Reviewer’s report

Title: Ethical concerns with the use of Intelligent Assistive Technology: Findings from a qualitative study with professional stakeholders

Version: 0 Date: 17 Aug 2019

Reviewer: Bjorn Hofmann

Reviewer's report:

Dear Editor,

Thank you for the opportunity to review this paper, which I have read with great interest.

This study investigates stakeholders' experiences with conception of the ethical promises and challenges with the use of intelligent assistive technologies (IATs) among older and disabled users. They use semi-structured qualitative interviews with researchers and health professionals in Switzerland, Germany and Italy and analyze the interview data using descriptive thematic analysis. They find that patient autonomy and informed consent, quality of data management, distributive justice and human contact are given ethical priority, while there is little agreement with respect to solutions to ethical challenges.

In general this is an interesting, topical, and important issue. The general agreement on the importance of using IATs to complement but not to replace human-delivered care is noteworthy. However, there are some significant shortcomings that could improve the manuscript if addressed properly.

Firstly, the research question of the study is not clearly formulated. It is indicated that "important to understand the views of different stakeholders" and to "consider the ethically relevant issues" but it is not clear what question will be addressed. The aim is somewhat more clearly stated: "This stakeholder consultation aimed at identifying critical ethical concerns perceived by professional stakeholders in relation to the use of IATs for the care of older people with dementia." However, it is not quite clear what "critical ethical concerns" refer to (or how the stakeholders are asked about this). Hence, it seems important to clarify the objective, formulate a clear research question, and also put this in the abstract. As it stands, the reader is confused about what this study wants to do, and may stop reading (and thereby miss important insights).
To call this a "tri-national study" appears somewhat audacious all the time only four persons in a heterogeneous country as Germany are included. Moreover, the differences between the countries are not discussed at any length in the paper. Hence, as it stands, it does not quite make sense to call this a tri-national study.

IATs appears itself to be a quite heterogeneous group of technology, and the answers indicate that the interviewees have a wide range of technologies in mind when they respond. It is difficult to interpret whether the issues they discuss are typical to the technology they have in mind, or if they are relevant for IATs in general. Moreover, some of the issues are related to the patient group more than to IAT. Not knowing this seems to reduce the value of the results of the study.

The challenge for the reader is to sort out the seven-fold of heterogeneity: technologies, interviewees (profession, experience etc), countries, context (institutions), promises, challenges, and solutions. The manuscript would greatly improve if the authors would provide the reader with some more help sorting this out.

Given the limitations that I have pointed out and the ones that the authors themselves acknowledge in the manuscript, the following statements may be somewhat to ambitious: "These findings will provide technology developers with in-depth information about unmet ethical needs. Furthermore, they will help raise awareness among clinicians and healthcare providers about the promises and challenges of IATs. Finally, they will provide policy makers with firsthand information from relevant stakeholders about possible solutions for ethically aligned technology governance."

As the authors clearly state, this is a part of a larger project with other publications. It is not clear to me how these different parts relate. That may, however, be made clearer to the reader of the final manuscript. As it stands, the reader may wonder whether the content of this article would fit better together with other parts of the project. Unfortunately, I am unable to give advice on this.

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.

Unable to assess

**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.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests
I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal