Author’s response to reviews

Title: Meta-Analytic Methods for Synthesizing Evidence from Explanatory and Pragmatic Trials

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Author’s response to reviews:

The reporting and conduct of this study need to be improved, there are no references in the Discussion, for instance, though they are referred to.

Authors: We have now improved the reporting of the manuscript

There needs to be clear distinction between PRECIS and PRECIS-2 which has a likert Score and 9 domains (not 10) often PRECIS is referred to instead of PRECIS-2.

Authors: We have now clarified the differences between PRECIS and PRECIS-2 in the manuscript

Abstract Conclusion: consider changing "highlights the potential usefulness" of PRECIS-2.

Authors: We have revised this section of the abstract completely.

Introduction
P1 line 38 Spelling Loudon instead of Ludon
Authors: This is now addressed

Authors: This is now addressed

Method p1 2.1 Line 13 need to insert references [13] [14]
Authors: Addressed

Method P1 Line 28 insert reference [16]
Authors: This is now addressed.

2.2 Line 38 weren't the trials Randomised Controlled trials? Check!
Authors: This is now addressed

2.2 Line 41, "similar to" would be better word than "consistent". Yoong et al created their own adaptation from PRECIS (2009) Scale 0-4. PRECIS-2 was developed with a scale of 1-5 which you used for your study.
Authors: This is now addressed.

Perhaps just say we used PRECIS-2 [16] 2.3 p1 line 25
Authors: This is now addressed.

Please could you state which Kappa statistic was calculated using R software. Cohen's kappa is used for two raters and the Fleiss kappa (adaptation of Cohen's kappa) is used for 3 or more raters.
Authors: A Fleiss kappa statistic was used for the analysis. This is now clarified.
Was there any piloting of the methodology of scoring trials using PRECIS-2. How much training was there? How much familiarity with the tool was there? That can affect scoring, particularly if one rater has more experience.

Authors: We thank the reviewer for this important point. All the three raters are biostatisticians (2 PhD and 1 MSc) with experience in designing RCTs All the raters first read relevant papers on the development and revision of PRECIS instruments and piloted ratings on 5 published trials. We have added these details to section 2.3

3. Results

p1 Line 52-57 Refer to Table 1 and put in Ref for the Cochrane review with the 31 studies as not putting in individual RCTS to address obesity in children.

Authors: This is now addressed.

p1 Line 60. The second sentence doesn't make sense without saying that the reported mean difference…was for 31 RCTs and the intervention to reduce obesity in children. Also state that these results are taken from the original Cochrane review.

Authors: This is now addressed.

p2 Line 7 Typo 12 Insert [25].

Authors: This is now addressed.

Were any domains harder to code or had greater variation in scores and reduced kappa scores?

Authors: We had difficulty coding flexibility and follow-up intensity domains of the PRECIS. We have added few sentences to discuss this point in the Results and Discussion sections.

Were any of the authors contacted for missing information to assist scoring domains? Yoong recommended that primary authors should be contacted to reduce problems with missing information If not this should be stated as limitation. Uncertainty in scoring is not mentioned but has been indicated in previous studies using PRECIS-2 (and PRECIS)
Authors: We did not contact any of the primary authors for details on the missing information. We have now stated this as limitation in the Discussion section.

p2 line 46 Tau2 Write out in full Tau-squared and explain as this is a technical term many systematic reviewers will not be familiar with if not statisticians.
Authors: We have now described the meaning of Tau squared.

3. Results p2 Line 43, 48, 56

4. Discussion
line 14, 18, 20 PRECIS-2 rather than PRECIS
Authors: This is now addressed.

Discussion P1 There are no references in this section. Please insert.
Authors: We have now cited appropriate references in the discussion section.

P1 Line 40, to avoid confusion avoid using former and latter.
Authors: This is now addressed.

Please explain and reference "As expected…".
Authors: We have now revised this sentence.

P1 line 48 is it "can" or "could" - if can please reference.
Authors: This is now addressed.
P2 Line 4 Insert references for "few studies" P2 line 12 instead of "when" IF may be more appropriate.

Authors: The appropriate references are now cited.

P2 line 36 rating the domains by 3 individuals is a separate issue to classification of the trials into pragmatic or explanatory.

P2 line 43 Please reference the "number of studies that have explored trichotomous classification of trials".

Authors: We have now revised this

General comments for discussion:

Suggest include discussion of Yoong's study in relation to this manuscript on "meta-analytic methods…" Also another group have undertaken a systematic review (not Cochrane) and used PRECIS-2 to rate included trials https://www.ncbi.nlm.nih.gov/pubmed/?term=PRECIS-2+systematic+review

Authors: The findings of our study are now discussed in comparison with these published studies in the first paragraph of the Discussion.

P3 Line 43 The author mention misclassification error assuming that differentiates between pragmatic and explanatory. As mentioned in the introduction page 1 line 48 there is a continuum from explanatory to pragmatic and that many trials have domains with a range of scores from explanatory to pragmatic. Along with an overall score, this may be relevant to policy decisions about implementation and worth mentioning in the Discussion as currently only the overall pragmatic score part of the meta-analysis.

Authors: We thank the reviewer for this important point. We have now revised this sentence to include the relevance of PRECIS domain-specific information for policy decision making.
Table 1.

PRECIS-2 ratings not PRECIS-2 suggest Intervention to reduce Obesity not Obesity intervention in Title.

Authors: This title is now revised.

I don't understand how the studies are ordered, not alphabetic, not by PRECIS-2 score, or PRECIS-2 classification. Please edit.

Authors: We have reorganized this Table according to the type of trial (explanatory vs pragmatic).

Table 2 Please write out in full REMR, Tau and BIC Also Trials to reduce obesity.

Authors: We have now explicitly defined these acronyms as footnotes to Table 2.