

Supplementary File 2: Data Extraction Matrix of All Included Studies

Methodological quality assessment of included studies

Study Ref	First Author & Year	Study Design	JBIC-S (0-7)	JBIC-Q (0-5)	MMAT (0-5)	SS (0-8)	Framework Stated?	Overall Quality Rating
S01	Amede et al. 2022	Cross-sectional evaluation	6/7	3/5	4/5	8/8	Yes	HIGH
S02	Visa et al. 2020	Observational (survey + record review)	6/7	3/5	4/5	8/8	Yes	HIGH
S03	Bala et al. 2025	Descriptive cross-sectional	6/7	3/5	4/5	8/8	Yes	HIGH
S04	Ameh et al. 2016	Cross-sectional evaluation	6/7	3/5	4/5	8/8	Yes	HIGH
S05	Raji et al. 2021	Retrospective secondary data analysis	6/7	NA	NA	8/8	Yes	HIGH
S06	Okhuarobo et al. 2025	Observational (mixed-methods)	6/7	3/5	4/5	8/8	Yes	HIGH
S07	Kwaghe et al. 2020	Descriptive evaluation	6/7	3/5	4/5	8/8	Yes	HIGH
S08	Okon et al. 2020	Descriptive evaluation	6/7	3/5	4/5	8/8	Yes	HIGH
S09	Dambazau et al. 2025	Cross-sectional evaluation	6/7	NA	NA	8/8	Yes	HIGH
S10	Okefor & Okefor 2017	Cross-sectional evaluation	6/7	4/5	NA	8/8	Yes	HIGH
S11	Beebejaun et al. 2021	Mixed-methods	6/7	5/5	5/5	8/8	Yes	HIGH
S12	Umezuru et al. 2022	Mixed-methods	6/7	5/5	5/5	8/8	Yes	HIGH
S13	Bassey et al. 2011	Retrospective cross-sectional	6/7	NA	NA	7/8	No*	HIGH
S14	Walter et al. 2025	Mixed-methods	6/7	5/5	5/5	8/8	Yes	HIGH
S15	Salam et al. 2022	Mixed-methods	6/7	5/5	5/5	8/8	Yes	HIGH
S16	Mitchell et al. 2021	Mixed-methods	6/7	5/5	5/5	8/8	Yes	HIGH
S17	Silenou et al. 2020	Mixed-methods	6/7	4/5	4/5	7/8	No*	HIGH
S18	Wiesen et al. 2022	Qualitative case study	NA	4/5	NA	4/8	No	LOW
S19	Ibrahim et al. 2021	Cross-sectional (mixed-methods)	6/7	NA	4/5	7/8	No*	HIGH
S20	Ibrahim et al. 2020	Cross-sectional rapid assessment	6/7	NA	NA	7/8	No*	HIGH
S21	Ohiri et al. 2016	Mixed-methods	6/7	NA	4/5	7/8	No*	HIGH
S22	Nnebue et al. 2013	Cross-sectional (mixed-methods)	6/7	3/5	3/5	7/8	No*	MODERATE
S23	Dairo et al. 2018	Cross-sectional	6/7	NA	NA	7/8	No*	HIGH
S24	Odega et al. 2010	Retrospective (capture-recapture)	6/7	NA	NA	7/8	No*	HIGH
S25	Tagurum et al. 2022	Comparative cross-sectional	6/7	NA	NA	7/8	No*	HIGH
S26	Nyangara et al. 2018	Cross-sectional (mixed-methods DQA)	6/7	NA	4/5	7/8	No*	HIGH
S27	Jinadu et al. 2018	Cross-sectional (mixed-methods)	6/7	NA	4/5	7/8	No*	HIGH
S28	Joseph et al. 2017	Mixed-methods (evaluation)	6/7	NA	4/5	8/8	Yes	HIGH

Nwechi V, Adaka AU, Umar MA, Akinola IF, Abdullahi AA, Madaki PD, Dambazau ZB. Strengthening disease surveillance in Nigeria: A systematic review of performance evidence across IDSR, SORMAS, and DHIS2 platforms. *J Interv Epidemiol Public Health*. 2026;9(3):141. Available from: <https://doi.org/10.37432/jieph-d-26-00214>

Study Ref	First Author & Year	Study Design	JBI-CS (0-7)	JBI-Q (0-5)	MMAT (0-5)	SS (0-8)	Framework Stated?	Overall Quality Rating
S29	Shorunke et al. 2019	Descriptive secondary data analysis	6/7	NA	NA	7/8	No*	HIGH

SS score of 7/8 indicates that one criterion was not met. For studies marked with an asterisk (*), the evaluation framework was not explicitly stated in the text. Overall quality rating was determined as follows: HIGH = all applicable tools scored in the HIGH range; MODERATE = any applicable tool scored in the MODERATE range; LOW = any applicable tool scored in the LOW range. For studies where some tools were not applicable (NA), ratings were based on applicable tools only.

Abbreviations and appraisal tools

Abbreviation	Full Name	Description
JBI-CS	Joanna Briggs Institute Critical Appraisal Checklist for Analytical Cross-Sectional Studies	Assesses 7 criteria: (1) clear inclusion criteria; (2) detailed description of study participants and setting; (3) valid and reliable measurement of exposure; (4) objective, standard criteria used for outcome measurement; (5) identification and management of confounding factors; (6) valid and reliable outcome measurement; and (7) appropriate statistical analysis.
JBI-Q	Joanna Briggs Institute Critical Appraisal Checklist for Qualitative Research	Assesses 5 criteria: (1) congruity between philosophical perspective and methodology; (2) congruity between methodology and data collection; (3) adequate representation of participants and their perspectives; (4) appropriate interpretation of findings; and (5) consideration of researchers' cultural or theoretical influence where applicable.
MMAT	Mixed Methods Appraisal Tool (Version 2018)	Assesses 5 criteria: (1) appropriateness of the research question; (2) adequacy of data collection methods; (3) integration of qualitative and quantitative components; (4) consideration of limitations arising from integration; and (5) overall methodological quality of both qualitative and quantitative components.
SS	Surveillance-Specific Checklist (Developed for This Review)	Assesses 8 criteria: (1) evaluation framework explicitly stated; (2) use of CDC (2001) or equivalent surveillance evaluation attributes; (3) clearly defined case definitions; (4) data source(s) described; (5) sampling strategy or population denominator reported; (6) quantitative results presented with numerators and denominators where appropriate; (7) study limitations acknowledged; and (8) recommendations clearly linked to study findings.
DQA	Data Quality Audit	-

Scoring Legend

Abbreviation	Full Name	Description
JBI-CS	Joanna Briggs Institute Critical Appraisal Checklist for Analytical Cross-Sectional Studies	Assesses 7 items: clear inclusion criteria, detailed system description, valid/reliable outcome measurements, objective standard criteria applied, confounders identified, outcomes measured for all subjects, appropriate statistical analysis
JBI-Q	Joanna Briggs Institute Critical Appraisal Checklist for Qualitative Research	Assesses 5 items: philosophical perspective stated, methodology congruent, data collection congruent, adequate representation of participants, data interpreted with cultural influence
MMAT	Mixed Methods Appraisal Tool, version 2018	Assesses 5 items: research question suitable, data collected as intended, acknowledges limitations of integration, quantitative component adequate, qualitative component adequate
SS	Surveillance-Specific Checklist (developed for this review)	Assesses 8 items: evaluation framework explicitly stated, CDC 2001/equivalent attributes used, case definitions clearly stated, data source(s) clearly described, sampling/denominator described, quantitative data reported with numerators, limitations acknowledged, recommendations linked to findings

Quality Rating Thresholds

Quality Rating	JBI-CS	JBI-Q	MMAT	SS
HIGH	≥5/7	≥4/5	≥4/5	≥7/8
MODERATE	3-4/7	3/5	3/5	5-6/8
LOW	<3/7	<3/5	<3/5	<5/8