Reviewer's report

Title: Behaviour change strategies for reducing blood pressure-related disease burden: findings from a global implementation research programme

Version: 1 Date: 24 June 2015

Reviewer: Lou Atkins

Reviewer's report:

This manuscript describes the application of the Behaviour Change Wheel to understand the capabilities, opportunities and motivations of groups involved in implementing interventions to reduce blood pressure, and to describe the intervention functions and policy categories of these interventions in LMICs.

I think this manuscript has the potential to make a valuable contribution to the area and have a number of suggestions.

Major compulsory revisions

The authors have used the COM-B model (which is not referred to by name in the manuscript but I would suggest the authors do so for clarity) to rank the capabilities, opportunities and motivations to perform target broad target behaviours, e.g. ‘Empowering patients who have had a stroke to improve their adherence to medicines and recommended health care visits’. Groups including community, doctors, non-physician health workers etc. are ranked as having either low medium or high capability etc to perform these behaviours. There are two issues here. Firstly, these targets for behaviour change I think are too broad to be meaningful when attempting to apply the COM-B model to understand what needs to change in the different groups for these behaviours to be performed. For example, there are many behaviours that could be performed that would contribute to ‘Changing clinic systems and behaviour of health professionals in the clinic’ some performed by community, some performed by doctors, some performed by both, but it is not clear who is doing what. Related to this is that ranking capabilities opportunities and motivations in these groups as low medium or high provides limited information on what exactly needs to change e.g. in motivation to perform a behaviour in order to promote intervention implementation – do people need to value doing it more, or do they need to create a habit to do something? Both these fall under motivation but have very different implications for what an intervention might look like. Also the authors have limited to the broader three components and not used the sub-components, e.g. physical opportunity or social opportunity which would have provided more detail on what needs to change.

I appreciate the authors have attempted to summarise a lot of data by using the approach described and as is provides a high-level overview. But to promote intervention implementation in different context, groups and for different behaviours, there also needs to be engagement with the detail. If the data are
available I would suggest describing the behaviours each group needs to perform and describing which aspects of capability, opportunity and motivation needs to change. This might not be feasible for all but I would suggest a smaller data set with greater specificity will make a more helpful contribution to the area.

It is not clear the methods for linking findings from the COM-B analysis to intervention functions and intervention functions to policy categories presented in the supplementary files. Were the authors guided by the matrices in the original Behaviour Change Wheel paper? How were specific intervention functions identified? There needs to be much more detail about this process in order to critically appraise what was done.

I would strongly recommend in table 2 the interventions are also described in terms of their intervention functions and policy categories.

Minor revisions

Background

In the final paragraph ‘preparedness of various actors’ could the authors clarify the definition of preparedness here as this has theoretical connotations, e.g. Transtheoretical Model but I’m not sure that’s what the author intend. Possibly influences on the behaviours of various actors?

As currently written the study aims could be clearer, e.g. in the first aim it’s not clear whose behaviour is targeted for change. Re-writing as research questions the study aims to answer might provide more clarity.

Method

Whilst not a requirement of the journal, I would recommend the methods is structured into conventional sub-headings of participants, design, procedure etc. has it is not easy to see what was done.

The first paragraph looks like it belongs in Background as it sets up context for the current project but is not specifically the procedural steps taken in this project.

Second paragraph – it’s not clear who ‘we’ are. Can the authors clarify?

Terminology use needs attention, e.g. the Behaviour Change Wheel is described as a ‘taxonomy’ which it is not, it is more appropriately described as a framework for intervention design.

Using consistent terminology throughout will promote clarity, there are instances where different terms used and it’s not clear if differences are intended, if they are then terms need to be defined, e.g.

• ‘policy category’ ‘policy domain’
• ‘intervention functions’ ‘intervention categories’
• ‘behaviour change target’ ‘behaviour change goal’ ‘behaviour change domain’

For the latter, whichever term is used, a definition would be helpful.
I suggest the authors add definitions of capability, opportunity and motivation in addition to intervention function and policy categories.

Results
Can the authors provide definitions for the intervention classification tables? It is not clear what ‘partially’ means and how this differs from being rated ‘yes’.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.