Reviewer’s report

Title: Changing Behaviour 'more or less' - Do theories of behaviour inform strategies for implementation and de-implementation? A Critical Interpretive Synthesis

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Reviewer: Wynne Norton

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Changing behavior 'more or less'—Do theories of behavior inform strategies for implementation and de-implementation? A critical interpretive synthesis.

August 20, 2018

The authors have done a good job responding to reviewers' suggestions and critiques. Overall, I found the manuscript interesting. However, I still do not think it should be accepted for publication in the journal Implementation Science, for the reasons outlined below:

* The manuscript focuses mostly on individual-level behavior change despite referencing strategies in the title and throughout the text. Moreover, the articles reviewed where theory is included are mostly focused on individual-level interventions (including but not limited to provider behavior change) vs. implementation strategies. While theories can be used to understand and explain behavior, the approaches needed to simultaneously change multi-level aspects involved in implementation go well beyond individual-based theories of behavior change. In addition, few of the theories included in the search overlap with those identified from reviews of theories, models, and frameworks commonly used in implementation science (e.g., CFIR; Tabak et al., 2012). Perhaps this review would be more applicable to behavior change at the provider-level only, but such an approach would require a search of implementation strategies specifically rather than behavior change interventions more broadly.

* Given the focus on individual-level behavior change and associated interventions, I believe this manuscript would be a better fit for a health behavior journal, such as Translational Behavioral Medicine or Health Education and Behavior.
The authors use the term implementation as synonymous with increasing a behavior and the term de-implementation as synonymous with decreasing a behavior, and not within the context of implementing (or de-implementing) an evidence-based practice or intervention. They use the term intervention as synonymous with strategy, which is another misnomer. Again, another reason why the manuscript would be a better fit for a health behavior or behavioral intervention journal.

The authors incorrectly infer that a theory only focuses on increasing or decreasing a behavior based on how it is reported in the literature from the 49 studies included in the review. The original description, explanation, and operationalization of the theory may include starting, increasing, decreasing, and stopping a type of behavior; without reviewing the original text and source, one cannot accurately infer that x-theory only applies to increasing behavior or decreasing behavior. The take-home message of the manuscript seems to assume that because theories have been used to increase behavior in interventions, they only explain that type of behavior. This may be accurate but can only be assessed by reviewing the original source.

Per below on p.5 (as listed on manuscript), it doesn't look like the authors searched for articles in PubMed, which seems like a huge limitation. Is this true? If so, another argument for why the manuscript would be a better fit for a behavioral science or health psychology journal.

"We searched Academic Search Complete, PsycARTICLES, Psychology and Behavioural Sciences Collection, PsycINFO, E-Journals, CINAHL, MEDline, SocINDEX, GreenFILE, EconLit, Business Source Complete, Regional Business, News, Teacher Reference Centre, Criminal Justice (see supplemental file #1)."

The authors do not make a distinction between starting a new behavior and stopping an existing behavior, both of which are related to but not the same as increasing an existing behavior or decreasing an existing behavior.

The sample size seems extremely small and lacks face validity. Perhaps this is a function of not using the PubMed database as a search engine. The results from this manuscript are highly skewed and likely to be misinterpreted (i.e., only 49 articles identified from search criteria), which is a disservice to the field.

**Level of interest**

Please indicate how interesting you found the manuscript:

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