

Nutrition and maternal weight outcomes: annex 4 - AMSTAR 2 assessment

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AMSTAR 2 assessment

This annex provides information on the [AMSTAR 2 tool](#) which was used to assess the methodological quality of the 24 systematic reviews meeting the inclusion criteria for consideration in this report. How the AMSTAR 2 assessment was undertaken is described in Chapter 3 (Methods).

AMSTAR items

AMSTAR 2 consists of 16 items, each addressing a specific aspect of the systematic review process. These 16 items are as follows (the item numbers in the header row of table A4.1 correspond to the item numbers in this list).

1. Did the research questions and inclusion criteria for the review include the components of patient, intervention, comparison, and outcome (PICO)?
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?
3. Did the review authors explain their selection of the study designs for inclusion in the review?
4. Did the review authors use a comprehensive literature search strategy?
5. Did the review authors perform study selection in duplicate?
6. Did the review authors perform data extraction in duplicate?
7. Did the review authors provide a list of excluded studies and justify the exclusions?
8. Did the review authors describe the included studies in adequate detail?
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?
10. Did the review authors report on the sources of funding for the studies included in the review?
11. If meta-analysis was performed, did the review authors use appropriate methods for statistical combination of results?

12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?
13. Did the review authors account for RoB in individual studies when interpreting and discussing the results of the review?
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?

Confidence ratings

For each item, a review received one of the following outcomes: yes, no, partial yes, not applicable (N/A) or no meta-analysis (MA) where no evidence was identified or where no MA was available.

In grading confidence, we considered 'partial yes' as adequate adherence to the standard.

Items 2, 4, 7, 9, 11, 13, and 15 are classified in AMSTAR 2 as critical domains. In the context of this risk assessment, the nutrition and maternal health working group agreed that item 7 (relating to the list of excluded studies) was not considered as a critical domain as few of the included systematic reviews met these best practices. Therefore, the critical domains for this risk assessment were items 2, 4, 9, 11, 13 and 15.

The confidence ratings are:

- critically low - more than one critical flaw with or without non-critical weaknesses
- low - one critical flaw with or without non-critical weaknesses
- moderate - more than one non-critical weakness with no critical flaws
- high - no or one non-critical weakness with no critical flaws

Two AMSTAR 2 scores are provided for each SR, one including item 7 (overall confidence rating) and the other excluding item 7 (additional confidence rating).

AMSTAR 2 assessment of systematic reviews

The AMSTAR 2 assessment of systematic reviews is presented in Table A4.1. Please note that the item numbers in the header row refer to the items listed in the section 'AMSTAR items' above. Where no evidence was identified, this was noted as 'N/A' (not applicable). Where no meta-analysis was available, this was noted as 'no MA'.

Table A4.1: AMSTAR 2 assessment of systematic reviews

Author (year)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Overall confidence rating	Additional confidence rating (with item 7 excluded)
Achón (2019)	No	Yes	No	Partial yes	No	No	No	Yes	Yes	No	No MA	No MA	No	Yes	No MA	Yes	Critically low	Low
Abdollahi (2021)	Yes	Yes	Yes	Partial yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Moderate	Moderate
Chatzakis (2019)	Yes	Yes	Yes	Partial yes	Yes	Yes	No	No	Yes	No	Yes	No	Yes	No	Yes	Yes	Low	Moderate
Dalrymple (2018)	Yes	Partial yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No MA	No MA	No	No	No MA	Yes	Critically low	Critically low

Author (year)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Overall confidence rating	Additional confidence rating (with item 7 excluded)
Dodd (2018)	Yes	No	Yes	Parti al yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Critically low	Critically low
Dodd (2010)	Yes	No	Yes	Parti al yes	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Critically low	Critically low
Flynn (2016)	Yes	Yes	Yes	Parti al yes	No	Yes	No	Yes	Yes	No	No MA	No MA	Yes	Yes	No MA	Yes	Low	Moderate
Girard (2012)	Yes	No	Yes	Parti al yes	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes	Critically low	Critically low
i-WIP (2017)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Low	Moderate
Jebeile (2016)	Yes	No	Yes	Parti al yes	No	No	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Critically low	Critically low
Lamminpa a (2018)	Yes	No	Yes	Parti al yes	No	No	No	Yes	Yes	No	No MA	No MA	Yes	No	No MA	Yes	Critically low	Low
Muktabhan t (2015)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	High	High

Author (year)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Overall confidence rating	Additional confidence rating (with item 7 excluded)
Ota (2015)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Moderate	Moderate
Pari-Keener (2020)	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No MA	No MA	No	No	No MA	Yes	Critically low	Critically low
Quinlivan (2011)	Yes	No	Yes	Partial yes	No	No	No	Yes	No	No	Yes	No	No	No	Yes	Yes	Critically low	Critically low
Shieh (2018)	Yes	No	Yes	Partial yes	No	Yes	No	No	Yes	No	Yes	No	No	No	No	Yes	Critically low	Critically low
Streuling (2011)	Yes	No	No	Partial yes	No	No	No	Yes	No	No	No MA	No MA	No	No	No MA	Yes	Critically low	Critically low
Syngelaki (2019)	Yes	Yes	Yes	Partial yes	Yes	No	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Critically low	Low
Tielemans (2016)	Yes	Partial yes	Yes	Partial yes	Yes	No	No	Yes	Yes	No	No MA	No MA	Yes	Yes	No MA	Yes	Low	Moderate
USDA (2020a) (dietary patterns)	Yes	Yes	Yes	Partial yes	Yes	Yes	Yes	Yes	Yes	No	No MA	Yes	Yes	Partial yes	No MA	Yes	High	High

Author (year)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Overall confidence rating	Additional confidence rating (with item 7 excluded)
USDA (2020b) (frequency of eating)	Yes	Yes	Yes	Partial yes	Yes	N/A	Yes	N/A	N/A	No	No MA	N/A	N/A	N/A	No MA	Yes	High	High
Walker (2018)	Yes	Yes	Yes	Partial yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Low	Moderate
Zhang (2018)	Yes	No	Yes	Partial yes	Yes	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Critically low	Critically low
Zhang (2022)	Yes	No	Yes	Partial yes	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes	Critically low	Critically low