

Supplemental Table 2: Quality assessment of the included studies: a) Cross-sectional studies and observational cohorts and b) Before-after studies with no control group

a) Quality assessment questions for cross-sectional studies and observational cohorts

Author	Year of publication	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Quality Assessment score	Outcome
Abdellhak	2018	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Abdellhak	2019	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Benatar	2017	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	8	Good
Byrne	2017	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Byrne	2018	Y	Y	NR	Y	Y	Y	Y	N	Y	N/A	Y	NR	N/A	N	8	Good
Disanto	2017	Y	Y	NR	Y	NR	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Fortea	2018	Y	Y	Y	Y	N	Y	Y	N	N	N/A	Y	NR	N/A	N	7	Good
Gaiottino	2013	Y	Y	NR	Y	N	Y	CD	N	Y	N/A	Y	NR	N/A	N	6	Fair
Gisslen	2016	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Gong	2018	Y	Y	CD	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Hakansson	2018	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Halaas	2019	Y	Y	NR	Y	N	Y	CD	N	Y	N/A	Y	NR	N/A	N	6	Fair
Hansson	2017	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Kalm	2017	Y	Y	NR	CD	N	Y	CD	N	Y	N/A	Y	NR	N/A	N	5	Fair
Kuhle	2016	Y	Y	NR	N	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	7	Fair
Kuhle	2016	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	8	Good
Lu	2015	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	8	Good
Mariotto	2018	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	8	Good
Mariotto	2019	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	Y	N/A	N	8	Good
Marques	2019	Y	Y	NR	Y	N	Y	Y	Y	Y	N/A	Y	Y	N/A	N	9	Good
Mattsson	2017	Y	Y	NR	Y	N	Y	Y	Y	Y	N/A	Y	NR	N/A	N	8	Good
Meeter	2016	Y	Y	N	Y	Y	Y	Y	Y	Y	N/A	Y	NR	N/A	N	9	Good
Menke	2015	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Mielke	2019	Y	Y	NR	Y	N	Y	CD	N	Y	N/A	Y	NR	N/A	N	6	Fair
Novakova	2017	Y	Y	NR	Y	N	Y	Y	Y	Y	N/A	Y	NR	N/A	N	8	Good
Piehl	2018	Y	Y	NR	Y	N	Y	Y	N/A	Y	N/A	Y	NR	N/A	N	7	Good
Rojas	2018	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Rojas	2016	Y	Y	NR	Y	N	Y	Y	N/A	Y	N/A	Y	NR	N/A	N	7	Good
Sanchez-Valle	2018	Y	Y	NR	Y	N	Y	Y	N/A	Y	N/A	Y	NR	N/A	N	7	Good
Sehr	2019	Y	Y	Y	Y	N	Y	Y	N/A	Y	N/A	Y	NR	N/A	N	8	Good
Staffaroni	2019	Y	Y	NR	Y	N	Y	Y	N	Y	N/A	Y	NR	N/A	N	7	Good
Steinacker	2018	Y	Y	NR	Y	N	Y	Y	Y	Y	N/A	Y	NR	N/A	N	8	Good
Weydt	2016	Y	Y	NR	Y	N	Y	Y	N/A	Y	N/A	Y	NR	N/A	N	7	Good
Wilke	2016	Y	Y	Y	Y	N	Y	Y	Y	Y	N/A	Y	NR	N/A	N	9	Good

Abbreviations: CD = Cannot determine, N/A = not applicable, NR = not reported

Question 1 (Q1): Was the research question or objective clearly stated?

Question 2 (Q2): Was the study population clearly stated and defined?

Question 3 (Q3): Was the participation rate for eligible persons at least 50%?

Question 4 (Q4): Were all the subjects recruited from similar populations? Were inclusion and exclusion criteria pre-specified and applied uniformly to all participants?

Question 5 (Q5): Was a sample size justification, power description, or variance and effect estimates provided?

Question 6 (Q6): For the analyses in this paper, were the exposure of interest measured prior to the outcome being measured?

Question 7 (Q7): Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?

Question 8 (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)?

Question 9 (Q9): Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?

Question 10 (Q10): Was the exposure assessed more than once over time?

Question 11 (Q11): Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all study participants?

Question 12 (Q12): Were the outcome assessors blinded to the exposure status of participants?

Question 13 (Q13): Was loss to follow-up after baseline 20% or less?

Question 14 (Q14): Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure and outcome?

b) Quality assessment questions for before-after studies with no control group

Author	Year of publication	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Quality Assessment score	Outcome
Bergman	2016	Y	Y	CD	Y	CD	Y	Y	NR	Y	N/A	Y	N/A	7	Good
deFlon	2019	Y	Y	Y	N	CD	Y	Y	NR	Y	N/A	Y	N/A	7	Good

Abbreviations: CD = Cannot determine, N/A = not applicable, NR = not reported

Question 1 (Q1): Was the study question or objective clearly stated?

Question 2 (Q2): Were eligibility/selection criteria for the study population pre- specified and clearly described?

Question 3 (Q3): Were the participants in the study representative of those who would be eligible for the test/service/intervention in the general or clinical population of interest?

Question 4 (Q4): Were all eligible participants that met the pre-specified entry criteria enrolled?

Question 5 (Q5): Was the sample size sufficiently large to provide confidence in the findings?

Question 6 (Q6): Was the test/service/intervention clearly described and delivered consistently across the study population?

Question 7 (Q7): Were the outcome measures pre-specified, clearly defined, valid, reliable, and assessed consistently across all study participants?

Question 8 (Q8): Were the people assessing the outcomes blinded to the participants' exposures/interventions?

Question 9 (Q9): Was the loss to follow-up after baseline 20% or less? Were those lost to follow-up accounted for in the analysis?

Question 10 (Q10): Did the statistical methods examine changes in outcome measures from before to after the intervention? Were statistical tests done that provided p values for the pre-to-post changes?

Question 11 (Q11): Were outcome measures of interest taken multiple times before the intervention and multiple times after the intervention (i.e., did they use an interrupted time-series design)?

Question 12 (Q12): If the intervention was conducted at a group level (e.g., a whole hospital, a community, etc.) did the statistical analysis take into account the use of individual-level data to determine effects at the group level?