Reviewer's report

Title: A typology of uncertainty derived from an analysis of critical incidents in medical residents: A mixed methods study

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Reviewer: Maarit Nevalainen

Reviewer's report:

1. Major Compulsory Revisions:
None.

2. Minor Essential Revisions:

On the line 136 I would prefer that the authors put their abbreviation at once after the term critical incidents (= CI). However, I was not able to gain access to the paper that was referred and that is why I would like to ask, if the abbreviation was used in the referred article already or if it was an invention of the authors. If the latter is true, I would suggest the authors to think if they could change the abbreviation, as it is already officially used to mark confidence intervals and as such may confuse some readers. But this is only a suggestion, in case it is a term chosen by the authors of this manuscript.

On the line 237 and also on line 388 there is the term "significant others" which is not suitable for the context as it already has an established meaning "spouse" in English language. I would suggest that the authors replace it with some other term that still responds to the thoughts they have had, for example "other health care personnel" or something similar.

On the line 299 there must be a little typo as Mr. Bererford's name is missing an s.

On the line 308 I would suggest the authors to consider if they want to add the word "she" after "he" if they want to keep the same chosen style through the manuscript.

The sentence beginning on the line number 323 cannot be fully understood in its present form. I assume that there is one typo, that is one comma too many on the line numer 325 before the words "are revealed".

On the line 328 the surname of the first author in the reference is spellt wrong, I presume it is a typo (Nevalainen is the right form).

On the line 355 the explanation in the brackets is slightly unclear. Does it mean that the coping strategies "jump" over the peers and senior residents? I would perhaps prefer that it was phrased as "going from consulting the literature to peers and senior residents and further to the attending physician". But I may
have misunderstood the thought behind in that sentence.

The sentence beginning on the line number 378 is a bit unclear as I do not quite understand the sentence "is seen somewhat less favorable (even if the figures in brackets nicely clarify it), and the is a little typo as the "CI" is certainly the thing meant by "IC". I would suggest a slightly different choice of words, such as "is seen by the residents somewhat less favorably" or something similar.

On the line 384 I would also suggest a change as I now cannot understand properly which thing needs to be reestablished, the natural order maybe? I would suggest that the authors clarify it a bit.

On the line 392 I would suggest that the words "the exposure" would be added between the words "due" and "to". Then the sentence would be easier to read.

On the lines 393-394 the statement is rather strong "Communication is an area neglected in medical training", as for example in the Nordic countries there is an emphasis on communication in the curriculum that is gaining more and more hours in the medical training. Maybe the authors could add the word "often" before the word "neglected", as it would make the statement milder and not irritate medical teachers who already are putting an effort in training communication with their students.

On the line 397 I suppose the word should be "processed" and not "proceed" after the words "uncertainty to".

On the line 428 I assume that the word "care" is missing after the word "health".

On the lines 429 to 431 the sentence begins well, but ends in such a way that the authors lose me, as I cannot really understand it to the full. Maybe it could be refrased? A suggestion is "As Han indicates [37] the need for greater conceptual clarity, and consistent representational methods, that make the meaning of various uncertainties understandable are pending issues. Likewise important are clinical interventions to support patients in coping with uncertainty in decision making." But this is only my suggestion and the authors are definitely free to rewrite the sentence in the way they like best.

Despite of my several comments on the manuscript I think that it is of high value, the authors have made a really good job and I enjoyed reading the manuscript. I admire the courage of the authors when they took on the task of revising the old and already accepted typology by Mr. Beresford.

I thank the BMC Medical Education for the for the opportunity to be able to read and be a referee for this most interesting manuscript and I wish the authors good luck in the future as their new typology might become a new version in the future to be used when dealing with themes related to uncertainty in the medical field.

Yours sincerely,
Maarit Nevalainen MD, PhD
Clinical teacher and General Practitioner
University of Helsinki
Finland

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests. And the fact that the authors have chosen one article by me and my colleagues as one of their references is a mere co-incidence, I have had nothing to do with the selection process as I have not been contacted by the authors in any way.