PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Reducing complexity of patient decision aids for community-based older adults with dementia and their caregivers: multiple case study of Decision Boxes
AUTHORS	Bilodeau, Gabriel; Witteman, Holly; Legare, France; Lafontaine-Bruneau, Juliette; Voyer, Philippe; Kröger, Edeltraut; Tremblay, Marie-Claude; Giguere, Anik

VERSION 1 - REVIEW

REVIEWER	Christine Stirling University of Tasmania Australia
REVIEW RETURNED	26-Nov-2018

GENERAL COMMENTS	This is an important topic and a worthwhile study, with an appropriate method.I find the paper though to be unbalanced in structure, with a very short background section and discussion section, but a very long results section resulting in a lack of clarity over the key points (though these are quite well articulated in the abstract). The authors aim to highlight the key features that create decision aid complexity for people with dementia and their carers and use a health literacy theory framework. However, the discussion does not bring this information to a 'point' nor link back to the theory. The background information does not do enough to establish what is known about understanding or simplifying complex information, which means that the discussion does not revisit this topic, meaning the paper falls short of establishing the outcome. This leaves the paper currently to be a description of feedback about one decision aid (or 5 Dboxes) and does not sit the information within a field of knowledge. I advise increasing the background content about other relevant Decision aids (for example other driving decision aides), plus known factors of good design, and then revisiting this in the discussion/conclusion in order to increase the relevance of the results. For example, what would the authors say about using GRADE scales for future studies? The study results could be shortened which would help with highlighting the key points. A small point - The description of the acronym for Dboxes is introduced after it has already been used in the document in line 49 page 5.

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REVIEWER	Andrew Kirk University of Saskatchewan, Canada
REVIEW RETURNED	27-Nov-2018

GENERAL COMMENTS	Bilodeau et al describe a study of patient decision aids which were reviewed by the target audience and thereby improved. I welcome this study as it's clearly important that decision aids be appropriate for their intended audience and this is especially important for those with dementia whose understanding may be impaired. My main suggestion concerns the title. I found it a bit hard to understand and, even after reading the paper a couple of times, I'm not sure that it really describes what was done. I think it'd be helpful if the authors gave their title a bit more thought to aim at clarity. I wonder about something like, "Features of patient decision aids that make them less complex.." or "Reducing complexity of decision aids..." etc. A good proofreading would be helpful as there are a few typos, such as "ensue" for "ensure" and the wording is occasionally a bit awkward. There were a few places where the authors mentioned that some changes were made to the final version of the decision aids that were not reviewed by the target audience. I feel it would add to the study if these "final" versions were reviewed too. Overall, however, I feel this is a helpful study in an important area.

VERSION 1 – AUTHOR RESPONSE

Reviewer reports:

Reviewer 1: Christine Stirling, University of Tasmania (Australia)

2. I find the paper though to be unbalanced in structure, with a very short background section and discussion section, but a very long results section resulting in a lack of clarity over the key points (though these are quite well articulated in the abstract).

*Response: Thank you for this important comment. We had initially submitted our manuscript to the BMJ journal, which limits the length of the Discussion section. To improve the current manuscript, we added some elements to enrich the Introduction and the Discussion Sections. More information on the modifications that we made are described in our answers to comment #4. Moreover, to improve clarity over the key findings of this project, we added an explicit statement to help readers identify our proposed features and strategies to limit complexity and improve user experience (Results, Factors influencing adoption of shared decision making, 2np paragraph): “A detailed description of these features and strategies are also listed in (Table 2).”

3. The authors aim to highlight the key features that create decision aid complexity for people with dementia and their carers and use a health literacy theory framework. However, the discussion does not bring this information to a 'point' nor link back to the theory.

*Response: The current work contributes to increase our knowledge on the design of "health-related stimuli" described in the framework, to reduce their demand and allow a better understanding of the

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message conveyed. To highlight this contribution and link back to theory, we added a sentence in the Discussion (Discussion, Relation to other Studies Section): “Our findings also provide new evidence on the factors potentially influencing the health literacy demand of a stimulus, recognized in the Health Literacy Skills Framework as influencing comprehension of the message. Our practical descriptions of content and visual design features of health-related stimuli allow shifting the focus away from the person targeted, towards improvement of the stimuli to reach wider audiences.”

4. The background information does not do enough to establish what is known about understanding or simplifying complex information, which means that the discussion does not revisit this topic, meaning the paper falls short of establishing the outcome. This leaves the paper currently to be a description of feedback about one decision aid (or 5 Dboxes) and does not sit the information within a field of knowledge. I advise increasing the background content about other relevant Decision aids (for example other driving decision aids), plus known factors of good design, and then revisiting this in the discussion/conclusion in order to increase the relevance of the results. For example, what would the authors say about using GRADE scales for future studies? The study results could be shortened which would help with highlighting the key points.

* Response: We added information to describe more the evidence that already exists on the design strategies of decision aids to limit their health literacy demands (Introduction Section, 3rd paragraph): “An earlier systematic review described some features of patient decision aids to support understanding and values clarification in adults with limited health literacy skills, namely presenting essential information more prominently, adding videos to verbal narratives, presenting numerical information (1) in tables or pictographs (2) with the same denominator and (3) using higher numbers to display improvements.[17] Health communication research also suggests several features to limit the complexity of health information, such as simple language and the use of pictures,[18] and presenting actionable health information.[19,20] However, no decision aid feature is known to support communication between adults with limited literacy and their healthcare professionals.[17] There is also a lack of evidence regarding the features of decision aids to communicate uncertainty to adults with limited literacy,[21] and health literacy is still rarely considered in the literature to date.[17]”

We also linked back to some of this evidence in the discussion, especially concerning GRADE ratings (Relation to other studies Section, 3rd paragraph): “Future research should look into how GRADE ratings are understood by patients, and how they influence patient preferences.”

We also added information on the evidence available on information tools available for older adults living with dementia in the Discussion (Relation to other studies Section): “In one study, they added a tutorial regarding study design and the strength of evidence to the patient decision aid, due to limited high-quality evidence regarding the proposed options.[24] In the other, they specified revising the printed decision aid to a sixth-grade reading level, and sizes 16 to 20 font,[23] which agrees with our proposed features. Other web-based support tools for this population have been studied, but did not qualify as patient decision aids.[43–45] For example, the FIT and DEM-DISC tools addressed a major gap, by helping caregivers of older adults living with dementia in clarifying their most pressing needs and identifying supportive products and services meeting to meet those needs.[43,44] This converges with the current study findings that patient decision aids for this population should provide a list of the available resources to support users in their implementation of the selected option. Interestingly, among the three designs evaluated for FIT, caregivers and healthcare professionals appreciated the exercise that used ticking of checkboxes the most, as it was more familiar to them and allowed people to view all the choices at once.[43] Another such tools worth mentioning is the web-based DecideGuide that served to support communication and step-by-step shared decision-making among the network of people involved in the care of the person living with dementia.[45] However, most of the challenges reported by users of the DecideGuide concerned web-based and interactive aspects of the tool, and are not applicable to a printed patient decision aid.”

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Lastly, we chose not to reduce the Results Section, as we did not find any way to do this without removing some important findings

5. A small point - The description of the acronym for Dboxes is introduced after it has already been used in the document in line 49 page 5.

*Response: The description of the acronym for Dboxes was added at first mention, in the Introduction (3rd paragraph).

Reviewer 2: Andrew Kirk, University of Saskatchewan (Canada)

6. My main suggestion concerns the title. I found it a bit hard to understand and, even after reading the paper a couple of times, I'm not sure that it really describes what was done. I think it'd be helpful if the authors gave their title a bit more thought to aim at clarity. I wonder about something like, "Features of patient decision aids that make them less complex.." or "Reducing complexity of decision aids..." etc.

*Response: Please see our response to the first comment here above.

7. A good proofreading would be helpful as there are a few typos, such as "ensue" for "ensure" and the wording is occasionally a bit awkward.

*Response: We revised the text to correct any awkward or incorrect wording.

8. There were a few places where the authors mentioned that some changes were made to the final version of the decision aids that were not reviewed by the target audience. I feel it would add to the study if these "final" versions were reviewed too.

*Response: Since the manuscript submission, we collected more feedback from older adults on the final Decision Box template, and we were able to confirm our final decisions made to improve content and design. We thus chose to remove any mention to a lack of validation of the final design in the revised manuscript.

VERSION 2 – REVIEW

REVIEWER	Christine Stirling University of Tasmania Australia
REVIEW RETURNED	01-Mar-2019

GENERAL COMMENTS	This paper revision has resulted in a useful paper with new knowledge on decision aid design for people with dementia, and provides a useful strategy for future decision aid testing. Note apostrophe misplaced line 20 page 1, and lines 5-10 on page 22 are bolded with a misplaced heading

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