Reviewer's report

Title: Development and psychometric properties of the team-scale for measuring interprofessional collaboration from a patient and health care professional perspective

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Reviewer: Antje Hammer

Reviewer's report:

Teamwork has become an important aspect in recent quality improvement and patient safety research. For this reason I consider the manuscript “Development and psychometric properties of the team-scale for measuring interprofessional collaboration from a patient and health care professional perspective” as innovative and important, especially to those with closely related topics. The purpose of the paper is well defined, the methods are appropriate, the data is sound and overall the manuscript adheres to the relevant standards for reporting psychometric properties. However, I have a few concerns and suggestions for major and minor revisions.

Major compulsory revisions:
Prior to publication I would like to ask the authors to elaborate on the following issues. I have only a few suggestions for major revision.

1. I am a little concerned about using a short scale, because teamwork climate is a very complex construct (see review Valentine 2012) and the use of short scales is debated in health care research: To what extent does a short 6-item questionnaire on teamwork allow meaningful assumptions? However, using short scales has advantages as well, especially if they are to be included in more comprehensive surveys. Therefore, I recommend to further elaborate your reasons for developing this short scale and the advantages of using it. You only raised it very briefly in the discussion, but simultaneously you give a lot of reasons against using the scale in your second point of the limitations.

2. In relation to this, I wondered about the selection and wording of the single items. As I understand from the authors the team scale was newly developed. But in how far have the single items been adapted from the variety of teamwork measures still available in international contexts. Your argumentation clarifies the selection of the aspects communication, coordination and respect, but it does not substantiate the selection and wording of items itself.

3. Please provide some reasons for questioning patients about team climate. Since the patient questionnaire accounts for almost half of the paper, I wondered if there is evidence on how far patients are capable to assess teamwork of professionals. What have been your reasons to include the patients’ point of view? What is the benefit of using the patients’ perspective? My request especially relates to a) the number of missings in case of item 5 and 6 and b) the
higher ratings throughout the scale items in the patient questionnaire. The first point has been raised briefly in the discussion, but the second has not.

Minor essential revisions:

4. IMPORTANT: Carefully check the results of table 5 with the results described in the text (p. 11). They do not match: According to the table the range is .377 to .733 for patients and .369 to .686 for staff.

5. Background and Instruments: The detailed explanation on internal and external participation as well as the relatively extensive description of the concept of shared decision making initially misled my expectations in regard to the paper. I would suggest shortening these paragraphs and focusing on your reasons for mentioning these concepts, namely the purpose of analyzing discriminant and convergent validity.

6. In relation to my first comment, I wondered about the difference between the scales on workplace atmosphere/climate and leadership on the one hand and the self-compiled scales on clinic and leadership culture on the other hand (p 8.). Do these scales differ enough to reasonably use all four of them to test convergent validity? Moreover, in this paragraph you shift from staff to patient and back to staff questionnaire, which makes it difficult to follow the argumentation.

7. Methods: Did you send out reminders in order to increase the response rates? If yes, please give a brief description or state that patients and professionals have been contacted only once.

8. Statistics: Please indicate criteria or cut-off values (inclusive quotations) for ALL statistics used in the paper (e.g. Criterion for the corrected item total correlation is stated in the results, but not in the methods; Criterion for acceptable Cronbach’s alpha is not mentioned; criteria for excluding cases due to missing data, which is mentioned in the sample characteristics of staff, but not in the methods).

9. Instrument (p. 6/7) and table 1: The order of items in the text is different from the order of items in the table, which is kind of confusing when following the argumentation. Moreover, I would suggest to use the term working climate (as used in the text) instead of only climate (as used in the table and figure 1) in order to distinguish for example from patient safety climate.

10. Characteristics of team scale for subgroups (and table 6): Please explain your reasons and the purpose of presenting subgroups results within the method part.

11. What’s the reason for using different age groups for patients and staff (table 6)?

12. Please discuss the normed chi² value for the patient sample (Model fit and table 7), because the value exceeds the recommended value of 2.5 (Bollen et al. 1989). This is not a good-to-excellent model fit, as you described (consider also point nr 8).

13. Limitations: To what extent are the scale characteristics not transferable across translation?
Discretionary revisions:

14. Because this is not essential for the purpose of the paper, I would recommend skipping the information about translation of the items. Anyway, I wondered what the authors are going to do in case international researchers are interested in using the scale, because your translation was developed only for the purpose of articles and conference presentations. This decision is up to the authors, but due to the possibility of high interest in the scale, I would suggest to perform a standardized translations process (back and forward translation which each 3 native speakers).

References:


Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

In 2011 I published a paper about psychometric properties with Markus Wirtz, who supported me with his statistical expertise. I know both authors in person, but neither Mirjam nor Markus are related to any of my current projects.