

Supplement 2. Modified AMSTAR 2 questionnaire.

This supplement provides the modified version of the AMSTAR 2 questionnaire that was used to assess the methodological quality of systematic reviews. Please refer to the following publication for the original AMSTAR 2 tool: Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J, Moher D, Tugwell P, Welch V, Kristjansson E, Henry DA: AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. BMJ 2017;358:j4008.

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|---|------------------------------|
| 1. Did the research questions and inclusion criteria for the review include the components of PICO? | |
| For Yes, ALL the following: | |
| <input type="checkbox"/> Population | <input type="checkbox"/> Yes |
| <input type="checkbox"/> Intervention | <input type="checkbox"/> No |
| <input type="checkbox"/> Comparator group | |
| <input type="checkbox"/> Outcome | |
| 2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol? | |
| For Yes: | |
| The authors state that they had a written protocol or guide that includes ALL the following: | |
| <input type="checkbox"/> review question(s) | <input type="checkbox"/> Yes |
| <input type="checkbox"/> a search strategy | <input type="checkbox"/> No |
| <input type="checkbox"/> inclusion/exclusion criteria | |
| <input type="checkbox"/> a risk of bias assessment | |
| 3. <u>Did the review authors use a comprehensive literature search strategy?</u> | |
| For Yes, ALL the following: | |
| <input type="checkbox"/> searched at least two databases (relevant to research question) | <input type="checkbox"/> Yes |
| | <input type="checkbox"/> No |
| <input type="checkbox"/> provided key word and/or search strategy | |
| 4. Did the review authors perform study selection in duplicate? | |
| For Yes, either ONE of the following: | |
| <input type="checkbox"/> at least two reviewers independently agreed on selection of eligible studies and achieved consensus on which studies to include | <input type="checkbox"/> Yes |
| | <input type="checkbox"/> No |
| <input type="checkbox"/> OR two reviewers selected a sample of eligible studies <u>and</u> achieved good agreement (at least 80 percent), with the remainder selected by one reviewer | |

5. Did the review authors perform data extraction in duplicate?

For Yes, either ONE of the following:

- at least two reviewers achieved consensus on which data to extract from included studies Yes
- OR two reviewers selected a sample of eligible studies and achieved good agreement (at least 80 percent), with the remainder selected by one reviewer No

6. Did the review authors provide a list of excluded studies and justify the exclusions?

For Yes:

- Provided a flow chart showing the number of excluded studies and reasons for exclusion. A study-specific list is not required. Yes
- No No

7. Did the review authors describe the included studies in adequate detail?

For Yes, ALL the following:

- described population Yes
- described interventions No
- described comparators
- described outcomes
- described research designs

8. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?

For Yes:

- A tool was used to evaluate the risk of bias of included studies Yes
- No No

9. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?

For Yes:

- Statistical heterogeneity between trial results was assessed and the results are provided Yes
- No No
- No meta-analysis conducted No meta-analysis conducted

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| 10. Did the review authors account for RoB in individual studies when interpreting/discussing the results of the review? | |
| For Yes: | |
| <input type="checkbox"/> Study quality is considered in the discussion and interpretation | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 11. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review? | |
| For Yes, either ONE of the following: | |
| <input type="checkbox"/> There was no significant heterogeneity in the results | <input type="checkbox"/> Yes |
| <input type="checkbox"/> OR if heterogeneity was present the authors performed an investigation of sources of any heterogeneity in the results and discussed the impact of this on the results of the review | <input type="checkbox"/> No <input type="checkbox"/> No meta-analysis conducted |
| 12. <u>If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias)?</u> | |
| For Yes: | |
| <input type="checkbox"/> Performed graphical or statistical tests for publication bias or an adequate reason is provided for not performing a test. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No meta-analysis conducted |
| 13. Did the review authors discuss the likely impact of publication bias on the results of the review? | |
| For Yes, either ONE of the following: | |
| <input type="checkbox"/> There was no significant publication bias | <input type="checkbox"/> Yes |
| <input type="checkbox"/> OR if publication bias was present the authors discussed the likelihood and magnitude of impact of publication bias on the results of the review | <input type="checkbox"/> No <input type="checkbox"/> No meta-analysis conducted |
| 14. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review? | |
| For Yes, either ONE of the following: | |
| <input type="checkbox"/> The authors reported no competing interests | <input type="checkbox"/> Yes |
| <input type="checkbox"/> OR The authors described their funding sources and how they managed potential conflicts of interest | <input type="checkbox"/> No |

Critical assessment items are underlined.

Overall rating

Critical weakness(es): _____

Non-critical weakness(es): _____

Rating overall confidence in the results of the review: _____