Appendix 4. Results of NIH quality assessments for included studies

For observational cohort and cross-sectional studies:

ID#	Authors	Year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Yes %	Rating
119	Admon L, et al.	2018	Yes	Yes	Yes	Yes	Yes	No	Yes	NA	Yes	NA	Yes	NR	NA	Yes	82%	Good
952	Booker W, et al.	2018	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	93%	Good
1178	Cameron, N. et al.	2022	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	NR	NA	No	83%	Good
1331	Chalouhi, S. et al.	2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	NR	No	92%	Good
1371	Chang, J et al	2014	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	NR	Yes	100%	Good
1861	deRavello, L. et al.	2015	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	NR	NA	No	83%	Good
3421	Interrante, J. et al.	2022	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	NA	Yes	85%	Good
4010	Kozhimannil, K et al.	2020	Yes	Yes	Yes	Yes	No	Yes	Yes	NA	Yes	NA	Yes	NR	NA	Yes	90%	Good
7372	Tiwari, R. et al	2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	NR	Yes	92%	Good
8141	Zamora-Kapoor A., et al	2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	86%	Good

A study will be rated as “Good” if it receives a “Yes" response for ≥80% of the applicable NIH critical appraisal questions, “Fair” for 50%-79%, and “Poor” for ≤50%.

Quality of included studies was assessed using the National Institutes of Health (NIH) Quality Assessment tool for Observational Cohort and Cross-Sectional Studies (https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools).
Q1. Was the research question or objective in this paper clearly stated?
Q2. Was the study population clearly specified and defined?
Q3. Was the participation rate of eligible persons at least 50%?

Q4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?
Q5. Was a sample size justification, power description, or variance and effect estimates provided?
Q6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?
Q7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?
Q8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?
Q9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
Q10. Was the exposure(s) assessed more than once over time?
Q11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
Q12. Were the outcome assessors blinded to the exposure status of participants?
Q13. Was loss to follow-up after baseline 20% or less?
Q14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?

For case-control studies:

ID#	Authors	Year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Yes %	Rating
835	Best, L. et al	2012	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	92%	Good
836	Best, L. et al.	2012	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	92%	Good
837	Best, L et al.	2013	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	83%	Good
2230	England L, et al	2013	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%	Good
2944	Hadley, M et al	2021	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	75%	Fair

A study will be rated as “Good” if it receives a “Yes" response for ≥80% of the applicable NIH critical appraisal questions, “Fair” for 50%-79%, and “Poor” for ≤50%.

Quality of included studies was assessed using the National Institutes of Health (NIH) Quality Assessment of Case-Control Studies (https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools):
Q1. Was the research question or objective in this paper clearly stated and appropriate?
Q2. Was the study population clearly specified and defined?
Q3. Did the authors include a sample size justification?
Q4. Were controls selected or recruited from the same or similar population that gave rise to the cases (including the same timeframe)?
Q5. Were the definitions, inclusion and exclusion criteria, algorithms or processes used to identify or select cases and controls valid, reliable, and implemented consistently across all study participants?
Q6. Were the cases clearly defined and differentiated from controls?
Q7. If less than 100 percent of eligible cases and/or controls were selected for the study, were the cases and/or controls randomly selected from those eligible?
Q8. Was there use of concurrent controls?
Q9. Were the investigators able to confirm that the exposure/risk occurred prior to the development of the condition or event that defined a participant as a case?
Q10. Were the measures of exposure/risk clearly defined, valid, reliable, and implemented consistently (including the same time period) across all study participants?
Q11. Were the assessors of exposure/risk blinded to the case or control status of participants?
Q12. Were key potential confounding variables measured and adjusted statistically in the analyses? If matching was used, did the investigators account for matching during study analysis?

Q, question; CD, cannot be determined; NA, not applicable; NR, not reported