Reviewer’s report

Title: Studying medical communication with video vignettes: how variations in video-vignette introduction format and camera focus influence analogue patients' engagement. A randomized study.

Version: 0 Date: 27 Jul 2017

Reviewer: Pal Gulbrandsen

Reviewer's report:

The authors have done a large job to try to identify and disentangle effects related to the setup of video vignette studies using analogue patients. Such studies are rare and complicated to conduct. As such, this study should be published, even if I have some difficulties following the presentation of the results (in particular).

I should note that I have not myself conducted psychophysiological studies and I am not familiar with this body of literature. This means that some of the criticisms made below may be experienced as unfair. On the other hand, studies in this domain should not be too difficult to interpret for readers who have performed several other studies in the field of clinical communication.

I accept the reason for the study, and I particularly liked the presentation of preformed expectations about findings. This is crucial in experimental studies.

The Methods section is clear. The sample (young students) has its advantages, however the disadvantages are maybe more. Pros and cons are sufficiently discussed in the discussion. One of the reasons for using students was (probably?) convenience: this experiment required a large sample (a 2x3 format challenges the power of the study). However, I see no description of power calculations. Measurements are satisfactory. The authors chose a 0.05 level for statistical significance without further argument (which is common, of course). As the authors later in the results section refer to several interaction analyses and post hoc analyses, I would have liked to hear more about this. Would a lower significance level have been appropriate? Would a correction for multiple tests have been appropriate? Even if the authors gave clear hypotheses up front, it seems to me that they had to look for significant findings in a lot of different ways.

The Results section is rather hard to follow. First, I find it unusual first to present multivariate main effects (no effect), and then later return to univariate (do they mean bivariate?) effects. It is usually easier to hear about bivariate analyses first (independent variables separate effects on outcome variable). I am also confused by the sentence (line 40 page 11) that says "...univariate results showed a small to medium interaction effect...". How can you assess interaction in a univariate analysis? Maybe I am confused by the term interaction, which often is used for effect modification in epidemiological studies? The last part of the sentence is also somewhat unclear:
"...their empathy with the video patient..." - does the video patient refer to the patient presented in the AV introduction or the patient in the consultation observation? On page 12 several post hoc analyses are mentioned, and in most cases it is in these post hoc analyses significant effects are found. Effect sizes are usually small or medium, and I tend to think that maybe these findings are rather modest and of relatively little importance. Particularly in light of the underlying premise that all these measurements are made to underpin why analogue patients can actually evaluate how the real patient reacts to the vignette.

The Discussion section is sober although maybe the authors slightly overemphasize the importance of their findings (most authors do). Line 18-27 on page 15 is close to a repetition of what has already been said, could probably be deleted. What comes after that is however important!

References #2 and #7 are identical.

Table 1 is well designed, could however do with an indication of the values of most interest (for example in bold). The paragraph in the text about table 2 (p. 12) refers to the formats A and B, this is somewhat confusing when these formats are not presented in the table. Table 3 is OK. Notably, most of the values are in the range 4-5 on a 1-7 scale, so one gets the impression effects are in general not dramatic. Figure 1 is nice. Figures 2 and 3 creates an impression of a large effect because the Y axis does not start at 0. This is usually not considered proper presentation of statistics.

Finally, I want to repeat my message that I think the study should be published, despite my comments above.

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

Yes

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

Yes

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

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