Reviewer’s report

Title: Never the Twain Shall Meet? A Comparison of Implementation Science and Policy Implementation Research

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Reviewer: Lars Wallin

Reviewer’s report:

I have read the manuscript by Nilsen and coworkers with great interest. It is a well written paper comparing implementation science with policy implementation research highlighting what can be learned from the policy implementation field for clinically focused implementation. My knowledge in policy implementation research is not that profound but I think I can offer some comments for improving the paper.

- Major Compulsory Revisions

The paper is rather long. It stretches over 25.5 pages. Despite the essay character of the paper I think it would benefit of being somewhat condensed.

In the method section you state that you made a selection on literature relying on overviews, reviews and assessments of research. I can clearly see that approach in the cited literature. However, you are not providing any arguments on why the specific references 7-32 were selected. Why just these sources and not others? What are the specific merits of these sources ensuring the best overview of the two research fields?

In the definitions section you provide definitions of public policy and policy implementation but not on research of these fields. Overall is the definition of policy implementation much less elaborated compared with the definition you provide on implementation science. Would also like to see a discussion on the different approaches to define the fields.

On page 9 in the end of the second paragraph you write about how New Public Management led to the adoption of disciplinary approaches from management and organizational theory and that researchers abandoned the concept of implementation in favour of terms such as governance. I found this interesting but unclear. The concept of governance also pops up regularly in implementation science. Think it deserves some elaboration.

On page 11 you give a short historic overview of the two research fields. Where do you place Rogers and the Diffusion of innovation paradigm? Is that what you refer to as the research with other labels dating back to the 1930s? If so, it is not consistent with page 24 where you link Rogers’ work to implementation science. Considering Rogers importance I would like to see his work more explicitly discussed in your article.
I don’t get the following sentence on page 28: “However, we believe there is important learning to be derived from several aspects of policy implementation research and from associated research into various implementation and/or policy issues in political science.” Who are learning from what? Think this could be clearer.

- Minor Essential Revisions

When your refer to Lipsky and “street-level bureaucracy” (page 7) it is not clear for me how this level can be described as policy makers. I also wonder if the decisions of “street-level bureaucrats”, in the form of healthcare practitioners, that Lipsky refer to, are the same kind of decisions that healthcare practitioners make, viewed from an implementations science perspective? Is Lipsky’s reasoning also valid from an implementation science perspective?

I wonder about the designation of PARIHS and KTA as “planned action change theories” (page 14). You refer to Graham and that is OK, but I have often seen “theories” like PARISH and KTA being labelled as “conceptual frameworks” (not least by the authors themselves) which is a less demanding label than theory. Not sure about the importance of this, but think you should consider (or discuss) the “theory” label of these conceptual frameworks.

In your listing of determinants of change you consider the individual healthcare practitioner to be the “implementer”. I can see the point in your reasoning but I find it strange to not also view different kinds of change agents, such as knowledge brokers, facilitators, opinion leaders, etc, as a kind of implementers. I think your description of implementers in the policy implementation tradition as a rather complex phenomenon also goes for implementation science.

Don’t think the “Implementation impact” heading should be a subheading to “Determinants of change”.

In the start of the discussion you state that healthcare practitioners have autonomy to choose the knowledge on which they want to act. In the policy implementation field implementers should be more expected/required to adhere to the policy. I am not sure that this “freedom” is a correct description of healthcare practitioners’ conditions. I think that also healthcare practitioners find their practice more and more surrounded by contracts and regulations on what kind of practice they are expected/required to deliver for being perceived as “quality care” providers, or even being reimbursed.

I have a problem in understanding what you mean (and also what it is based on) in the following sentence (page 23): Top-down perspectives on the implementation process imply a more positivist orientation as the implementation object is often viewed in terms of an entity that exists in a finished form as explicit objective facts and the implementation process is considered primarily as an act of engineering.”

- Discretionary Revisions
In the background (page 3-4) you claim that researchers in two research fields tend to stick to references from their own field in their writing. Can you provide some typical examples of this?

I found page 27 where you refer to a couple of theories in the policy implementation field very interesting. Your paper could definitely have use of more references from the policy implementation field similar to these.

**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