Reviewer's report

Title: On the didactics of pharmacological communication: A study of final semester health science students

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Reviewer: Onno C Meijer

Reviewer's report:

1. Is the question posed by the authors well defined? Partially
2. Are the methods appropriate and well described? Partially
3. Are the data sound? Depends on 2)
4. Do the figures appear to be genuine, i.e. without evidence of manipulation? N.A.
5. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
6. Are the discussion and conclusions well balanced and adequately supported by the data? Yes
7. Are limitations of the work clearly stated? Yes
8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
9. Do the title and abstract accurately convey what has been found? Partially
10. Is the writing acceptable? Yes

The manuscript describes an approach to assess styles of communication and (implicit) goals of pharmacotherapeutic information supply by (to be) educators (i.e. health care students) to patients, in a ‘phenomenological space’. The authors define 4 communication styles (from unidirectional to two-way communication), and 3 types of knowledge that the educators at this stage of their training.
The actual goal of the paper should be more explicit earlier on. Strikingly, information on the outcome of the 'phenomenological space' is lacking in the abstract, and it is therefore unclear to me whether the goal of the manuscript is to show room for improvement of pharmacotherapeutic communication skills of health care students (but why omit results then?), or whether the authors want to put forward this 'didactic model' of teaching as such. If the latter is the case, the authors may in text and figures better define the difference with other ways of teaching communication skills.

Having said so, it is to me of interest that the authors have put side by side the content of pharmacotherapeutic information, and the style in which the info is transmitted (or attempted to be transmitted).

Even if the paper is qualitative, I can imagine that content and style of delivery are not independent. Do the results allow to see such an interaction (directive one-way style being used for strict instructions?). (As such the different communication styles are hardly surprising).

The authors should comment on the criteria to define the number of categories in their object spaces – 4 communication styles, and 3 ‘types of information’ are identified, but is this formalized in any way?

It would also be of interest how many of the subjects actually took more than one approach in the two phenomenological spaces. As the authors discuss, there could be an ideal mix of simple and thoroughly underpinned argumentation. In a sense, it is a shame that there are only 12 subjects, as it would be of interest to see how far these skills are developed in larger cohorts of specific levels of seniority. But perhaps this is something that the readers of the manuscript should pick up for their own institutions.

The recommendation to practice/teach communication skills in an integrated setting makes sense, but I am not sure that this is not common wisdom? Do many Medical Schools use non-clinical examples to teach communications with patients? Is there not enough pharmacotherapy in such courses? Are there arguments/figures to support such notions?

The figures are meant as an illustration, but are so abstract that they need the text to make sense – it would be helpful if they become more self-explanatory.

Figure 1 renders a rather abstract form of the model, which is contrasted in the text with other models. To clarify the difference between the model that was used and the models 'mentioned hitherto', it would be helpful if one or two other would also be depicted alongside. Would these be two or three non-connected lines?

Figure 2 contains a ‘professional triangle’ and ‘educational triangle’, but in its abstraction there is nothing to distinguish the two. ‘The left’ and ‘the right’ appear to refer to the triangles, but there is also a left and a right corner in each triangle. Please make more explicit – the polygons look smooth, but a letter in the corner would help. To me, the results section came a bit as a surprise, in the sense that
here the students had one role, namely that of ‘educator’. Perhaps also here indicate what is the ‘general’ model, and what what actually done in the ‘experiment’.

Figure 4 I interpret as the interview containing pharmacotherapeutic knowledge (shape at the apex – is this ‘the content’?) and obviously the interaction between educator and patient (‘the communicative relation’?) from pharmacokinetic, -dynamic and interaction knowledge. But why not make that more explicit too?

In a separate study, the pharmacological understanding of the students was assessed – it seems to me that the pharmacological understanding in part determines the communication about the subject – is /should this taken in to account?

Discretionary Revisions

The manuscript talks about pharmacological knowledge, but it transpires that part of the content is actually seen as pharmacotherapeutic (adherence), then purely ‘pharmacological’. Would pharmacotherapeutic then be a better way to state the content-domain in the whole setting of the manuscript?

Page 9, l.15 to 19 seem superfluous (because redundant

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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