Reviewer’s report

Title: Animal-Assisted Therapy at a University Center for Palliative Medicine - a Retrospective Qualitative and Quantitative Observational Study

Version: 0 Date: 25 May 2017

Reviewer: Sofia Zambrano Ramos

Reviewer's report:

The authors report on the content analysis of protocols written by dog handlers after animal assisted therapy sessions at a German university hospital.

In general, the paper reads clearly and the topic is of interest and adds to the literature on animal companions and palliative care.

However, major changes need to be made to the manuscript before considering it for publication:

1. The study cannot be reported as a "quantitative qualitative observational study".

The study consists of a qualitative content analysis of protocol notes written by dog handlers. No quantitative analyses beyond presenting raw quantities or some medians were performed, therefore the use of the term 'quantitative' is misleading. I do understand that Mayring's approach is both quantitative and qualitative, but the approach is called "qualitative content analysis".

Similarly, the authors state that they employed an "Interpretative Phenomenological Approach following Mayring's model of qualitative content analysis". IPA and Content analysis are two different methodologies, based on different epistemologies, therefore they couldn't have been employed at the same time. In particular because IPA requires in-depth analysis of individual experiences and it is questionable that this type of analysis can be applied to case notes written by a third person on the experience of the patients.

The authors need to limit the description of the methodology to: Qualitative Content Analysis following Mayring's approach.

This change should also have an effect on the "effectiveness and feasibility" statements, since a retrospective qualitative study cannot really provide evidence for feasibility or effectiveness. Please tone down these aspects throughout the manuscript.

Other important modifications are suggested below, section by section:
Introduction:

While there is indeed not enough research on AAT in palliative care, there is literature within the palliative care context that can be reported in this section. The critical review by Chur-Hansen ("Furry and Feathered Family Members—A Critical Review of Their Role in Palliative Care." American Journal of Hospice and Palliative Medicine 31.6 (2014): 672-677.) may be a good starting point to recognise what has been done. Specific articles such as the ones below, and the one by Gottschling that you cite in your discussion could also be useful.


Methodology

- On page 5 the authors state "All three were neither present during the AAT sessions, nor during the dog handlers' written recording of the sessions, thus ruling out possible conflicts of interest or bias. The researchers maintained reflexivity during all stages of research."

Two questions arise: How did the researchers maintain reflexivity? Why would not being present rule out conflicts of interest or bias? These conflicts can still occur during analysis and therefore it would be important to discuss exactly how 'reflexivity' was maintained.

- Page 5 line 140 states that there were two dog therapy teams. On page 6 where the authors explain the composition of the teams, it reads: "Our trained and certified dog assistant therapy team (DATT) consisted of a therapist with background in social work and/or education and a therapy assistant dog."

The composition of the teams should be better explained because it seems they are only describing one and not both teams.

- Line 169 page 7 says that the authors performed 'member checking' in order to enhance trustworthiness. What they did was most likely triangulation. In qualitative research 'member check' means that the results are sent back to participants in order for participants to corroborate whether the results still represent their views. An author of the manuscript who was neither a patient, nor the animal therapist, cannot have made member checking
because this process does not ensure that the participants' voice remains in the study. Please revise and modify accordingly.

Results

- Please explain in table 2 (AAT structure modified according to Gottschling) Did Gottschling modify it or did you? If it was originally by Gottschling and modified by you this needs to be clarified.

- The authors mentioned that in some sessions there were family members. Was family participation also analysed in the results? Also, did the authors observe any differences between the dog therapists, since there were two different teams? In the discussion they report that the written protocols were different per therapist, how does this affect the results?

- The result of the inter-coding reliability, currently on page 8, would fit better in the methodology section than in the results section.

- 'Experience with dogs' seems more relevant as a description of the sample, than as a category on its own. Unless these personal experiences of having had a dog made a difference on what was observed, I'd suggest it is added to the 'patient characteristics' section.

- Page 10 lines 273 and 274 mention negative effects but without any further elaboration. Could the authors provide some examples of this?

- "discontinuation" and "patient motivation" need to be further developed. Pointing to a 50-page table is unacceptable. No meaningful aspects of the data can be observed. Not only it is too long, but the cells cannot be seen next to each other. It will be more meaningful to have the 5 or 6 final categories and some examples next to them.

- Can symptom burden be classified under effects? It is unclear whether the burden was already there or whether it was a product of the session.

Discussion

- There should be no results presented in the discussion section. There are several instances, e.g. page 12 lines 317 onwards, where participant numbers are given. This should only appear in the results section, unless there is a very specific and unique purpose to use it and they are used sparingly. Please revise.
- Please tone down the language in this section too: e.g. feasibility, or in Line 322 "whether it might be associated" your study does not present associations. It is purely a qualitative study.

Other recommendations

- When all the modifications have been made throughout, many sections in the discussion and the abstract need to be revised.

- I think that reporting a trial registration number for the study misleads the reader. These internal numbers, unless they are from the ethics committee, are not necessary.

- Numbers should be spelled out at the beginning of a sentence. And one to nine always spelled out unless in a parenthesis indicating a number.

Please note that my comments and suggestions aim to improve the clarity, transparency and rigour of your manuscript. I think that you have some interesting results which merit being published, however they need to be contextualised to the methodological approach employed, and any inferences need to remain strictly within this context.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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