

Appendix 2

Adaptations to AMSTAR 2

Domain	Original AMSTAR 2 domain	Adapted AMSTAR 2 domain for meta-review	Rationale for adaptation of AMSTAR 2 domain for meta-review
1	Did the research questions and inclusion criteria for the review include the components of PICO?		
	For Yes: <input type="checkbox"/> Population <input type="checkbox"/> Intervention <input type="checkbox"/> Comparator group <input type="checkbox"/> Outcome Optional (recommended) <input type="checkbox"/> Timeframe for follow-up	Adaptation made For Yes: <input type="checkbox"/> Patient population <input type="checkbox"/> Psychiatric illness of interest <input type="checkbox"/> Outcome (prevalence)	I adapted this domain to be relevant for reviews of prevalence studies. PICO is commonly used to describe interventional studies, however is less appropriate for describing prevalence studies (i.e. cross-sectional studies and cohort studies). I adapted this domain to include the following essential components: patient population, psychiatric illness of interest and outcome (prevalence).
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 Partial Yes, the authors state that they have a written protocol or guide that included ALL of the following: <input type="checkbox"/> Review question(s) <input type="checkbox"/> A search strategy <input type="checkbox"/> Inclusion/exclusion criteria <input type="checkbox"/> A risk of bias assessment For Yes, must satisfy partial yes criteria, plus the protocol should be registered and	No adaptations made.	Not applicable.

	should also have specified: <input type="checkbox"/> A meta-analysis/synthesis plan if appropriate, <i>and</i> <input type="checkbox"/> A plan for investigating causes of heterogeneity <input type="checkbox"/> Justification for any deviations from the protocol		
3	Did the review authors explain their selection of the study designs for inclusion in the review?		
	For Yes, must satisfy ONE of the following: <input type="checkbox"/> Explanation for including only RCTs <input type="checkbox"/> OR Explanation for including only NRSI <input type="checkbox"/> OR Explanation for including both RCTs and NRSIs	Adaptation made For Yes, the review must satisfy the following: <input type="checkbox"/> Include only cross-sectional studies and cohort studies	I adapted this domain to be relevant for reviews of prevalence studies. Cross-sectional studies and cohort studies are appropriate study designs for measuring prevalence because they measure the proportion of people in a group who have a medical illness at a given time.
4	Did the review authors use a comprehensive literature search strategy?		
	For Partial Yes, must include ALL of the following: <input type="checkbox"/> Searched at least 2 databases (relevant to research question) <input type="checkbox"/> Provided key word and/or search strategy <input type="checkbox"/> Justified publication restrictions (e.g. language) For Yes, must also have ALL of the following: <input type="checkbox"/> Searched the reference lists/	Adaptation made For Yes, removed: <input type="checkbox"/> Searched trial/study registries	I removed “searched trial/study registries” because this item is not necessary for reviews of prevalence studies (i.e. reviews of cross-sectional and cohort studies).

	bibliographies of included studies <input type="checkbox"/> Searched trial/study registries <input type="checkbox"/> Included/consulted content experts in the field <input type="checkbox"/> Where relevant, searched for grey literature <input type="checkbox"/> Conducted search within 24 months of completion of the review		
5	Did the review authors perform study selection in duplicate?		
	For Yes, must include 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"/> 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 adaptations made.	Not applicable.
6	Did the review authors perform data extraction in duplicate?		
	For Yes, must include ONE of the following: <input type="checkbox"/> At least two reviewers achieved consensus on which data to extract from included studies <input type="checkbox"/> OR two reviewers extracted data from a sample	No adaptations made.	Not applicable.

	of eligible studies and achieved good agreement (at least 80 percent), with the remainder extracted by one reviewer		
7	Did the review authors provide a list of excluded studies and justify the exclusions?		
	<p>For Partial Yes: <input type="checkbox"/> Provided a list of all potentially relevant studies that were read in full-text form but excluded from the review</p> <p>For Yes, must also have: <input type="checkbox"/> Justified the exclusion from the review of each potentially relevant study</p>	No adaptations made.	Not applicable.
8	Did the review authors describe the included studies in adequate detail?		
	<p>For Partial Yes, must include ALL of the following: <input type="checkbox"/> Described populations <input type="checkbox"/> Described interventions <input type="checkbox"/> Described comparators <input type="checkbox"/> Described outcomes <input type="checkbox"/> Described research designs</p> <p>For Yes, must also have ALL the following: <input type="checkbox"/> Described population in detail <input type="checkbox"/> Described intervention in detail (including</p>	<p>Adaptation made</p> <p>For Yes, must have described ALL of the following: <input type="checkbox"/> Study design <input type="checkbox"/> Inclusion criteria <input type="checkbox"/> Study setting <input type="checkbox"/> Sample demographics <input type="checkbox"/> Psychiatric illness assessment measure(s) <input type="checkbox"/> Psychiatric illness caseness definition(s) <input type="checkbox"/> Prevalence estimates</p> <p>No “Partial Yes” score</p>	I adapted this domain to be relevant for reviews of prevalence studies. PICO is commonly used to describe interventional studies, however is less appropriate for describing prevalence studies (i.e. cross-sectional studies and cohort studies). I adapted this domain to include the following essential components: study design, inclusion criteria, study setting, sample demographics, psychiatric illness assessment measure(s), psychiatric illness caseness definition(s) and prevalence estimates.

	doses where relevant) <input type="checkbox"/> Described comparator in detail (including doses where relevant) <input type="checkbox"/> Described study's setting <input type="checkbox"/> Timeframe for follow-up		
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?		
	<p>For Partial Yes, must have assessed RoB:</p> <input type="checkbox"/> From confounding, and <input type="checkbox"/> From selection bias	<p>For Yes, must also have assessed RoB:</p> <input type="checkbox"/> Methods used to ascertain exposures and outcomes, and <input type="checkbox"/> Selection of the reported result from among multiple measurements or analyses of a specified outcome	<p>For Yes, must have assessed RoB:</p> <input type="checkbox"/> From unrepresentative samples
			I adapted this domain to be relevant for reviews of prevalence studies. When examining risk of bias in prevalence studies, the most important thing to assess for is the representativeness of their study samples.
10	Did the review authors report on the sources of funding for the studies included in the review?		
	<p>For Yes:</p> <input type="checkbox"/> Must have reported on the sources of funding for individual studies included in the review. Note: Reporting that the reviewers looked for this information but it was not reported by study authors also qualifies	No adaptations made.	Not applicable.

11	If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?		
	<p>For Yes, must include all of the following:</p> <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis</p> <p><input type="checkbox"/> AND they used an appropriate weighted technique to combine study results, adjusting for heterogeneity if present</p> <p><input type="checkbox"/> AND they statistically combined effect estimates from NRSI that were adjusted for confounding, rather than combining raw data, or justified combining raw data when adjusted effect estimates were not available</p> <p><input type="checkbox"/> AND they reported separate summary estimates for RCTs and NRSI separately when both were included in the review</p>	<p>For Yes, must include all of the following:</p> <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis</p> <p><input type="checkbox"/> AND they used an appropriate weighted technique to combine study results, adjusting for heterogeneity if present</p>	<p>I removed the last two items from this domain which focus on NRSI and RCTs, because they are not applicable to prevalence studies.</p>
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?		
	<p>For Yes, must include either of the following:</p> <p><input type="checkbox"/> Included only low risk of bias RCTs</p> <p><input type="checkbox"/> OR, if the pooled estimate was based on RCTs and/or NRSI at variable RoB, the authors performed analyses to investigate</p>	<p>For Yes, must include either of the following:</p> <p><input type="checkbox"/> Included only low risk of bias studies</p> <p><input type="checkbox"/> OR, if the pooled estimate was based on studies of variable RoB, the authors performed analyses to investigate possible impact of</p>	<p>I did not adapt this domain – I simply replaced the words “RCTs” and “NRSI” with “studies” and removed the word “effect”.</p>

	possible impact of RoB on summary estimates of effect	RoB on summary estimates	
13	Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?		
	For Yes, must include one of the following: <input type="checkbox"/> included only low risk of bias RCTs <input type="checkbox"/> OR, if RCTs with moderate or high RoB, or if NRSI were included the review provided a discussion of the likely impact of RoB on the results	For Yes, must include one of the following: <input type="checkbox"/> included only low risk of bias studies <input type="checkbox"/> OR, if studies with moderate or high RoB were included the review, provided a discussion of the likely impact of RoB on the results	I did not adapt this domain – I simply replaced the words “RCTs” and “NRSI” with “studies”.
14	Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?		
	For Yes, must include one of the following: <input type="checkbox"/> There was no significant heterogeneity in the results <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	No adaptations made.	Not applicable.
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?		
	For Yes: <input type="checkbox"/> Performed graphical or statistical tests for publication bias and discussed the likelihood and magnitude of	No adaptations made.	Not applicable.

	impact of publication bias		
16	Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?		
	For Yes, must include either of the following: <input type="checkbox"/> The authors reported no competing interests <input type="checkbox"/> OR the authors described their funding sources and how they managed potential conflicts of interest	No adaptations made.	Not applicable.

AMSTAR 2 = A MeaSurement Tool to Assess systematic Reviews 2; NRSI = Non-Randomised Studies of Healthcare Interventions; PICO = Population, Intervention, Comparator group, Outcome; RCT = Randomised Controlled Trial; RoB = Risk of Bias.

Original AMSTAR 2 Publication

Shea BJ, Reeves BC, Wells G, et al. AMSTAR 2: A critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *British Medical Journal* 2017; **358**: j4008.

<https://amstar.ca/docs/AMSTAR-2.pdf>