Reviewer's report

Title: Development and initial validation of the Patient Safety Practices Questionnaire

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Reviewer: Rachel Davis

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Re: Development and initial validation of the Patient Safety Practices Questionnaire
(Reviewed by Dr R. Davis, UCL, CORE)

Thank you for the opportunity for reviewing the above article. I enjoyed reading the article, found it very interesting and it is certainly a very timely topic of investigation within the patient safety field. I feel the article is very suitable for the BMJ Quality and Safety audience and is well written. I do however have some specific suggestions on how I feel it could be improved, all of which I feel should be minor essential revisions and are listed below in Section One of this report. My overall assessment of the article in terms of interest and value is provided in Section Two.

Section One. Minor essential revisions

Abstract

1. You state that acceptable levels of internal consistency were found but looking at the results only ‘adequate’ levels were demonstrated for some of the domains – I suggest rephrasing this slightly

2. Please state the behaviour you are examining in the questionnaire (using pH as the first line method for checking position of ng tube) rather than saying ‘one specific behaviour’

3. Please provide levels of discriminant validity and internal consistency

4. This is only a small point but you use the terms ‘professional’ and ‘practitioner’ interchangeably and I would suggest for consistency you just use the term healthcare professional (HCP)

5. Conclusion (I am being picky with this one!) - you say a reliable questionnaire has been developed for measuring professional patient safety behaviours but you only present findings (in the paper) in relation to one behaviour. While in the next sentence you do acknowledge that further work is required to assess the relevance of the questionnaire to other behaviours I would suggest rephrasing these sentences slightly because at present its seems a little contradictory.

6. Keywords – suggest changing ‘behavioural change’ to ‘behaviour change’ - also suggest including ‘patient safety’
Introduction/background

1. First sentence ‘there is substantial evidence of unsafe care…’ – I don’t feel the reference is really supports this point strongly enough – I suggest citing some of the major studies on adverse events in healthcare


2. Perhaps a stylistic point but personally I would not put ‘etc’ in the sentence – I suggest removing and just saying ‘harms resulting from unsafe care such as’

3. Sentence beginning ‘this limits the extent to which accurate…’ – there is a typo and ‘the’ is used twice

4. Ref 7 – this is a great reference! Might also be worth citing Michie et al’s paper ‘Making psychological theory useful for implementing evidence based practice’ and mention the overlapping nature of many constructs in the different theories

5. You state how the TDF was developed but I feel it might be worth stating that the aim was to simplify and integrate a plethora of behaviour change theories and make theory more accessible to, and usable by, other disciplines

6. You state the TDF has been used to develop a handful of questionnaires examining barriers to health behaviours - I think it would be worth citing the below study and how your paper adds to this’

- Francis et al. Using theories of behaviour to understand transfusion prescribing in three clinical contexts in two countries: Development work for an implementation trial, Imple Scie, 2009

7. Ref 12 seems to be in the wrong place?

8. Although I do not feel this is essential it would be worth discussing briefly how your questionnaire would fit into the wider context of investigating HCPs safety practices and cite some of the other research that has been done in this area, - I suggest worth looking at Sexton’s website where he has a number of questionnaires:

Examples of surveys

- Safety Attitudes Questionnaire – Short Form
- Safety Attitudes Questionnaire – Teamwork and Safety Climate
- Safety Attitudes Questionnaire – Ambulatory Version
- Safety Attitudes Questionnaire – ICU Version
- Safety Attitudes Questionnaire – Labor and Delivery Version
- Safety Attitudes Questionnaire – Operating Room Version
- Safety Attitudes Questionnaire – Pharmacy Version

Development of the PSPQ

1. You state the TDF has 11 domains but considered in terms of the reference you cite it actually has 12. I know in a later paper (Cane et al. ‘Validation of the TDF for use in behaviour change and implementation research’) one of these domains was removed (nature of behaviours) and I also note that this domain is not included in your paper so I assuming this is why you mention 11 and not 12? However in the paper I refer to (Cane et al) 3 of the domains were split into 6 domains leaving 14 domains in total so it seems you have used both papers (Michie et al 2005 and Cane et al 2012) in part to inform your work? I think it would be worth clarifying this here.

2. In the ‘identifying target behaviour section’ you say you are focussing on just one behaviour but then in this section (dev of PSPQ) you discuss 3 different pt safety behaviours (in relation to ngs, titraing midazolam and bloods for gentacimin patients). You only report the methods of your main sample and your results in relation to NG’s. I would suggest removing reference to the other behaviours so that the paper just focuses purely on NG’s (and perhaps if you really want to just saying that the items were developed in relation to three areas of safety but you are just focussing on one here) – I feel reporting items in relation to both NGs and Midozolam in Figure 1 makes it a bit confusing for the reader as you only report findings in the main results in relation to NG positioning.

3. Please provide info on the professions of the 16 staff you questioned

4. You say the items were both positively an and negatively phrased but then go on to say that a higher mean score indicates a stronger barrier – presumably some of the items were reverse scored then? Please explain this a little more

5. You say a team consisting of clinical and behaviour change specialists commented on the face validity of the items – how many in the team? – what professions?

6. The 15 HCPs that commented on the draft- were they doctors or nurses or dieticians? etc

7. I would like to see a full list of the survey items in Figure 1 – personally I found this study very interesting and in order for it to be of most use and for others to
use the questionnaire I feel a full copy of the Qs should be made available

Participants and procedure
1. How many hospital wards did you collect data across?

Data analysis
- Include the first author ‘Hooper’ in the sentence on the ‘guidance of testing a model fit’ as you do this lower down for refs 24-26
- No further comments on this section as the analysis was appropriate and use of stats – FA commonly use for survey development.

Results
1. I would include absolute frequencies as well as percentages for sample
2. With regard to selecting model fit statistics to report, it is good that you have not just reported the statistics that estimate the best fit, but instead have also included other important results – e.g RMSEA
3. Your RMSEA value of 0.6 for the second model is acceptable so may be worth citing ref for this
4. Same point for GFI
5. Under section titled internal consistency reliability I would delete ‘reliability’ – seems a little redundant because we already know from words internal consistency that we are talking about reliability
6. Table 2 – I don’t think you need this – you could just have a sentence in the results reporting these findings

Discussion
1. You say in the discussion that the findings resulted in good construct validity discriminant validity and internal consistency – I would argue that your internal consistency was not good
2. I would also argue that yours is not the first study to examine barriers to practitioner behaviour change – there are other studies on this so suggest toning this statement down a little or making it more specific to what you were looking investigating.

Conclusion
1. You say in your conclusion that PSPQ can be used in research but you do not include a copy of this in the paper
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:

I declare that I have no competing interests