

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Strategies to evaluate health care provider trainings in shared decision-making (SDM): A systematic review of evaluation studies
AUTHORS	Müller, Evamaria; Strukava, Alena; Scholl, Isabelle; Härter, Martin; Diouf, Ndeye Thiab; Légaré, France; Buchholz, Angela

VERSION 1 – REVIEW

REVIEWER	Shishi Wu Saw Swee Hock School of Public Health, National University of Singapore, Singapore
REVIEW RETURNED	04-Nov-2018

GENERAL COMMENTS	<p>This manuscript addresses an interesting topic regarding healthcare provider training. Overall I think the methods are described clearly in detail. And the analysis of included articles is very structured and detailed. Below are my major comments:</p> <ol style="list-style-type: none"> 1. Is there any reason that you did not search on major medical electronic databases like Cochrane Library or EMBASE? 2. I am still not very clear on why you used the ICROMS tool to assess the quality of the studies. In the discussion, you mentioned that “Of the 31 articles assessed with the ICROMS tool, only 18 articles met the posited minimum quality score and a small number of eight articles additionally met ICROMS mandatory criteria for inclusion in a review”. But in this systematic review, you included all the 34 articles in the analysis, is that right? 3. For now I don’t see major difference between your developed framework and the Kirkpatrick framework. It will be better if you could highlight the differences between the two. 4. And following the 3rd comment, what are the strengths and limitations of applying your developed framework?
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REVIEWER	Jennifer Elston Lafata University of North Carolina at Chapel Hill, USA
REVIEW RETURNED	05-Dec-2018

GENERAL COMMENTS	<p>Training health care providers in the use of shared decision making (SDM) is an important and timely topic. As such, the manuscript, which presents a systematic review of SDM training programs for health care providers, is important and timely. Strengths of the manuscript include its transparent presentation of appropriate and rigorous methods for the review. In particular, the study/article identification process used was comprehensive, and clearly documented within the manuscript. Similarly, the use of the Kirkpatrick and Quadruple aim to organize the evaluation of the studies is a strength. All Tables and Figures are appropriate and</p>
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	<p>supportive of the narrative. An overarching weakness of the manuscript is the organization and (lengthy) writing style used within the Introduction and Discussion sections. Specific concerns are outlined below.</p> <ol style="list-style-type: none"> 1. The Introduction and Discussion sections seem unnecessarily long. The writing within these sections (of paragraphs and sentences within the paragraphs) could be tightened up with points made more concisely. Doing so could enhance the clarity of the writing. 2. I wonder if the content regarding the reasons for the lack of knowledge as outlined within the 2nd paragraph of the Introduction might be better incorporated into the Discussion? 3. The purpose of the manuscript is also quite buried within the Introduction section. The main purpose of the manuscript is to summarize our understanding of the effectiveness of SDM training programs for health care providers. It would be helpful if this idea could be introduced within the first paragraph of the paper. 4. I struggled to understand the study aims as stated in the fourth paragraph. It is not until the Discussion section that what is meant by “strategies” is defined for the reader. 5. It was not apparent to me how the systematic review informed the development of the proposed framework. I wondered if the evaluation framework instead should be presented early in the manuscript (e.g., in the Methods) and thus serve as a guiding framework for the approach and organization to the review? 6. Just as the purpose of the manuscript is quite buried within the Introduction section, the key points of the Discussion section are equally buried. Many specific (detailed) findings are repeated with the more overarching, summary statements a bit lost. 7. The 6th paragraph of the Discussion section (page 24) seemed to be of particular importance and forward looking, yet it comes late in the Discussion. 8. There are a few sentences that I could not understand, and thus would suggest they be rewritten for clarity. For example, in the Summary: “We omitted analysis of evaluation strategies regarding a match between training contents and evaluation outcomes” <p>Minor concerns:</p> <ol style="list-style-type: none"> 9. There are a couple of places where references seem to be needed. On page 1, there is a statement about how SDM trainings revealed that less than 25% of recognized SDM trainings had published evaluation that warrants the addition of a reference. Similarly, on page 23 there is statement about participants’ reactions needing to be favorable for training to be effective. 10. There is not really much discussion of the patient samples or how these are used. 11. I did not understand the solid vs. the hollow triangles used in Tables 4 and 5. Can the footnote be edited for clarity? 12. The footnote pertaining to superscripts 1-5 in Tables 4 and 5 is omitted.
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1 (Reviewer Name: Shishi Wu)

„This manuscript addresses an interesting topic regarding healthcare provider training. Overall I think the methods are described clearly in detail. And the analysis of included articles is very structured and detailed. Below are my major comments:“

- Thank your for your feedback, which we have addressed in our manuscript and to which we will reply here.

„Is there any reason that you did not search on major medical electronic databases like Cochrane Library or EMBASE?“

- Yes, the reason is that our university medical center in Hamburg does not have access to EMBASE database. We chose to search the less popular database CINAHL instead to find articles reporting on studies examining trainings for nurses and other allied health professionals.

„I am still not very clear on why you used the ICROMS tool to assess the quality of the studies. In the discussion, you mentioned that “Of the 31 articles assessed with the ICROMS tool, only 18 articles met the posited minimum quality score and a small number of eight articles additionally met ICROMS mandatory criteria for inclusion in a review”. But in this systematic review, you included all the 34 articles in the analysis, is that right?“

- We used ICROMS because it allowed us to assess the quality of diverse study designs, including qualitative studies. We used ICROMS only to assess quality, not to decide upon inclusion in the review, because our aim was to analyze evaluation strategies and outcomes, not to integrate study results. It is correct that we were able to assess only 31 (now 38) articles with the ICROMS tool. The three articles, which were not assessed with ICROMS, were post-test studies and ICROMS does not include criteria for this kind of study. We agree that this is not clearly described in the manuscript and added this information in the „Quality results of the ICROMS tool“ section.

„For now I don't see major difference between your developed framework and the Kirkpatrick framework. It will be better if you could highlight the differences between the two.“

- As the framework is based on Kirkpatrick's evaluation model, the difference between the two frameworks is admittedly not big. The evaluation framework can be seen as a specification of the Kirkpatrick model for the context of evaluating HCP trainings in SDM. We rewrote large parts of the manuscript and introduced the framework in the methods section.

„ And following the 3rd comment, what are the strengths and limitations of applying your developed framework?“

- We added limitations and strengths of the framework in the article summary “strengths and limitations” section.

Reviewer: 2 (Reviewer Name: Jennifer Elston Lafata)

Training health care providers in the use of shared decision making (SDM) is an important and timely topic. As such, the manuscript, which presents a systematic review of SDM training programs for health care providers, is important and timely. Strengths of the manuscript include its transparent presentation of appropriate and rigorous methods for the review. In particular, the study/article identification process used was comprehensive, and clearly documented within the manuscript. Similarly, the use of the Kirkpatrick and Quadruple aim to organize the evaluation of the studies is a strength. All Tables and Figures are appropriate and supportive of the narrative. An overarching

weakness of the manuscript is the organization and (lengthy) writing style used within the Introduction and Discussion sections. Specific concerns are outlined below.

- Thank you for your detailed feedback on the manuscript. We followed your suggestions and think the manuscript has improve after the revision.
1. The Introduction and Discussion sections seem unnecessarily long. The writing within these sections (of paragraphs and sentences within the paragraphs) could be tightened up with points made more concisely. Doing so could enhance the clarity of the writing.
 - We rewrote and especially shortened paragraphs and sentences in the introduction and discussion sections and made some changes in the methods and results sections.
 2. I wonder if the content regarding the reasons for the lack of knowledge as outlined within the 2nd paragraph of the Introduction might be better incorporated into the Discussion?
 - In the process of rewriting the manuscript, we deleted this part of the manuscript.
 3. The purpose of the manuscript is also quite buried within the Introduction section. The main purpose of the manuscript is to summarize our understanding of the effectiveness of SDM training programs for health care providers. It would be helpful if this idea could be introduced within the first paragraph of the paper.
 - We agree with you and rewrote the aims in the introduction section to clarify our point. We introduced our motive: to understand how evaluation strategies of HCP trainings in SDM account for a lack of evidence.
 4. I struggled to understand the study aims as stated in the fourth paragraph. It is not until the Discussion section that what is meant by “strategies” is defined for the reader.
 - We understand your point and explained what we mean by “strategies” in the aims paragraph of the introduction.
 5. It was not apparent to me how the systematic review informed the development of the proposed framework. I wondered if the evaluation framework instead should be presented early in the manuscript (e.g., in the Methods) and thus serve as a guiding framework for the approach and organization to the review?
 - We followed your suggestion and introduced the framework in the methods section of the manuscript. Only the subcategories of the framework were informed by the work of this review and the analysis of evaluation outcomes.
 6. Just as the purpose of the manuscript is quite buried within the Introduction section, the key points of the Discussion section are equally buried. Many specific (detailed) findings are repeated with the more overarching, summary statements a bit lost.
 - We rewrote and rearranged the discussion to make clear statements.
 7. The 6th paragraph of the Discussion section (page 24) seemed to be of particular importance and forward looking, yet it comes late in the Discussion.
 - Thank you for this feedback, we rewrote large parts of the discussion to follow your remarks.
 8. There are a few sentences that I could not understand, and thus would suggest they be rewritten for clarity. For example, in the Summary: “We omitted analysis of evaluation strategies regarding a match between training contents and evaluation outcomes”
 - We rewrote the sentence you mentioned and generally aimed to make our statements more concisely.

Minor concerns:

9. There are a couple of places where references seem to be needed. On page 1, there is a statement about how SDM trainings revealed that less than 25% of recognized SDM trainings had published evaluation that warrants the addition of a reference. Similarly, on page 23 there is statement about participants' reactions needing to be favorable for training to be effective.
 - We added according references.
10. There is not really much discussion of the patient samples or how these are used.
 - We considered your observation and agree that the patient samples were hardly discussed in the manuscript. Since the information of the patient samples adds hardly any information to the topic of our manuscript, we reduced the information on patient samples in Table 2 to the use of patient samples in the studies and the reported number of participating patients. Since patients were sometimes used to evaluate the SDM training, we considered it important to report on these samples.
11. I did not understand the solid vs. the hollow triangles used in Tables 4 and 5. Can the footnote be edited for clarity?
 - We deleted the hollow triangles and summaries on study level from the tables to display the new data from articles identified in the update.
12. The footnote pertaining to superscripts 1-5 in Tables 4 and 5 is omitted.
 - We included the footnotes in Tables 4 and 5, and will check they can be seen on the pdf proof.

VERSION 2 – REVIEW

REVIEWER	Jennifer Elston Lafata UNC, Chapel Hill, USA
REVIEW RETURNED	15-Apr-2019

GENERAL COMMENTS	<p>The authors have been highly responsive to the prior reviews. They have updated the literature included in the review and have clarified both the aims of the review as well as its implications. I continue to find this a well done systematic review that makes important contributions to the literature. While the Discussion section does include a discussion of the void in consensus regarding and thus measurement of SDM behaviors, I was surprised that this point was not explicitly reiterated in the summary paragraph at the bottom of page 19. Do we even know if these training programs were training clinicians to do the same thing? Perhaps the authors could use the same literature to systematically describe how clinician training in SDM is being approached (albeit when it is being evaluated) for a second paper.</p> <p>I think there is a typo on page 18, line 50. Should the first instance of "Training" really be "Understanding?" or perhaps "Measuring?"</p>
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