Reviewer’s report

Title: Preventing stress-related ill health among newly registered nurses by supporting engagement in proactive behaviors: Development and feasibility testing of a behavior change intervention

Version: 2 Date: 08 Nov 2017

Reviewer: Barbara Antunes

Reviewer’s report:

This study addresses an important topic, however, there are some issues that need to be taken into consideration in order to make this paper more robust. I hope the authors find these comments useful.

Keywords

I would suggest to add "stress-related ill health"

Background:

I suggest that the authors provide a definition for the term "stress-related ill health", somewhere before "Study objectives", given that the aim of this study is to prevent this event from happening and also because the term can take many forms, e.g.: burnout, distress, physical stress, work-related ill health, strain. From the readers´ point of view, the definition should be stated for clarification.

Page 5 lines 120 to 122: The reference for the mentioned review of interventions for preventing stress-related ill health among new registered nurses is missing.

Intervention:

I fail to understand the methodology for data analysis for the semi-structured interviews. Who conducted the interviews? Were these experienced interviewers? Was this face to face? How was data recorded? With a digital voice recorder? Written notes? A combination of different recording techniques? Were the data transcribed verbatim? By whom? Were these transcribers experienced? In relation to data analysis was this done independently by more than one researcher? How was consensus of final analysis obtained? What methodology was used to reduce the data to its final topics "antecedents", "consequences", "behaviours"? Content analysis maybe? Given that authors had pre existing topics when conducting the semi-structured interviews? Authors mention functional analysis, but when I read it my interpretation is that this has to do with the relationships between stimuli and responses, meaning, what triggers the
behaviour (psychology theory). So I don't see this as methodology to properly analyse qualitative data, but more like the theory used to make sense of the data collected. Also for each Panel in Figure 1, I would like to see a transcript as an example of the data collected which let to that result, as this is considered to be good practice when conducting qualitative research. By providing transcripts you give the reader some insight about the data collected and a better understanding of the rational of how you got to the results.

As for the intervention itself (page 10), I would like to see a more in-depth description of what was actually proposed/suggested to participants in each session, including the homework assignments. Was it just providing information and participants took a more passive role? Or were there specific activities done individually/in small groups/as a whole group? What were they? If I wanted to replicate this feasibility study, I wouldn't be able to do it. Maybe there is a protocol as an annex?

Data collection and analysis

In page 12, line 296 it is stated that self-report measures were distributed using electronic surveys. Regarding the measures, which measures were sent? Are they validated and culturally adapted for the population under study? What are the psychometric properties? In terms of the items' scales, is 1 "no problem" and 5/6 "the worse possible problem"? Or is it the other way around? Or are there some items of each and was this addressed in the analysis? In Table 1 there is a column named "Reference" but I don't see these references in the References' list of the article, so in fact, there is no completed reference for any of the self-report measures used in this study. Tables 2 and 3 provide some psychometric information of these measures, but only for the sample under study.

Regarding the use of electronic survey methodology, a reference to a checklist (somewhat the equivalent of the CONSORT) would be best practice, e.g. Checklist for Reporting Results of Internet E-Surveys (CHERRIES) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4220447/

Results:

This feasibility study had 4 assessment moments, namely Time 0, Time 1, Time 2 and Time 3 (page 12, lines 296-298). I feel that those results are missing, even if it's just descriptive analysis, if it's mentioned in the methods why is this not given in the results? And as a reader, what I'm looking for is the longitudinal stress (primary outcome) results. I want to know of the stress lowered after the intervention and if those results were maintained across time. The authors state that the intervention will be modified because there wasn't enough time to complete the tasks in the manual, but were there differences in the stress levels with the intervention provided in this present study? Would that not inform and help with additional changes to the intervention itself making it more robust to the full scale evaluation, since the intervention was developed within this feasibility study?
Some typos (this is not an exhaustive list):

Page 7, trial design, line 159: where it reads "data was collected" should it read "data were collected" also occurs in page 8, line 182

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