Author's response to reviews

Title: How research funding agencies support science policy and practice integration? : An international overview

Authors:

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Author's response to reviews: see over
We would like to sincerely thank the Editor and both reviewers for taking the time to go over our manuscript in such detail, for pinpointing specific sentences and paragraphs that lacked clarity, and for making so many constructive comments and suggestions.

We have modified and added to the manuscript accordingly.

Editor’s comment:
Editor: I have now received 2 expert reviews of your manuscript. As you will see from the attached reports, whereas the referees are generally positive about the manuscript, they have raised a significant number of issues with it. Most of them are in some way related to the clarity of the reporting and the analyses that have been presented. In the light of these comments, I would like to invite you to address the referees’ points in detail and resubmit a revised manuscript to the Journal.

Answer: We have carefully revised the article in order to make it more reader friendly and to ensure consistency in our terminology throughout.

REVIEWER REPORT A:
Reviewer: The paper can be presented with better format. Right now there are so many information in the paper which might be better presented, if the authors consider a conceptual framework for that. It is not clear now why and how the three domains, which their titles changed through methods and result section, are selected and were developed. Introducing the framework and or the concept that the authors had in their mind can improve readability of the paper.

Answer: We have made several changes for the sake of clarity.
1. Methodology: The variables are described in greater detail.
2. The same terminology for concepts is used throughout the manuscript.

Reviewer:
Page 5: In the literature on science policy, or how ‘policies of national government, supranational organizations, public science funding organizations and large public research organizations aimed at influencing the production of scientific knowledge” (citation Leiden University), granting agencies have been analyzed.’ needs reference.
Answer: This has been added.

Page 6: ‘We studied both policy and practice instead of limiting ourselves to just one side of the spectrum.’; not very clear.
Answer: We have removed this sentence. We have added a section about the integration of policy and practice into science. The additions is: The other element in
essence, the flip side worth investigating is knowledge development. This aspect, the integration of policy and practice into science, may be essential if we are to achieve a meaningful dialogue and reciprocal influence between research and policy, and between research and practice [7]. Lessons for the integration of policy into science can be learned from previous studies on the Rothschild initiative in England [32, 33]. Researchers have examined 7 years' of follow-up data on this attempt by the English Department of Health in the 1970s to influence and set the agenda for healthcare research. Recent editorials on collaborative research have highlighted the importance of maintaining an active relationship between research and the policy and practice side [11].

Reviewer:
Page 7: The following part (“Challenges in SPPI, here the variety of models, definitions and measures across agencies, have been documented and elaborated. The definition of knowledge transfer across granting agencies at the international level is not consistent [19] […] – Closeness or not of granting agencies with researchers and with policy makers.”) could be presented in discussion section instead of the introduction. In addition, it can be better presented.
Answer: We have heeded this suggestion.

Page 9: The next part is not necessary: The distinction between policy integration and practice integration will be highlighted when data allowed us to, especially in the result section.
Answer: This has been removed.

Page 11: The following part (“The empirical secondary data gathered through these sources are limited: they do not necessarily reflect the most recent and up-to-date decisions of granting councils. [...]”) is very crucial and better to be presented as the limitations of the study in discussion...
Answer: We have moved this section, as suggested.

Page 13: The following two parts is better to be presented in discussion: “The labeling of evidence informed decision making in the field of policy and practice is still suffering from inconsistencies across granting councils. This partly reflects the findings from Tetroe and coll. (2008) in an international comparison of granting agencies they made in 2003-2004.”
Answer: These parts have been moved to the discussion, as suggested.

Page 12: “Links and exchanges (L&E)”; While this term was used in previous lines, it was introduced in page 12.
Answer: This term is now introduced and used in the section on the identification of variables.
Page 14: The following parts is better to be presented in discussion: “INSERM may be considered as serving translational research and not being part of KT (Graham et al., 2006), however there needs to be adoption of knowledge with the partnered companies, qualifying for KT in our analysis here.”
Answer: We have kept this result in the analysis of results section and removed the reference to Graham.

Reviewer: In methods the variables of the study were introduced, but the names in result are not consistent with them. Suppose in method section, authors used ‘Steps of innovation’ which in the result it changed to ‘Eligible expenses’. The order of the ‘Synthesis’ in the methods is first and in result is 4th. In the methods they used ‘Benefits’, while in the results section it changed to ‘Effectiveness analysis’.
Answer: We have made these changes. Cf previous comments.

Reviewer: The following sentences could be summarized. It wanted to show that this institution has push model strategies. It can be captured by the first sentence as well.
Page 18: NHMRC urgent research program reflects the pull model:
“Research that must be undertaken rapidly in response to a threat to public.
Answer: The NHMRC is an example of research driven by policy needs. We have reformulated this: “NHMRC’s urgent research program reflects a pull model driven by policy needs”.

REVIEWER REPORT B:

Reviewer: I’m afraid I think there are a number of problems with how some of the key aspects of the article are phrased and this meant I was not always quite sure about the focus of the analysis, particularly at the start of the article. For example, the title refers to ‘science policy and practice integration’ and para 1 of the background refers to ‘the integration of science into policy’ and borrowing from three research traditions: ‘health service research, knowledge transfer and science policy (SP)’. These phrases seem to suggest that science policy (as a topic related to the organisation of research activities etc) is being used to help analyse how science is implemented in policy and practice. This dual use of the words science and policy can, of course, be appropriate but it does need very careful handling to get the wording correct and unfortunately at various points the meaning of the article was not really clear to me. For example, would the title be better rephrased something like: Research funding agencies support for the integration of science into policy and practice: An international analysis. Or, perhaps, there should be a comma between science and policy. Similarly, I was not quite sure about the focus in the start of the 5th para of the Background.
Answer: We have made the following changes:
1. The title is now: Research funding agencies support for the integration of science into policy and practice: An international overview
2. We have changed science policy and practise integration (SPPI) to science integration into policy and practice (SIPP).
3. We now distinguish more clearly between the two directions: science into policy and practice; and policy and practice into science. A paragraph on how policy and practice influence science has been added to the section entitled Contributions.
4. We have removed the term “science policy”.

Reviewer: If possible, I would like to see a greater effort to build on the undoubtedly large-scale and detailed analysis of a range of aspects of the web sites, so as to undertake consideration of how far the agencies had coherent strategies. For example, the NIHR has an overall framework to identify the needs a wide range of users, and produce science that is intended to address those needs. This provides an example of where the article could have drawn more on the existing literature that is already cited (for example the article on developments in England) to inform the detailed analysis. Or alternatively, it is where an informant from the agency might have been able to provide a deeper understanding of the context in which the agency operates and how the web site is structured.
Answer: This comment refers to how science is influenced by users, whether they are policy makers or practitioners. We have added a section on the integration of policy and practice into science in the section entitled Contributions. We have also added some remarks to the section on data sources regarding how informants from agencies may provide information about the localisation of relevant documents on their website.

Reviewer: The article does appropriately set out some limitations, and admits it does not provide an exhaustive list of resources or mechanisms, but I think it would be appropriate to have a somewhat fuller analysis of issues such as how far the structure of the web sites might have influenced the data collection. The site with which I am most familiar, ie NIHR, has many links from one page, to other more detailed accounts of specific points, and then onto links to yet further pages etc. Also, as noted above, with such a mass of data that could potentially be included, some structuring of the data analysis for each agency on the basis of previous literature and/or a key informant interview could be useful.
Answer: In the section on the limits of our methodology, we have added the option whereby the data collection could be completed with interviews. We had not considered the question related to the structure of website in our first version, though it is highly relevant. Thanks for mentioning this important point.

We have now added, to the section on methodology, the following:
Note that our data collection relied on information available on the agencies’ websites. The consistency of the data published by a particular agency cannot be guaranteed by our methodology. There is reason to believe the selected agencies publish data that are
not so different from one another. The websites reveal each agency’s formal representation of its own activities. Moreover, the information published by agencies on their websites is directed at the public, researchers, policy makers and practitioners. It is their public portrait.

Our analysis of the websites generated secondary, tertiary and endless snowball references as a result of navigating the agencies’ websites plus those of linked agencies and ministries. We pulled documents that were directly posted on the agencies’ own websites. Relevant information was either easily accessible via the homepage, or it was less available, being stored in archives or identifiable by the title on webpages. We browsed the whole website, including archives, paying particular attention to webpages related to strategy and funding. Of course, a key informant in each agency could have validated the documents we retrieved, but we sought only to examine documentation.

Reviewer: Continuing with a similar example to the one made in the point above (because this is the area with which I am most familiar) it is stated in Table 1, and this links to section 2.3 in the Methods, that Organizational visibility of SPPI in granting councils is not available for NIHR. Yet in section 2.3 there is a discussion of intensions as being understood as Organizational visibility of SPPI. A detailed analysis of the web pages of many of the NIHR-funded programmes would find clear accounts of the importance of involving stakeholders in agenda setting, which seems to me to be a clear example of where the agency has drawn on science policy (as indeed informed by Kogan and Henkel, see below) to make sure it adopts approaches likely to lead to research impact.

Answer: This comment refers to how science is influenced by users, whether they are policy makers or practitioners. We have added a section on the integration of policy and practice into science in the section entitled Contributions. We also added the suggested references.

Reviewer: There are places where I think sentences should be re-written to make the meaning clearer.

Answer: We have carefully revised the paper.

Reviewer: There is mention in different parts of the article to NHS London; NHS, England; and (NHS,UK). I know the arrangements for the health service in England are complicated, but the origin of these different phrases was not made clear in the text.

Answer: We have corrected this problem.

Reviewer: I believe the referencing of articles in BioMed Central’s own journals (eg Imp Sci, Health Res Policy Syst) is not quite right: there should not be a number in brackets after the vol number.

Answer: This has been corrected.
Reviewer: A slightly fuller historic analysis of previous developments might help set the context for the current study. For example, one of the authors (J-LD) referred in his influential 2003 paper with Jonathan Lomas, to the key role played in developing the concept of collaborative research by the analysis from Kogan and Henkel (1983).

Answer: The Rothschild experiment is well aligned with the topic of our paper. We have added the references cited by the Reviewer to the section entitled Contributions.

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