Author's response to reviews

Title: Human resources management interventions to improve health workers' performance in Low and Middle Income countries: a realist review

Authors:

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Author's response to reviews: see over
Dear editors,
Please find below a detailed account of how the reviewers’ comments have been addressed by the authors.
With kind regards,
Marjolein Dieleman

Reviewer 1-suggestions were considered by the reviewer as not essential

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<th>Comment reviewer</th>
<th>Reaction authors</th>
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| Useful article though it is a basis for further work rather than providing a conclusive way forward | The reviewer is correct that this review is not conclusive. The main aim of the manuscript was to propose Realist Inquiry in addition to the currently used evaluation and review methods of HRM intervention in LMIC by applying a realist perspective to published research. We have added the following text to the discussion (p.20):
“This review corroborates the findings of other reviews and demonstrates that there is evidence of positive results of HRM interventions, although the evidence is limited. Other reviews acknowledge the limitations of current research and reviews and explicitly stress the need to examine the influence of the context on intervention results (Haines, Rowe and Chopra) and to consider theories of behaviour change (Rowe). This review showed that applying a realist perspective to the evaluation of HRM interventions offers an opportunity to deepen the understanding of HRM interventions as it includes context and mechanisms in the analysis.”
We have rewritten important parts of the discussion on p. 20 and have added the following text:
“Applying a realist perspective to published research has its limitations. Apart from limited reporting on the context, the process of implementation and mechanisms, the studies did not explicitly report on the underlying assumptions of how the HRM interventions should bring about change. To better understand mechanisms and to build program theories, these underlying assumptions need to be revealed and evaluated [57]. In addition, the published interventions were often evaluated at different levels (output, outcome or effect) and with different indicators, making it difficult to compare them. Because of the limited information and the missing link between evaluation and underlying...
assumptions of HRM interventions, these studies contribute to a limited extent to developing insights in how different HRM interventions could lead to improved health worker performance. Therefore this review is not conclusive and needs to be complemented with additional realist evaluation research so as to construct and test program theories so urgently required to assist policy makers in their choice of HRM interventions.”

### Compare findings to systematic review of performance improvement strategies in UK, carried out by Cochrane centre

We are grateful to the reviewer to have sent this review- and at the same time we were reluctant to include this particular review as it would imply that we would have to add additional reviews of studies in High Income countries on health worker performance- which would require a much wider search and analysis. Because the reviewer did not consider this essential and because our main focus was to gain a better understanding of health worker performance in Low and Middle Income Countries, we decided to limit ourselves in this manuscript to LMIC. However, we acknowledge the importance of including the results of other reviews. We have therefore included references to reviews on performance by other authors, which included LMIC. These were the following reviews:


We have referred to these reviews in the introduction (p. 4) and we have included a comparison between these reviews and our review in the discussion, and added the following text (p.19/20): as cited above “This
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<th>Consideration why results are so similar in such different settings</th>
<th>As we did not include the review, this was not addressed.</th>
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<td>Considering learning styles and considering human behaviour and reluctance to change- use of expectancy theory is theoretical</td>
<td>The authors agree that the use of expectancy theory is theoretical and might not help readers to better understand how motivation works. We have therefore deleted the text on expectancy theory and more clearly explained the importance of mechanisms bringing about changes in performance that were identified from the published research by restructuring the text of the discussion section(p.17-20).</td>
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Reviewer 2 - main comments were that paper does not achieve its stated aim and that more information is required about the paper’s additional value

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| What does this review add that other excellent reviews such as those by Rowe et al. have not already covered? | The other reviews (and especially the review of Rowe et al.) are indeed of good quality. The main difference between the realist review and the other published reviews is that realist review aims to tease out mechanisms responsible for improved performance so as to build program theories. The other reviews limit their analysis to the outcome of the interventions without systematically considering program theories of change and without contextualizing the interventions. However, three reviews suggest including the context and Rowe et al propose to consider theories for behaviour change to better understand behaviour. In order to more clearly compare this review to the other reviews, we have included in the introduction on p.5, a reference to the different reviews that included HRH interventions in LMIC, adding the following text: “Existing reviews that include HRM interventions in LMIC are limited in number and mainly identified “what works” [4, 6-8], although they acknowledge the influence of the context on the outcome of interventions.” We also have expanded the explanation of realist inquiry on p.4/5 as explained when addressing the next comments of the reviewer (see next comments) Additionally, we have added in the discussion a comparison between the existing reviews and our review, including the following text on p. 20: “This review corroborates the findings of other reviews and demonstrates that there is evidence of positive results of HRM interventions on health worker performance, although it is limited. Other reviews acknowledge the limitations of current research and stress the need to examine the influence of the context on intervention results (Haines, Rowe and Chopra) and to consider theories of behaviour change (Rowe). This review showed that applying a realist perspective to the evaluation of HRM
interventions offers an opportunity to deepen the understanding of HRM interventions as it includes context and mechanisms in the analysis. “

The reviewer’s comments show the authors that the focus and aim of realist inquiry in this manuscript is not clearly explained- we have added in the introduction a clearer explanation of the realist review, by adding the following sentences on p.4:

“Realist inquiry aims to answer the research question “what is it about this program that works for whom in what circumstances” [9:2]. It identifies how interventions produce certain outcomes by exploring through which mechanisms (or processes), triggered by the intervention, change is brought about, and which contextual factors are critical for success or failure. Contextual factors are the circumstances within which HRM interventions are implemented. In addition to the organizational, socio-economic, cultural and political environment, these include the stakeholders involved, their interests and convictions regarding change and the process of implementation [9]. Realist inquiry has an explanatory focus and aims to build theories about mechanisms for change. It might therefore offer a valuable addition to the current evidence-building approaches by expanding the evidence-base with information about which interventions in LMICs are successful in improving performance under which circumstances and for which groups of health workers [2, to be adapted: 7,8]”

In order to be clearer about the different aspects included in contextual factors (as defined in the introduction) we have moved, throughout the section “findings”, the text on implementation aspects and inserted this in the description of contextual factors.

| The results of this paper do not do justice to the stated aim | The reviewer highlights that we are no able to provide an answer to the question “what works in which circumstances”- the reviewer is correct in the sense that the application of the realist review to published literature has its limitations. Although it does provide new information- it does not yet provide full insights to how interventions work- which is mainly due to the information provided in the published studies. In order to match the readers’ expectations with what is feasible when using existing |
| Overall it would be very useful to be presented with a synthesis of the key contextual and intervention factors that could guide policy makers and managers in designing their HRM interventions | We believe that the main contextual and intervention factors have been presented for each type of intervention and throughout the article, based on what could be teased out of the published research. This is then summarized at the start of the discussion. Although it is understandable that the reviewer would like to have a synthesis, the authors believe that the evidence-base of this review is too limited to provide such a synthesis. We have added the following text regarding contextual factors in the discussion section on p.17:
"However, different contexts produced different outcomes. Commonly reported critical implementation aspects that contributed to success could be extrapolated and these were the involvement of local authorities, communities and management, adaptation to the local situation, and the active involvement of local staff to identify and implement solutions to problems. In addition, the studies provide examples of contextual factors influencing the outcome. However, it was not possible to identify patterns in how contexts influenced outcome of interventions due to their limited descriptions and the fact that there were few similar interventions implemented in different contexts.

So as to make the limitations of reviewing existing evidence more explicit the following sentences has been added on p. 20 and two sections of the discussion have been reorganized. It currently reads (p. 20). “Applying a |
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| information, we have added a clearer objective of the article at the end of the introduction (p.5): “It explores if realist review of published primary research provides better insight into the reasons why certain interventions work in certain contexts and not in others.”

We have repeated this aim at the start of the discussion by adding the following sentence (p. 16): "Our review set out to explore whether or not the application of a realist perspective to published research could improve the understanding of how HRM interventions impact on health worker performance through the analysis of the context and the mechanisms that brought about change.” |
realist perspective to published research has its limitations. Apart from limited reporting on the context, the process of implementation and mechanisms, the studies did not explicitly report on the underlying assumptions of how the HRM interventions should bring about change. To better understand mechanisms and to build program theories, these underlying assumptions need to be revealed and evaluated [57]. In addition, the published interventions were often evaluated at different levels (output, outcome or effect) and with different indicators, making it difficult to compare them. Because of the limited information and the missing link between evaluation and underlying assumptions of HRM intervention, these studies contribute to a limited extent to developing insights in how different HRM interventions could lead to improved health worker performance. Therefore this review is not conclusive and needs to be complemented with additional realist evaluation research so as to construct and test program theories so urgently required to assist policy makers in their choice of HRM interventions.

The reviewer is correct when (s)he writes that more information about the context would be needed to guide policy makers. However, this article is only able to provide information about context to the extent that this has been described in the published research, which was very limited. In order to better explain this we have added text on the context in the discussion on p. 17, as explained earlier.

In addition, for those readers, who are interested in the context of each intervention, the authors offer details of the assessment through contacting the first author (refer to page 6).

In fact, the manuscript aims to highlight the limitations of current published research and makes a plea to add realist inquiry to the current evaluations and reviews of HRH interventions, so as to be able to build up more contextualized evidence and to construct and test program theories. This message does not seem to have been clearly enough developed in the manuscript and therefore we have suggested additional text.
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<th>This analysis could provide us with some greater insights as to which of the interventions (supervision, training or strong management) are more important or under which circumstance do certain types of interventions work better and what are the ingredients/contexts that make QI work</th>
<th>We believe that this remark has already been addressed with the above comments and suggested adaptations in the text.</th>
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<td>comparing the realist review to the other reviews as explained while addressing the 1st comment of the reviewer.</td>
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