Author's response to reviews

Title: Effects of patient health literacy, patient engagement and a system-level health literacy attribute on patient-reported outcomes: a representative statewide survey

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Author's response to reviews: see over
Thank you for the opportunity to revise our paper, now entitled “Effects of patient health literacy, patient engagement and a system-level health literacy attribute on patient-reported outcomes: a representative statewide survey.” We greatly appreciate the comments of the reviewers. Below we provide detailed responses to the comments.

Reviewer 1

I have no revisions to suggest. This is a well written paper that clearly identifies related studies and adds to our understanding of health literacy in terms of aspects of health care organizations. The major limitation (which is really a limitation in a lot of studies using cross sectional data) is that it is possible that patients who want to learn more from their doctors have already sought out practices that treat them respectfully and that is why there is a relationship between self-reported learning and good front desk experience. However this limitation is noted in the discussion.

Response: We thank the reviewer for this comment and agree that this is an important issue with our study design as noted on p. 13.

Reviewer 2

Like all research, this study is not without limitations. The most significant limitation in this case may be the use of the “front desk staff” questions as measures of system-level health literacy. As the authors note, there is very little guidance in the literature on how the concept of system-level health literacy should be measured – certainly much less than there is on how to measure health literacy at the individual level – so that any choice the authors made to operationalize this concept required them to do something novel. This limitation of the paper therefore reflects a lacuna in the collective body of work on this topic rather than a weakness that is specific to this study. Nonetheless, I felt that the choice of the front desk variable could have used at least some more explanation. I found myself wondering whether this variable was chosen “after the fact” in the sense that the survey was conducted before the analysis was designed, and the “front desk staff” questions were the closest thing to a measure of system-level health literacy. Thinking more broadly, if one was conducting a survey with the explicit goal from the outset of measuring system-level health literacy, what questions would get at this? I wanted more discussion along these lines to help me understand the choice of measure and to persuade me of its face validity as a measure of system-level health literacy.

Response: We thank the reviewer for her in-depth thinking on this issue and this was a question we grappled with as well in the design of the study. While we selected the front desk staff items in order to measure one aspect of the health care system health literacy environment, we did not intend to indicate that the front desk staff items captured all system-level health literacy attributes. We have revised the statement of our research question on p. 5 to reflect that we see front desk experience as one
attribute of a health literate health care organization (lines 7-8). We also made this change to our statement of the summary of the findings (p. 12, lines 2-5, line 9; p. 15, lines 14-21) and to the abstract (p. 2, lines 3-7; p. 3, lines 4-9). Finally, we added an explicit statement to the limitations section that the front desk experience variable captures only one aspect of the attributes of a health literate health care organization and that validated measures of the attributes defined by the IOM are needed.

I also found the role of the “brought questions to the visit” variable somewhat confusing. In the bivariate and multivariate analyses it is presented on equal footing with the system and patient health literacy measures (in fact, it is listed between them in the listing of covariates) and so it took me a while to figure out whether it was intended as an additional measure of literacy, a control variable, an outcome, or what. After reading the paper twice, I have concluded that it is included as a key control variable to measure patient engagement which might otherwise bias the results on the individual health literacy measure (similar to the work on patient activation by Greene et al. 2005 or Smith et al. 2013). I feel that this could be explained more clearly at the outset in the paper, with a stronger link upfront to the literature on patient engagement and/or activation.

Response: We apologize that we were not clear in our description of this variable. We have revised the Methods section to more clearly state that we assessed three predictor variables, and that patient engagement through question asking was one of these variables (p. 7, lines 6-12). We have also more clearly and separately listed the covariates (p. 7, lines 18-22). We have added the suggested citations from the reviewer to distinguish the constructs of individual health literacy skills and patient engagement and activation (p. 5, lines 7-8). In addition, in the Discussion, we revised our description of the role of the patient question asking variable in our summary of the findings (p. 12, lines 2-5; p. 15, lines 14-21) and to the abstract (p. 2, lines 3-7; p. 3, lines 4-9).

The bottom line
Overall, I believe that this paper represents a useful inquiry in a novel area. The paper could be strengthened with some revisions (listed below); once revised, it will be a useful reference for future investigators interested in further exploring the importance of individual versus system level health literacy.

Response: We have made the suggested revisions, as described in detail above and below.

References

Response: We have added the suggested citations to clarify the distinction between individual health literacy skills and patient activation and engagement as suggested by the reviewer.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

- None.
- Add citations to the literature on patient engagement/activation to support the “bringing questions” variable.

Response: We have added the suggested citations to clarify the distinction between individual health literacy skills and patient activation and engagement as suggested by the reviewer.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

- Please explain in the text why the overall sample sizes differ between Tables 1, 2, and 3 (presumably this is due to item nonresponse?).

Response: We have clarified in the text of the Methods that observations missing values for a variable were not included in analyses using that variable (p. 9, lines 6-7), which led to the different sample sizes between tables.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

- Please expand the discussion of measuring system-level health literacy along the lines suggested above
- Please clarify the analytic role of the “bringing questions” variable as discussed above.

Response: As detailed above, we have revised the paper based on the reviewer’s thoughtful comments.