validated measure, window, cutoff, or denominator could not be confirmed. Sixty-five estimate rows reconstructed events from rounded percentages, introducing small rounding error. Region/zone and response rate were inconsistently available, preventing reliable geopolitical meta-regression. Many syntheses mixed specialized populations, heterogeneity was usually extreme, and prediction intervals were unstable when k was small. Funnel plots and Egger tests were applied only at $k \geq 10$ and cannot prove absence or presence of publication bias. Finally, cross-sectional prevalence describes association and burden at one time, not incidence or causality. The computational cross-checks applied alongside single-reviewer adjudication specifically flagged duplicate or overlapping cohorts (4 of 801 excluded reports), condition-specific numerator/denominator inconsistencies (7 reports), and reports where a validated condition-identification method could not be confirmed from the accessible text (488 of 801 excluded reports, the largest single exclusion category); these rules and their evidence are logged in *Supplementary Data* (Excluded_Reports sheet). No second human rater was available for this solo-authored review; if a qualified co-rater becomes available, a random ~20% sample of eligibility and JBI decisions, stratified by risk category, will be independently re-appraised. The concentration of included studies at moderate risk (83 of 103; JBI scores clustering at 5-7 of 9, *Supplementary Data* JBI Appraisal) reflects the methodological reporting quality of the underlying Nigerian prevalence literature rather than an artifact of single-reviewer scoring, since item-level deductions were driven by specific, documented gaps (e.g., sampling frame or response-rate reporting) rather than borderline overall judgment calls.

Conclusions

For research planning in a population resembling the contributing studies, the principal pooled p values are: depression screen 0.302 (diagnosis 0.202); anxiety screen 0.348; current any SUD 0.164; diagnosed dementia 0.022 (cognitive-impairment screen 0.241); psychosis 0.042; antenatal depression screen 0.167; postpartum screen 0.185; diagnosed PTSD 0.122 (trauma-enriched screen 0.588); current suicidal ideation 0.204; current attempt 0.023; and ADHD 0.085. No valid bipolar p was estimable.

Researchers should choose the estimate whose population, instrument and recall window match the planned study, and use the upper confidence limit or $p=0.50$ for conservative calculations when the target differs materially, or the evidence is sparse. Policymakers should read the results as evidence of substantial burden across high-risk systems — perinatal care, HIV and chronic-disease services, schools, correctional facilities and displacement settings — rather than as direct national population rankings. Priorities for new primary research are nationally representative current diagnostic surveys, bipolar prevalence, psychosis outside correctional settings, older-adult neurocognitive studies, and underrepresented geopolitical zones, with standardized tools, transparent response rates and accessible full reports.

References

Owing to the journal's 40-reference limit for Reviews, the following list presents core methodological sources and one to three representative primary studies per condition family. The complete list of all 103 included reports and 133 estimates is provided in Supplementary Data (Extraction sheet).

- World Health Organization. World mental health report: transforming mental health for all. 2022. Available from: <https://www.who.int/publications/i/item/9789240049338>.
- GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet Psychiatry* 2022;9:137-50.
- Patel V, Saxena S, Lund C, et al. The Lancet Commission on global mental health and sustainable development. *Lancet* 2018;392:1553-98.
- Gureje O, Lasebikan VO, Kola L, Makanjuola VA. Lifetime and 12-month prevalence of mental disorders in the Nigerian Survey of Mental Health and Well-Being. *Br J Psychiatry* 2006;188:465-71.
- Greene MC, Yangchen T, Lehner T, et al. The epidemiology of psychiatric disorders in Africa: a scoping review. *Lancet Psychiatry* 2021;8:717-31.
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71.
- Rethlefsen ML, Kirtley S, Waffenschmidt S, et al. PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. *Syst Rev* 2021; 10:39.
- Munn Z, Moola S, Lisy K, et al. Methodological guidance for systematic reviews of observational epidemiological studies reporting prevalence and cumulative incidence data. *Int J Evid Based Healthc* 2015;13:147-53.
- Higgins JPT, Thomas J, Chandler J, et al. *Cochrane handbook for systematic reviews of interventions*. Version 6.5 (updated August 2024). Cochrane; 2024.
- Schwarzer G, Chemaitelly H, Abu-Raddad LJ, Rücker G. Seriously misleading results using inverse of Freeman-Tukey double arcsine transformation in meta-analysis of single proportions. *Res Synth Methods* 2019;10:476-83.
- Egger M, Davey Smith G, Schneider M, Minder C. Bias in meta-analysis detected by a simple, graphical test. *BMJ* 1997;315:629-34.
- R Core Team. R: a language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing; 2026.
- Olagunju AT, Aina OF, Fadipe B. Screening for depression with Centre for Epidemiological Studies Depression Scale Revised and its implication for consultation-liaison psychiatry practice among cancer subjects: a perspective from a developing country. *Psychooncology* 2013;22:1901-6.
- Adewuya AO, Oladipo O, Ajomale T, et al. Epidemiology of depression in primary care: findings from the Mental Health in Primary Care (MeHPriC) project, Lagos, Nigeria. *Int J Psychiatry Med* 2022;57:6-20.
- Ladi-Akinyemi TW, Okpue AP, Onigbinde OA, et al. Depression and suicidal ideation among undergraduates in state tertiary institutions in Lagos Nigeria. *PLoS ONE* 2023; 18:e0284955.
- Ossai Edmund N, Nwuzor Ann N, Obayi Nicodemus O, et al. Prevalence and predictors of anxiety and depressive symptoms among medical students of Ebonyi State University Abakaliki, Nigeria. *Discov Ment Health* 2026;6:142.
- Ademoyegun AB, Akintayo N, Ogunmola A, et al. Sleep duration variations across weekdays and weekends and their associations with generalised anxiety disorder and depressive symptoms in Nigerian adults. *BMC Psychiatry* 2026. 10.1186/s12888-026-08435-w.
- Duke AEE, Harri BI, Iyamu I, et al. Anxiety and depression among internally displaced persons in north central Nigeria: prevalence, correlates, and policy implications. *J Prim Care Community Health* 2025;16:21501319251406840.
- Nwafor JI, Okedo-Alex IN, Ikeotuonye AC. Prevalence and predictors of depression, anxiety, and stress symptoms among pregnant women during COVID-19-related lockdown in Abakaliki, Nigeria. *Malawi Med J* 2021;33:54-8.
- Mbanuzuru AV, Uwakwe R, Anyaoku CS, et al. Generalized anxiety disorder screening using gad-7 among in-school adolescents of anambra state, nigeria: a comparative study between urban and rural areas. *Child Adolesc Psychiatry Ment Health* 2023;17:91.
- Okoro TE, Chikezie UE. Prevalence of alcohol and other psychoactive substance abuse and association with depression among medical students in Niger Delta University, Bayelsa State. *Pan Afr Med J* 2024;47:90.
- Abayomi O, Onifade PO, Adelufosi AO, Akinhanmi AO. Psychosocial correlates of hazardous alcohol use among undergraduates in southwestern Nigeria. *Gen Hosp Psychiatry* 2013;35:320-4.
- Enebe AC, Orijio SO, James BO, et al. Substance use and psychiatric morbidity among inmates in a Nigerian correctional centre: a cross-sectional study. *Int J Prison Health* 2025;21: 499-509.
- Yusuf AJ, Baiyewu O, Sheikh TL, Shehu AU. Prevalence of dementia and dementia subtypes among community-dwelling elderly people in northern Nigeria. *Int Psychogeriatr* 2011;23: 379-86.
- Amoo G, Ogundele AT, Olajide AO, et al. Prevalence and pattern of psychiatric morbidity among community-dwelling elderly populations in Abeokuta, Nigeria. *J Geriatr Psychiatry Neurol* 2020;33:353-62.
- Kuranga AT, Yussuf AD. Psychiatric morbidity amongst adolescents in a Nigerian juvenile correctional facility. *S Afr J Psychiatr* 2021;27:1590.
- Agbahowe SA, Ohaeri JU, Ogunlesi AO, Osahon R. Prevalence of psychiatric morbidity among convicted inmates in a Nigerian prison community. *East Afr Med J* 1998;75:19-26.
- Adewuya AO, Ola BA, Aloba OO, et al. Prevalence and correlates of depression in late pregnancy among Nigerian women. *Depress Anxiety* 2007;24:15-21.
- Okunola TO, Awoleke JO, Olofinbiyi B, et al. Predictors of postpartum depression among an obstetric population in South-Western Nigeria. *J Reprod Infant Psychol* 2022;40:420-32.
- Oladeji BD, Bello T, Ayinde O, et al. Prevalence and correlates of depression among pregnant adolescents in primary maternal care in Nigeria. *Arch Womens Ment Health* 2022;25:441-50.

31. Sheikh TL, Mohammed A, Agunbiade S, et al. Psycho-trauma, psychosocial adjustment, and symptomatic post-traumatic stress disorder among internally displaced persons in Kaduna, Northwestern Nigeria. *Front Psychiatry* 2014;5:127.
32. Awa TM, Ugbe UMJ, Onwusaka OC, et al. Correlates of post-traumatic stress disorder among adult residents of conflict-affected communities in Cross River State, Nigeria: a cross-sectional study. *BMJ Open* 2024;14:e078851.
33. Ibrahim AW, Musami UB, Kareem YA, et al. Post-traumatic stress disorder in the epicenter of the Boko Haram insurgency: prevalence and psychosocial correlates. *West Afr J Med* 2025;42:104-13.
34. Chinawa AT, Ossai EN, Chinawa JM, et al. The unique contributions of depression and anxiety to suicidal ideation among Nigerian secondary school students: a cross-sectional survey. *Afr Health Sci* 2023;23:537-50.
35. Olorunlambe W, Adeniyi S. Child maltreatment and suicidal ideation among justice-and welfare-involved adolescents in Nigeria: Investigating the mediating role of social support and emotion regulation. *Int J Law Psychiatry* 2025;98:102040.
36. Adewuya AO, Famuyiwa OO. Attention deficit hyperactivity disorder among Nigerian primary school children: prevalence and co-morbid conditions. *Eur Child Adolesc Psychiatry* 2007;16:10-5.
37. Ambuabunos EA, Ofovwe EG, Ibadin MO. Community survey of attention-deficit/hyperactivity disorder among primary school pupils in Benin City, Nigeria. *Ann Afr Med* 2011;10:91-6.
38. Ndukuba AC, Odinka PC, Muomah RC, et al. ADHD among rural southeastern Nigerian Primary school children: prevalence and psychosocial factors. *J Atten Disord* 2017;21:865-71.

Online supplementary material:

Supplementary Data. Exact search strategies and logs; JBI judgments; the complete extraction ledger; the report-level exclusion log; pooled, study-level, subgroup, meta-regression and Egger-test outputs; and included-reference metadata, including the full list of 103 included reports and 133 estimates.

Supplementary Figure 1. Forest plot: current depression, diagnostic definition.

Supplementary Figure 2. Forest plot: current depression, screening threshold.

Supplementary Figure 3. Funnel plot: current depression, screening threshold.

Supplementary Figure 4. Forest plot: current anxiety, screening threshold.

Supplementary Figure 5. Funnel plot: current anxiety, screening threshold.

Supplementary Figure 6. Forest plot: current alcohol-use disorder.

Supplementary Figure 7. Forest plot: current substance-use disorder; any substance.

Supplementary Figure 8. Forest plot: secondary Alcohol Use Disorders Identification Test-defined harmful or hazardous alcohol use.

Supplementary Figure 9. Forest plot: current cognitive impairment, screening threshold.

Supplementary Figure 10. Forest plot: current dementia, diagnostic definition.

Supplementary Figure 11. Forest plot: current psychosis, diagnostic definition.

Supplementary Figure 12. Forest plot: antenatal depression, diagnostic definition.

Supplementary Figure 13. Forest plot: antenatal depression, screening threshold.

Supplementary Figure 14. Forest plot: postpartum depression, diagnostic definition.

Supplementary Figure 15. Forest plot: postpartum depression, screening threshold.

Supplementary Figure 16. Forest plot: current post-traumatic stress disorder; diagnostic definition.

Supplementary Figure 17. Forest plot: current post-traumatic stress disorder; screening threshold.

Supplementary Figure 18. Forest plot: current suicide attempt.

Supplementary Figure 19. Forest plot: current suicidal ideation.

Supplementary Figure 20. Funnel plot: current suicidal ideation.

Supplementary Figure 21. Forest plot: current attention-deficit/hyperactivity disorder in children and adolescents.

Supplementary Figure 22. Forest plot: current mental disorder; any definition, in children and adolescents.

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Informed consent: not applicable because this systematic review and meta-analysis used only previously published aggregate data and involved no direct participant contact or collection of identifiable information.

Availability of data and materials: all data generated or analyzed during this study are included in this published article and its Supplementary Materials, which contain the exact search strategies and logs, JBI risk-of-bias judgments, the complete extraction ledger, the report-level exclusion log, and pooled, study-level, subgroup, meta-regression and Egger-test outputs, together with included-reference metadata for the full list of 103 included reports and 133 estimates.

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