Author’s response to reviews

Title: Barriers and opportunities in the translation of mobile phone and social media interventions between research and health promotion practice in Australia: A qualitative study of expert perspectives

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Version: 1 Date: 06 Dec 2018

Author’s response to reviews:

Dear editors,

Thank you for the opportunity to revise this manuscript. We feel that that the manuscript has been improved significantly as a result of the reviewers’ comments and have provided a point-by-point response to their suggestions below.

Kind regards,
Cassandra Wright, on behalf of the authors

Reviewer #1: This manuscript reports on the findings of a study to gather the opinions of experts on some of the barriers and opportunities in the translation of new media research to health promotion practice in Australia. Qualitative analysis so transcripts of interviews with experts identified the main themes: mismatch in aims and priorities, resource and time constraints, and skills for translating new media interventions. These themes accord with previously published work. The authors claim that the main addition that this study brings to the literature is to highlight barriers more specifically related to new media research.
1. The main area that the authors could address before publication is generalisability of findings beyond Australia. What was the rationale for the study to focus exclusively on the translation of new media research to health promotion practice in Australia? Are there contextual factors that make Australia unique, or was the focus a methodological constraint e.g. access to experts? Were the research experts based in Australia? It is stated in the manuscript that the health promotion experts were, but this is not stated for the researchers. Resource constraints, especially in an unfunded study such as this, are reasonable justification for a specific focus, however, the authors could still address issues of generalisability, both of their findings to other areas, but also whether or not other studies have address the translation of new media research to health promotion practice, as the focus of the introduction does appear to be limited to Australia (e.g. the statement "There are relatively few Australian publications (in either grey or academic literature) that describe new media interventions...").

Response:

To better contextualise the research, we have provided some information about the prevention/health promotion context in Australia in the introduction (lines 98-110):

In the Australian context, health promotion or prevention activities that reach the public are implemented by a range of organisation types. These include government (at a local, state and national level), non-government (such as community health services) and not-for-profit organisations or charities focused on specific health issues (i.e. Diabetes Australia). At a national and state level, investment in prevention has been in flux for the past two decades and as such, there have been few timepoints at which funding has been considered to be relatively stable [32, 33]. These organisations conduct a range of activities across the health promotion spectrum, from action focused at the policy and environment level through to initiatives focused at the individual level.

We have also included additional detail in the methods section describing the rationale for the Australian focus (lines 181-189):

“We selected participants purposively, based on their unique knowledge and insights into technology-facilitated prevention research and/or health promotion practice. This sampling technique involves the selection of experts based on their knowledge and experience of the core issues of the research [52]. We originally aimed to include participants from both Australian and international contexts, however after piloting the interviews with two international experts, it became apparent that the prevention and translation contexts differed markedly from Australia. As such, we were concerned that we would be unlikely to reach data saturation or draw useful conclusions in this small, unfunded study. We subsequently only interviewed participants based in Australia going forward, and excluded the data collected from the two international participants for the analyses we report on in this paper.”
2. The three themes identified are justified, but very broad. Given the author's claimed main contribution of this study is the emphasis on new media research, and within that the rapid pace of developments in the technology, this doesn't come across very strongly from the experts. Indeed I could only find one reference to this from researcher expert although in the manuscript it is reported that researchers reported that "obsolescence as a recurrent threat". If this was a factor that was reported by more than one expert, can the authors provide more evidence, and does this sub-theme fit well within 'Mismatch in aims and priorities' or could the pace of technological change be themed differently to underline the unique contribution of this study?

Response:

We agreed the theme about speed could be drawn out alone. In doing so, we re-framed the mismatch in priorities, and the resources themes to reflect the resources and priority challenges faced in the priorities for evidence and the perceived roles in translation. We feel it does not change the findings or the overall paper too much, but more clearly highlight what is different about technology-facilitated prevention as you suggested. Further, we have added more quotes from participants as evidence of this 'speed' theme (lines 260-278).

3. Minor comments.

Conventionally, quotes from research participants would be presented within quotation marks.

There are one or two minor spelling errors that need correcting in the final proof e.g. page 14 line 377.

Response: Thank you – spelling errors have been amended and quotation marks have been added.

Reviewer #2: Overall the paper is reasonably well written and will be a useful contribution to health research policy. It tackles a 'hard' issue facing health researchers - that of the dichotomy between research and practice and the seemingly inevitable lack of funding available throughout the sector.

I have some hesitations about the paper as it currently stands:
1. New media is not new anymore: technology applications is probably a more effective and inclusive term.

Response: We agree that the term 'new media’ has its limitations, however there is very little consistency in terminology used within or between research or health promotion literature. We have decided to use the term ‘technology-facilitated prevention’ throughout, and have explained which types of media we are referring to when specificity is useful to the reader. We agree that the technology itself is no longer new, but the use of it for prevention activities is newer, hence the changed emphasis in our terminology.

The results are probably somewhat self-evident. While the research appears to be conducted rigorously, I feel that we probably knew about these issues without the research. I would like to see more work on explaining WHY this research is necessary and what needs to change from a policy and systems perspective to ensure that this paper is leading the debate about structural changes to the system.

* While I accept that 'evidence' is necessary one of the biggest issues facing research using technology is that the rate of change is so rapid, codification is not feasible. The opportunity is therefore to change the rules of 'evidence' to suit the data that is available (e.g. use big data, secondary research sources, adjunct applications and existing third-party resources). This does not appear to have been considered by the authors who state that the time to publication is so long the research is out of date -

Response: Although we were informed by existing literature, we did not rely heavily on theory during the analysis process, instead preferring a data-driven approach (as is common in public health research). However, we recognise the value of referring to theories and frameworks, and have integrated them into our discussion (lines 553-571):

Researchers in our study were predominantly used to a linear, one-way form of translation, with their primary role in the sequence being the simple dissemination of research; this finding is consistent with previous research [57, 64]. The researchers’ description of translation most closely resembled Rychetnik’s model of translation processes to support evidence based policy and practice [65]. In this model, there are five key stages: 1) problem definition, 2) solution generation, 3), intervention testing, 4) intervention replication and 5) intervention dissemination. However, this type of linear process (sometimes termed as the ‘pipeline fallacy’[66]) has been criticised as slow and ineffective for producing real-world benefits [35, 67, 68]. A Updates to Translation Continuum (‘T’) models demonstrate a more complex route to achieving real world impact [69]. The T0-T4 model includes five stages, from problem definition (T0) to discoveries (T1), to tests of interventions (T2), the production of evidence-based recommendations (T3), to the implementation of interventions into organisations and communities. A key feature of this model is that between each of these stages are bi-directional arrows, and at each stage,
stakeholder engagement and evidence integration occurs. The overall process is also seen to be cyclical, with evidence from program implementation then informing problem definition. The researchers in our study were predominantly focused on the T1 and T2 stages of translation, with limited engagement or discussion of the other stages. We recommend that researchers consider their work in the context of the larger translational machine, and that they include stakeholder engagement with practitioners and community at the various stages of intervention research.

2. * The methods explanation is a bit lacking in 'narrative' about the necessity for a qualitative approach. I don't know WHY this is the 'right' way to approach this issue.

Response: We have included some justification for the selection of the qualitative approach (lines 168-179):

We utilised a realist qualitative study design[51], involving in-depth interviews with researchers working with mobile phone and social media interventions and prominent health promotion experts. A key purpose of the study was to inform the development of a quantitative survey of health promotion practitioners about use and evaluation of technology-facilitated prevention initiatives. We therefore sought to better understand the context in which practitioners operated, and gauge their perception of the state of play in the field. Due to the proliferation of research in technology-facilitated prevention, we decided that it was essential to also include researchers and explore their role in translation. Qualitative methods, particularly in-depth interviews, are a useful method for producing rich and detailed data in areas where less is known or documented [52]. The semi-structured nature of the interviews allowed flexibility for participants to move into discussions that were important to them which may not have been captured in a structured interview or questionnaire [52].

* NVivo is a tool for data analysis and coding data is done by the researchers (line 182). I would prefer to see some reference to theories as a result of the analysis. While the research is essentially descriptive, it does have implications for management, policy and systems. Each of these domains has theoretical underpinnings which have been essentially ignores for this research. The implications for practice and/or research would be much enhanced of these theories were consulted.

Response: As mentioned, we provided additional discussion of theories and frameworks in the discussion.
3. NVivo is also a very subjective analytical tool and I would like to see a discussion on the validation of the coding system. (there is nothing wrong with subjectivity but it has not been addressed in this section although it was in the data collection section.

Response: Further detail has been provided about the analysis process:

“We used an inductive approach to develop a coding framework. This involved reading the transcripts multiple times to first familiarise ourselves with the data, while making notes about potential codes to use to organise the data. These notes were used to develop a preliminary coding framework, which was refined iteratively during the process of coding the first four transcripts. Coding was then completed deductively using QSR NVivo V11 software by one researcher. A second researcher blind-coded a sample of four transcripts; the two researchers then met to check consistency and discussed discrepancies. Following coding, we searched for themes within the data; we used a realist or semantic approach, that is, the themes were identified based on explicit meanings of the data. At the time, we felt that this ‘data-driven’ approach was appropriate due to the pragmatic nature of the research questions and small scope of the study [51]. Following coding, we undertook a process of re-organising coding structures to consider relationships across codes in order to identify themes which related to both researchers and practitioners. Themes were then reviewed and defined based on their importance to technology-facilitated prevention specifically.”

* There are some difficult to read sequences of text that need clarifying. Lines:
  o 32-34

Response: We have amended the sentence to read:

“We therefore aimed to explore the perspectives of researchers and health promotion experts on efforts to translate technology-facilitated prevention initiatives into practice, and the barriers to achieving translation.”

  o 110-114

Response: We have amended the sentence to read:

A recent study found 29 apps that had been created by Australian health promotion bodies, but that there were no publicly available evaluations for any of them [6].

  o 115 - thus that??
Response: We have amended the sentence to change the word ‘thus’ to ‘therefore’.

o 169-172 - is too 'truncated' to be properly assessed for rigour

Response: We have amended the sentence to read:

To enhance rigour and reduce the chances of misinterpretation [53], the researcher conducting the interviews was careful to repeat statements back to the participants to clarify interpretations (known in qualitative research as ‘member checking’ [52]).

o 175-182 - is too 'truncated' to be properly assessed for rigour

Response: We have amended the sentence to read:

We used an inductive approach to develop a coding framework. This involved reading the transcripts multiple times to first familiarise ourselves with the data, while making notes about potential codes to use to organise the data. These notes were used to develop a preliminary coding framework, which was refined iteratively during the process of coding the first four transcripts. Coding was then completed deductively using QSR NVivo V11 software by one researcher. A second researcher blind-coded a sample of four transcripts; the two researchers then met to check consistency and discussed discrepancies. Following coding, we searched for themes within the data; we used a realist or semantic approach, that is, the themes were identified based on explicit meanings of the data. At the time, we felt that this ‘data-driven’ approach was appropriate due to the pragmatic nature of the research questions and small scope of the study [51]. Following coding, we undertook a process of re-organising coding structures to consider relationships across codes in order to identify themes which related to both researchers and practitioners. Themes were then reviewed and defined based on their importance to technology-facilitated prevention specifically.

o 184-186 - is too truncated to be properly understood

Response: This sentence is only intended to describe the structure of the results section. We have had a scientific editor check this and he agrees that the sentence is appropriate and comprehensible.

o 205-206 - I don't know what this means

Response: We have amended the sentence to read:
The speed at which new technological developments emerged was described as a general challenge to working in technology-facilitated prevention, which also had strong implications for translation.

- 209-210 presents essentially the same idea as the earlier sequence

Response: This has been removed.

- 222-225 - this is somewhat self-evident and I would like to see some explanation for what this means for practice and/or research

Response: We have amended the sentence to read:

However, health promotion experts believed that the practice field needed to be ‘ready’ to accept the technology-facilitated prevention interventions developed in research in order for translation to take place. They reflected that the developments were sometimes out of sync with practice readiness, meaning that the health promotion agencies were often significantly lagging behind the commercial sector and research world in terms of their use of technology for health.