Author's response to reviews

Title: Differentiating Innovation Priorities Among Stakeholders

Authors:

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Version: 2 **Date:** 23 May 2013

Author's response to reviews: see over

We thank the reviewers for their constructive comments and their suggestions. In the following document we give our response to their comments and describe the changes we made to the paper in reaction to their input. The original text as we received from BMC is in italics, and our response in normal font in the boxes.

Reviewer 1

Reviewer's report
Title: *Assessing Stakeholder Positions In The Implementation Process Of It-Innovations In Hospital Care Using Analytic Hierarchy Process*
Version: *1* ***Date:*** *19 February 2013*
Reviewer: *Stan Kachnowski*
Reviewer's report:
Major Compulsory Revisions

Reviewer comment
The authors must define innovation, specify why the IT innovations meet this threshold, and revise and resubmit the article once this is done.

Response

The reviewer is correct in pointing out that we did not define innovation. In order to define innovation, we added the following text in the Background:

An innovation is a practice or object that is perceived as new by the actor who adopts it [11]. We assume that an actor will adopt (start to use or implement) an innovation when the perceived benefits of using the innovation outweigh the perceived costs and hence that the new practice or object is an improvement to the current situation.

Subsequently, we corrected the text and systematically used the formulation “adoption of innovation” were we addressed the decision by an actor to use an innovation, “implementation of innovation” when we addressed planned processes of organizational use and implementation of (an) innovation(s) and “diffusion of innovation” when we addressed the process of the spread of one or more innovations on a macro scale.

Reviewer comment
The authors must fix typos, for instance, on page 12, "Managers, insurers and policymakers on the hand hand emphasize the benefits and value these....."

Response

We had a critical look on the text to remove typos. Subsequently we asked the editorial office of the RIVM (employer of ML) to edit the text on typos, grammar and style.

Reviewer comment

Level of interest: *An article of importance in its field*
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.

Reviewer 2

Reviewer's report
Title: *Assessing Stakeholder Positions In The Implementation Process Of It-Innovations In Hospital Care Using Analytic Hierarchy Process*
Version: *1* ***Date:*** *12 April 2013*
Reviewer: *Kathleen Gray*
Reviewer's report:

Reviewer comment
1. Major Compulsory Revisions
I offer my feedback as a number of questions for the authors to consider.
1.1. Is the question posed by the authors well defined?
In identifying the problem as slow translation of IT innovations into hospital practice, how does the paper differentiate among decisions taken during different stages: review of options, investment in a solution, technical implementation, user adoption, diffusion beyond the initial site?

Response

We agree with the reviewer that the process of innovation follows a number of stages. In the paper we assume that stakeholder positions are likely to affect all of those stages: first, the realization that there is a problem is likely to be affected by the position of the stakeholder, because a particular situation may be felt to be problematic more stringently by one stakeholder than by another stakeholder. The following stages, review of options (and subsequent ranking of the options according to attractiveness), investment in a solution (which stakeholder bears most costs), technical implementation (also cause of different types of costs for different stakeholders), and user adoption (change in work pattern of users, not for other stakeholders).

The results of this paper support our initial idea that stakeholder positions affect the willingness of stakeholders to adopt the innovation. The reviewer is correct in that we do not address the separate steps of the diffusion process. The aim of this paper was to explore whether we could find empirical support for our hypothesis that the agendas of stakeholders would differ and whether the differences in agendas could be understood from the cost/benefit ratio of different innovations for different stakeholders. The results of this paper raise new question which we tend to address in subsequent studies using different methods. In our conclusion we added the following text, based on the limitations of the findings of the present study we try to formulate ensuing research questions and directions for future research.

Introduction

Stakeholders are known to disagree on the relative importance of the implementation of different innovations and may therefore use their resources to influence the other stakeholders [21] and consequently use politics and power balance to affect implementation processes. Politics and power balance of stakeholders may be particularly important for innovations that span a large part of an (health care) organization where multiple stakeholders holding different positions in the organization are involved in implementation and using the innovation. The different positions of

stakeholders and resulting differences in priorities and agendas are likely to affect each step in an implementation process. In all stages, from the first stage of experiencing and defining a problem, to looking for solutions, to balancing investments versus the improvements and the evaluation, the differences in structural (stakeholder) positions will affect the costs and benefits of the different stakeholders and their subsequent preferences and priorities.

Discussion

We measured the preferences of the various stakeholders. These preferences are likely to impact the decisions on adopting innovations. These preferences appeared to be related to the cost-benefit ratio of each stakeholder. This cost-benefit ratio is affected by the stakeholders' position in an organization or a health care system. We did not study the actual impact of preferences on decision making. The influence of preferences on decisions about adoption may be the topic of another study.

Reviewer comment

The background defines the stakeholder groups as payers (government policy makers and insurers), administrators ("managers" – what about differentiating between CFOs and CIOs within hospital management?), clinicians (segmented into doctors and nurses – what about differences among visiting medical officers, physicians in different specialized units, other health professionals such as pharmacists and radiographers?), and clients (patients – what about including carers here too?).

Response

The reviewer has a good point in that a more elaborate differentiation of stakeholders is likely to result in more information on stakeholder positions. A combination of conceptual and practical considerations has led to our current differentiation of stakeholders.

The basis of the current distinction starts with the theory by Greer. This framework distinguishes three stakeholder groups based on decision systems they operate in: the Medical-individualistic, the fiscal-managerial and the strategic- institutional decision system (Greer, 1985). The medical-individual decision system is operationalized by the decisions of physicians, the fiscal-managerial decision system is operationalized by hospital administrators and the strategic-institutional system is operationalized by members of the board. This framework implies that different decision processes are affected by the distance to the care process. The physicians are directly involved in the care process, the administrators are facilitate the care process, and the board are positioned even further away from the care process to oversee the strategic position of the hospital as a whole.

Elaborating on this theoretical framework, we identified different stakeholders affected by hospitals, each with their particular decision system. The decision systems of patients are likely to be affected by unplanned and undesired disease. The decision system of the insurer will be based on the balance between income through premiums and care expenses and the health benefits for their insured. The decision system of the policymaker will be rooted in the political arena, balancing to improve the health situation of the population, with system level budgetary restrictions and restrictions caused by manpower.

Within these groups we chose to differentiate the clinicians into nurses and

physicians because in the Netherlands, contractual position within the hospital differs for a majority of physicians and nurses. Most nurses are employees of hospitals (with monthly fixed wages) and physicians are self-employed and hire services (hospital rooms, material and staff support) from the hospital. For the majority of doctors, their income is based on the number of patients treated. This difference in organizational position has fundamental consequences for the benefits, costs and negotiation power concerning organizational change, such as implementation of innovations.
We tried to differentiate the respondents in management and board, like Greer suggests. However, we found only one board member willing to fill out our questionnaire. We tried to contact several hospital boards, but most of the members were unwilling to participate in our study. For statistical reasons we therefore included the board member with hospital management.
We did not try to segment between for instance CFO or CIO, based on assumptions in the theoretical framework that these operate in a similar decision system.
For the same reason we also did not try to distinguish between patients and carers. We assume that the carers main concern is the health of the patients, which is similar to the main concern of the patient.
We acknowledge the comment of the reviewer that we could have made other choices in identifying stakeholders and that an other differentiation could have generated valuable information. However, we made the current differentiation based on existing literature and in reaction on practical problems during the research (board members being reluctant to cooperate) and we believe that the results from the current differentiation provides some evidence for the concept of different preference structures per stakeholders, showing that we addressed an issue that affects implementation processes in health care.

On order to address this issue in the paper we added the following text in the discussion:

If in subsequent studies it is possible to increase the number of respondents, further differentiations among a larger number of stakeholders may be possible. For instance, we did not further differentiate the management of hospitals. However, from a practical point of view it is reasonable to expect that a CIO will have different priorities than a CEO in a health care organization. With further differentiation, the results are likely to come up with an even more diverse picture, which would closer resemble the actual differences between stakeholders.

Reviewer comment
The background focuses the study onto stakeholder perceptions of cost / benefit, but needs to clarify if these are strictly economic or more broadly non-economic? How are these related conceptually to the decision criteria of investment level and distance from direct patient care? How does this conceptual framework relate to the literature? e.g.
Shekelle PG, Morton SC, Keeler EB. Costs and benefits of health information technology. Evid Rep Technol Assess (Full Rep) 2006;132:1-171. PMID:17627328

Response

The informative report mentioned by the reviewer, addresses amongst other things a cost/benefit issue similar to our current paper: benefits and costs are unequally distributed amongst the different stakeholders (e.g. the comparison between the costs and benefits of the hospital and of society as a whole when the hospital implements a HIT, page 12 of Shekelle et al.) . Like the report, we consider costs and benefits to be broader than monetary aspects. Quality of care, less medication errors, access to relevant information, reputation effects are costs and benefits. A central issue addressed by Shekelle et al and the current paper, is that per actor the perceived costs and benefit differ in size and in sort between actors. We therefore formulated the questions in the AHP in terms of importance: "how important is [criterion/innovation] according to you?", assuming that when the costs or benefits are larger to the actor/respondent, the perceived importance also increases.
The dimension 'investment level' is directly related to costs because it entails monetary and non-monetary costs that actors need to make when adopting an innovation.
The dimension 'distance to health care' is related to costs in the sense that the stakeholder position, in terms of distance to health care, affects the costs and benefits of the different innovations. For instance, apps with information on medication and possible interaction can have direct and substantial benefits for clinicians in their daily practice, but has no effect on the daily work practice of a policymaker. On the other side of the spectrum, a tool that gives improved estimations of manpower in health care, will greatly affect the work of policy makers and higher management, but will have little to no effect on the lives of clinicians.

We added the following text in the paper, explaining the same principle with examples from our innovation matrix.

These two dimensions are likely to affect the costs and benefits of different innovations for the actors involved. The size of the investment is directly tied to costs (monetary, and aspects such as organizational change), and distance to health care may explain differences in impact on work practices for different actors. For example, in the upper right cell of table 1, the "Full-text search engine for using narrative data in electronic health records" is likely to be beneficial to people analyzing patient data such as to analysts and decision makers, but it is unlikely that many clinicians are affected by this innovation. In the same column in the bottom row, we find "Computerized clinical decision support by app on PDA". It is likely that this innovation will affect the work practice of clinicians because of direct availability of information to support decisions they need to make several times per day, while this innovation is not likely to have mayor impact on the work practice of board members (provided they are not also active clinicians as well).

Reviewer comment

1.2. Are the methods appropriate and well described?
Participants: When we consider that every hospital has a distinctive history / needs / culture, and when the authors have emphasised the "social setting of the process", how appropriate is this study given that the stakeholders did not share the same hospital setting for possible innovation? Otherwise, how can the sample size and selection be justified as a representative cross-section of the regional / national health care system in question? (and can the reader be

informed about what system this is?)

Response

The reviewer is correct in the observation that we assume the social setting in which the innovation process takes place, influences the preferences of the stakeholders and that this will influence the outcome. We agree with the reviewer that every organisation, and therefore every hospital has its own culture and needs.
We stated in our discussion that our sample size is limited and that future research needs to increase the number of respondents. In the selection of our respondents we tried to represent national-level aspects where possible. Policy makers and insurers operate on national level, and may therefore be assumed to have a national level perspective. The other stakeholder groups consist of random samples and for managers and physicians we know that both academic hospitals and regular hospitals were represented. For the nurses and patients we also gathered random samples. As such we assume to have response from different types of hospitals, taking into account some differences of social settings.
However, each unique organisation has its own culture. In order to completely take culture into account, we need to take more different hospitals into account, or include a culture scale and somehow correct for that measure in the analyses. We did not do that and as such, we may not have incorporated cultural differences in our analyses.

We added the following text to address this point.
With further differentiation, the results are likely to come up with an even more diverse picture of differences between stakeholders . An increased number of respondents may also be used to correct analyses for aspects such as cultural differences and resemble the wider variety of health care organizations.

Reviewer comment

Measures: I wonder whether the inclusion of patient self-testing, in the context of in-hospital care, is sensible, since this seems the least likely setting where it would be implemented? See additional queries under point 7.

Response

The innovation that is included in the study involves self testing in combination with online automated management. The decision is based on the fact that the article by Bussey et al was included in our literature search and because our experts judged it to be important. The reviewer is correct in suggesting that this innovation reduces the need to involve the hospital in health care activities.
This innovation is included in our study based on an article on self management of thrombosis in the US (Bussy 2011). To our knowledge, anticoagulant monitoring in the US takes place in anticoagulant clinics. Some of these clinics are situated, or cooperate closely, with hospitals. So even though this did not involve in-patient hospital care, it did involve care that can take place in a hospital setting and was therefore included in our list of innovations.

(Bussey, HI (2011) Transforming oral anticoagulation by combining international normalized ratio (INR) self testing and online automated management *Journal Of Thrombosis And Thrombolysis* Volume: 31 Issue: 3 Special Issue: SI

Pages: 265-274 DOI: 10.1007/s11239-011-0564-y)

Reviewer comment

Procedures: How was the AHP was used in an instrument to elicit responses from the sample, and how was this instrument validated?

Response

We added the following text to address the comment.

Data collection

Preferences for the IT innovations were elicited through an online survey. The online questionnaire included an AHP example to illustrate how the respondents were to score their preferences for the IT innovations, and the relative importance of the decisioncriteria. Subsequently, the decision criteria and the IT innovations were described. As a first step of the preference elicitation, the respondents were asked to pairwise compare the importance of the criteria. In order to compare all criteria, the respondents judged seven pairwise comparisons on the validated AHP scale, ranging from equally important up to extremely important. As a second step, the respondents compared, for each of the decision criteria, their preferences for the IT innovations in comparison with current care. The respondents judged 63 pairwise comparisons, to prioritize the nine IT innovations on the seven decision criteria. This time the AHP scale ranged from equally preferred up to extremely preferred. On the basis of these judgments, the overall priorities for the IT innovations were calculated with the AHP.

Reviewer comment

1.3. Are the data sound?
No questions here: text, tables and figures present preference, criteria and priority data clearly.

1.4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
[For determination by the editor of this journal]

Reviewer comment

1.5. Are the discussion and conclusions well balanced and adequately supported by the data?
How do data (or other external evidence about stakeholder perceptions of their innovation options) support the researchers' speculation on factors underlying cost / benefit perceptions? E.g.
Kukafka R. Grounding a new information technology implementation framework in behavioral science: a systematic analysis of the literature on IT use. J Biomed Inform 2003;36:218-27. doi: 10.1016/j.jbi.2003.09.002 PMID:14615230

Response

In the paper we state that we can partly understand the results from a cost-benefit perspective, if costs and benefits are perceived from the broadest perspective

possible. We appreciate the literature suggestion by the reviewer. Using this literature, we added the following text in the paper to explicate the full scope of costs and benefits as understood by the authors.

Monetary costs may be an important cause for slow diffusion [14]. But in this study the costs and benefits are broader than monetary. The costs and benefits by the different actors will be at different levels of the innovation process: the environmental level (e.g. benefits improved exchange of information; costs renewing work flow with external partners); the organizational level (benefit e.g. solving an organizational problem; cost can be investments in new infrastructure, resistance in the organization, providing employees with new skills (training, education), at the social level (social support or negative attitudes of co-workers), at the psychological level (feelings of improved self-efficacy or loss of control) or at the user level (better quality of work, versus initially being less productive because a new way to work has to be learned) {Kukafkaa, 2003 #52}.

Subsequently, we argue that we can explain the results of our study from the benefits that the actors get from the various innovations, but less from the costs. We acknowledge this limitation of the study with the following text.

None of the stakeholders indicated to consider investments to be the most relevant factor in deciding on the added value of an innovation. It should be noted that these outcomes are based on subjective expectations, and not on evidence from health economic studies. A drawback of this study is that the respondents reported their subjective expectations and these expectations may differ from real life choices that stakeholder groups make. The relative small weight that was put on the costs may point towards such bias.

Reviewer comment

1.6. Are limitations of the work clearly stated?
Are the descriptions of innovations and the number of respondents the main limitations or are there also conceptual limitations?

Response

A strong assumption of this paper is that preferences of stakeholders are the result of cost-benefit considerations. One could argue that this is a conceptual limitation, since we do not operationalize or test the actual perceived costs and benefits of the stakeholders, only their priorities.
From the perspective of stakeholders holding different positions in a mutually dependent situation, the perceived costs and benefits (in the broadest sense) by the different actors are used as a theoretical assumption used to explain behavior to a certain extent. This is an application of a “thick” rational choice perspective (cf Hechter and Kanazawa, 1997), in which the actors are assumed to adapt their behavior to factors situated on multiple levels, e.g. behavior and attitudes of others, which are related to the social factors mentioned by theories that explain diffusion of innovations (see Kukafkaa et al, 2003). We believe we can make this assumption because this approach has been used successfully before and the implications are plausible.
The paper focusses on one aspect that affects diffusion of innovations in an organizational context. Admittedly, a multitude of factors will affect the eventual diffusion of innovations. A step further would be to actually measure the correlates

between stakeholder differences and speeds of diffusion. Following our predictions on the speeds of diffusion for the included innovation (page 19 of our paper) we added the following text to explicate that the findings of this study are on the priorities of the stakeholders and that future research should focus on the empirical relation between stakeholder differences and the speed of diffusion of innovations.

We suggest future research to empirically test these expectations.

Hechter and Kanazawa, 1997. Sociological Rational choice Theory. *Annual Review of Sociology.* Vol. 23, pp. 191-214.
Kukafkaa R, Johnson SB, Linfante A, Allegrante JP: Grounding a new information technology implementation framework in behavioral science: a systematic analysis of the literature on IT use**.** *Journal of Biomedical Informatics* 2003, **36:**218-227.

Reviewer comment
1.7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Why are there no recent references to the use of AHP in healthcare to substantiate the choice of AHP as the best methodology to study CBA elements in stakeholder preferences? e.g.
Liberatore, M. J., & Nydick, R. L. (2008). The analytic hierarchy process in medical and health care decision making: A literature review. European Journal of Operational Research, 189(1), 194-207.
Hummel, J. M., & IJzerman, M. J. (2009). PP1 A SYSTEMATIC REVIEW OF THE ANALYTIC HIERARCHY PROCESS IN HEALTH CARE DECISION MAKING. Value in Health, 12(7), A227.

Response
One of the authors of the present study is the first author of the second reference suggested by the reviewer (MH). She is familiar with the use of AHP in health care choices. The reviewer is correct in that we did not include all relevant references. To correct the omission, we added the references suggested by the reviewer and the following two references in the introductory text of the methods.

Hilgerink MP, Hummel JM, Manohar S, et al. Assessment of the added value of the Twente Photoacoustic Mammoscope in breast cancer diagnosis. Medical Devices (Auckl) 2011; 4: 107-15
Hummel JM, Volz F, van Manen JG, Danner M, et al. Using the Analytic Hierarchy Process to Elicit Patient Preferences: Prioritizing Multiple Outcome Measures of Antidepressant Drug Treatment. The Patient: Patient-Centered Outcomes Research 2012; 5:4: 225-37

Reviewer comment
1.8. Do the title and abstract accurately convey what has been found?
Is this report better described as "'Assessing Stakeholder Positions In The Implementation Process" or as "differentiating innovation priorities among stakeholders"?

Response

We discussed the suggestion of the reviewer and agreed that especially the second suggestion was an improvement to our previous title. We therefore changed the title to “Differentiating Innovation Priorities among Stakeholders”.

Reviewer comment

2 Minor Essential Revisions
In general the writing is acceptable, however there are numerous typo errors in addition to minor problems with English expression; the paper and the references list need thorough copy-editing which I have not done.

Response

The authors type edited the text and we had one of our editors correct the text.

3. Discretionary Revisions
Nil.

Reviewer comment

Level of interest: *An article of importance in its field*
Quality of written English: *Needs some language corrections before being published*
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.

Reviewer 3
Reviewer's report
Title: Assessing Stakeholder Positions In The Implementation Process Of It-Innovations In Hospital Care Using Analytic Hierarchy Process
Version: 1 **Date:** 8 April 2013
Reviewer: Nicola T Shaw
Reviewer's report:
This is an interesting article that presents a novel approach to understanding the reason why health IT adoption can be slow. The article needs to be edited by a native English speaker as the grammar makes it hard to read at times.

Reviewer comment
Further,
the methodology used needs to be much more detailed. Expert interviews are mentioned in passing;

Response

We added the following text to explain the proceedings in the interviews:
With the ensuing matrix, we approached ten experts asking them to identify one innovation per cluster (each cell in table 1 presented a cluster) from which the experts expected it would yield considerable progress in terms of quality of care and cost-efficient care. We allowed the experts to pick two or three innovations if they were unable to identify the innovation that was most beneficial in the specific cluster. Each time that an expert selected an innovation, this was marked with a score 1. Based on the sum scores of their choices and their complementary justification, we selected nine innovations for the AHP in the next phase.

We also added the following text about recruitment of respondents
The patients and the nurses were gathered from a survey panel from an external research agency. Both were random samples. The nurses were included if they were working in a hospital and were involved in patient care at the moment of filling out the questionnaire. Patients were included who had been hospitalized for at least one night in the two years prior to filling out the questionnaire. Physicians were contacted through personal networks of coworkers of the authors. We included physicians that were actively working in a hospital. We succeeded in including physicians of various age groups. The managers were recruited through the networks of co-workers; we contacted three insurer companies, and in one of the companies a number of employees working in the department involved with innovation in health care agreed to cooperate. The policymakers were recruited at the Ministry of Health, Well-fare and Sports by one of the authors who spent one day a week doing several research activities.

We added the following text on data collection
Preferences for the IT innovations were elicited through an online survey. The online questionnaire included an AHP example to illustrate how the respondents were to score their preferences for the IT innovations, and the relative importance of the decision criteria. Subsequently, the decision criteria and the IT innovations were described. As a first step of the preference elicitation, the respondents were asked to pairwise compare the importance of the criteria. In order to compare all criteria, the respondents judged seven pairwise comparisons on the validated AHP scale, ranging from equally important up to extremely important. As a second step, the respondents compared, for each of the decision criteria, their preferences for the IT innovations in comparison with current care. The respondents judged 63 pairwise comparisons, to prioritize the nine IT innovations on the seven decision criteria. This time the AHP scale ranged from equally preferred up to extremely preferred. On the basis of these judgments, the overall priorities for the IT innovations were

calculated with the AHP.

Reviewer comment
Table 2 seems to be missing;

If this is the case, this is a serious omission. I could not check the combined pdf that was submitted. We will make sure this will not happen after the revision.

Reviewer comment
Including the descriptions provided for each innovation assessed would be helpful;

Response
We added appendix C, which consists of a table with a short explanation of the nine innovations, their expected benefits and a selection of literature on the specific innovations.

Reviewer comment
more detail on how participants were recruited would be useful and how the 62 represented each category;

Response
We added the following text in the paper.

The patients and the nurses were gathered from a survey panel from an external research agency. Both were random samples. The nurses were included if they were working in a hospital and were involved in patient care at the moment of filling out the questionnaire. Patients were included who had been hospitalized for at least one night in the two years prior to filling out the questionnaire. Physicians were contacted through personal networks of coworkers of the authors. We included physicians that were actively working in a hospital. We succeeded in including physicians of various age groups. The managers were recruited through the networks of co-workers; we contacted three insurer companies, and in one of the companies a number of employees working in the department involved with innovation in health care agreed to cooperate. The policymakers were recruited at the Ministry of Health, Well-fare and Sports by one of the authors who spent one day a week doing several research activities. Eventually, 62 respondents were included in our sample. Table 2 presents the numbers per stakeholder group in brackets.

Reviewer comment
what was the qualitative analysis that MH did?.

Response
No qualitative analyses were conducted. We think that the reviewer refers to the text of the Authors' contribution of ML. We changed the text into the following to prevent unclarity.

ML developed the idea of the paper and the theoretical framework. He also recruited respondents,

conducted and interpreted interviews, judged the results of the literature searches, and was author of the text. MH conducted literature search, made the online questionnaire, conducted AHP analyses and was author of the text.

Reviewer comment

....
Box-plots are not labelled fully.

Response

We added the following text to all box plots, replacing the text 'different stakeholders' by the subsequent stakeholder.

Box plots of priorities of the IT innovations as assigned by the <different stakeholders>. The horizontal lines in the boxes represent the median of the priorities, the circle and star the outliers. The bottom and top of each box show the 25th and 75th percentiles, and the vertical lines extending from the boxes the 95% confidence interval.

Reviewer comment

Without further data being provided it is difficult to properly assess the statistics used.

Response

In previous sections of our reply we gave more information on the methods. We also added additional information in the paper. We like to provide a satisfying answer to the reviewer. Is the information that we added sufficient to answer her question? If not, we are willing to provide more information and give access to the data. We will discuss with the editor and reviewer on the practicalities.

Reviewer comment

In summary, this is an interesting paper that could make a contribution to the field. However, it needs to be edited well and much more detail included regarding the methods used in order to support the conclusions drawn.

Level of interest: *An article of importance in its field*
Quality of written English: *Needs some language corrections before being published*
Statistical review: *Yes, and I have assessed the statistics in my report.*
Declaration of competing interests:
I declare that I have no competing interests.