

File S2. The New-Castle-Ottawa quality assessment scale

NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE CASE CONTROL STUDIES

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.

Selection: (Maximum 5 stars)

- 1) Is the case definition adequate?
 - a) yes, with independent validation or record linkage **
 - b) yes, based on self reports *
 - c) no description
- 2) Representativeness of the cases
 - a) consecutive or obviously representative series of cases *
 - b) potential for selection biases or not stated
- 3) Selection of Controls
 - a) community controls *
 - b) hospital controls
 - c) no description
- 4) Definition of Controls
 - a) no history of disease (endpoint) *
 - b) no description of source

Comparability: (Maximum 2 stars)

- 1) Comparability of cases and controls on the basis of the design or analysis
 - a) study controls for _____ (Select the most important factor.) *
 - b) study controls for any additional factor * (This criteria could be modified to indicate specific control for a second important factor.)

Exposure: (Maximum 3 stars)

- 1) Ascertainment of the exposure (risk factor):
 - a) Validated measurement tool*
 - b) Non-validated measurement tool, but the tool is available or described.
 - c) No description of the measurement tool.
- 2) Same method of ascertainment for cases and controls
 - a) yes *
 - b) no
- 3) Non-Response rate
 - a) same rate for both groups *
 - b) non respondents described
 - c) rate different and no designation

NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE COHORT STUDIES

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Outcome categories. A maximum of two stars can be given for Comparability

Selection: (Maximum 4 stars)

- 1) Representativeness of the exposed cohort
 - a) truly representative of the average _____ (describe) in the community ★
 - b) somewhat representative of the average _____ in the community ★
 - c) selected group of users eg nurses, volunteers
 - d) no description of the derivation of the cohort
- 2) Selection of the non exposed cohort
 - a) drawn from the same community as the exposed cohort ★
 - b) drawn from a different source
 - c) no description of the derivation of the non exposed cohort
- 3) Ascertainment of exposure
 - a) Validated measurement tool★
 - b) Non-validated measurement tool, but the tool is available or described.
 - c) No description of the measurement tool.
- 4) Demonstration that outcome of interest was not present at start of study
 - a) yes ★
 - b) no

Comparability: (Maximum 2 stars)

- 1) Comparability of cohorts on the basis of the design or analysis
 - a) study controls for _____ (select the most important factor) ★
 - b) study controls for any additional factor ★ (This criteria could be modified to indicate specific control for a second important factor.)

Outcome: (Maximum 4 stars)

- 1) Assessment of outcome
 - a) independent blind assessment ★ ★
 - b) record linkage ★ ★
 - c) self report ★
 - d) no description
- 2) Was follow-up long enough for outcomes to occur
 - a) yes (select an adequate follow up period for outcome of interest) ★
 - b) no
- 3) Adequacy of follow up of cohorts
 - a) complete follow up - all subjects accounted for ★
 - b) subjects lost to follow up unlikely to introduce bias - small number lost - > ____ % (select an adequate %) follow up, or description provided of those lost) ★
 - c) follow up rate < ____% (select an adequate %) and no description of those lost
 - d) no statement

NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE CROSS SECTIONAL STUDIES

Selection: (Maximum 4 stars)

1) Representativeness of the sample:

- a) Truly representative of the average in the target population. ★ (all subjects or random sampling)
- b) Somewhat representative of the average in the target population. ★ (non-random sampling)
- c) Selected group of users.
- d) No description of the sampling strategy.

2) Sample size:

- a) Justified and satisfactory. ★
- b) Not justified.

3) Non-respondents:

- a) Comparability between respondents and non-respondents characteristics is established, and the response rate is satisfactory. ★
- b) The response rate is unsatisfactory, or the comparability between respondents and non-respondents is unsatisfactory.
- c) No description of the response rate or the characteristics of the responders and the non-responders.

4) Ascertainment of the exposure (risk factor):

- a) Validated measurement tool ★
- b) Non-validated measurement tool, but the tool is available or described.
- c) No description of the measurement tool.

Comparability: (Maximum 2 stars)

1) The subjects in different outcome groups are comparable, based on the study design or analysis. Confounding factors are controlled.

- a) The study controls for the most important factor (select one). ★
- b) The study control for any additional factor. ★

Outcome: (Maximum 3 stars)

1) Assessment of the outcome:

- a) Independent blind assessment. ★★
- b) Record linkage. ★★
- c) Self report. ★
- d) No description.

2) Statistical test:

- a) The statistical test used to analyze the data is clearly described and appropriate, and the measurement of the association is presented, including confidence intervals and the probability level (p value). ★
- b) The statistical test is not appropriate, not described or incomplete.