Reviewer's report

Title: Building theories of KT interventions: Use the entire menu of constructs

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Reviewer: Benjamin Gardner

Reviewer's report:

I very much enjoyed reading this resubmission. The authors have done a fine job in responding to my previous comments, and the changes made to the manuscript have clarified the messages of the paper. I am mostly satisfied with the authors’ responses to my comments, though there are two points on which I think further clarification would be useful.

Major Compulsory Revisions

1. I previously commented that little was said about how the Menu of Constructs (MoC) approach might be applied. This remains a concern. The authors state that the MoC approach ‘allows for inclusion of only those constructs that seem relevant to the new context’ (p7). This is rather vague: what and who determines the relevance of a construct to a particular context? What, more broadly, determines selection of constructs from the menu? On p11, the authors imply that some constructs from the menu (e.g. “transfer appropriate processing”) can legitimately be ignored where intervention designers find the construct too ‘complex’. If a construct is relevant, it seems unwise not to apply it because of its complexity.

The Behaviour Change Wheel (BCW; Michie, van Stralen & West, 2011) perspective argues that interventions should be designed using a bottom-up approach, based on a prior analysis of the behavioural problem at hand. The aim of this analysis is to identify whether the problem pertains to gaps in one or more of the three fundamental drivers of human behaviour (capability, opportunity, motivation). Similarly, as the authors acknowledge in this paper, application of the Theory Domains Framework begins with a similar contextualised analysis of the focal problem (using Theory Domains Interviewing), and identifies relevant concepts based on such analyses. Perhaps the application of the MoC approach should also depend on such an analysis? The authors note that the ‘flexibility inherent in the menu of constructs approach … may sometimes be more of a hindrance than a help’ (p27). Perhaps by explicitly recommending analysis of a behaviour in situ prior to selecting constructs, flexibility could be reduced to a more manageable and helpful level?

Of course, it may be that the authors wish only to spell out *what* the MoC approach is (and the paper does a good job of this), rather than *how* it may be applied. I would find this acceptable (albeit necessitating an explicit statement of this aim), but somewhat lamentable, as it could compromise the rigour of subsequent applications of the MoC approach.
2. The paper would benefit from a definition of ‘theory’ (currently on p6) and ‘construct’ at or near the outset. An explicit definition of a ‘construct’ is needed to clarify the distinction between implied ‘non-constructs’ (‘group size’ and ‘number of interventions’ are ‘superficial aspects’ rather than ‘constructs’; p9) and constructs (e.g. frequency of feedback, specificity of feedback; p13). This would clarify which constructs are eligible for inclusion in the ‘menu’, or whether there are no eligibility criteria for the ‘menu’.

3. Similarly, the paper would benefit from a statement of the role(s) of constructs in knowledge transfer interventions. Again, this might be outside of the remit of this paper (in which case the authors should make this clear). Without this however, the implication at present is that constructs ‘advance … understanding [of] KT interventions’ (p14) by improving statistical prediction of a behaviour (p12), and generating ideas for ‘future research and development efforts’ (p15). This is a rather narrow conceptualisation of how constructs may be used in intervention development. The authors might usefully contextualise the MoC approach by referring to Michie and Prestwich’s (2010) ‘theory-basedness’ coding frame, which offers an exhaustive account of the ways in which theories and constructs can be applied to the design, evaluation and reporting of interventions.

Minor Essential Revisions:

4. Title: Spell out ‘KT’.

5. Clarify sentence on p7: ‘…than the entire theory of situationism that surrounds that construct within the realm of social psychology’. (What construct? What is the ‘theory of situationism’?)

6. I disagree that previous meta-analyses have focused on ‘superficial aspects’ of A&F (p9), because it is feasible that the delivery-based concepts mentioned here may, in some contexts, determine A&F effectiveness. It is fairer to say that such aspects have not been coherently organised or conceptualised, than to imply that they are necessarily unimportant. I would recommend a change of wording here.

7. Similarly, on pp9-10, the authors refer to Hysong and Gardner’s reviews: ‘these reviews show immense variability … Without a theory about how A&F should work, it is difficult or impossible to organize this variability…’. Yet, Hysong and Gardner both offered theories about how A&F should work. Again, a change of wording is needed here.

Discretionary Revisions

8. p14: ‘Below we present some examples of theory-derived constructs…’. This sentence might be clarified by adding something to state that the following section is offered primarily to elucidate the MoC approach (rather than necessarily to build a theory of A&F).
**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests