Reviewer's report

Title: A Feasibility Study of the Effect of a Visual Arts-based Program on the Scores of Jefferson Scale for Physician Empathy

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Reviewer: Jay Orlander

Reviewer's report:

Major Compulsory Revision:
The paper is clearly written.

The authors developed a visual arts program, a 4 hour intervention (two- 2 hour sessions) which had been implemented two years prior to this assessment. The authors attempt to determine the impact of their program on learner empathy. This was evaluated in an immediate pre, immediate post participation fashion using a validated student version of self-administered scale designed to measure empathy. The intervention involved participants required to attend the sessions over a 4 month period. Subjects were defined as clerks and PGY1 residents.

1. Much of the arts-in-medicine literature targets pre-clinical students as a method to exposed learners to human conditions that they cannot otherwise be exposed too. The authors of this paper create a program for clinical clerks, and PGY1 residents; learners who are immersed in clinical care of hospitalized patients and through that work are being exposed to patients and families who are experiencing a range of human emotion and suffering. They should discuss in their paper whether the timing of their own intervention was designed out of convenience, (that is when they got space in the curriculum) or if there was strong theoretical justification for the timing of their program in the clinical development of trainees.

The intervention is well described. The methods used clear. The outcome measure was translated into Chinese and psychometric properties of the instrument performance determined in their data set. The factor analysis, chronbach alpha, and mean scores obtained were comparable to that obtained in the original version in English and many other studies.

2. The subjects experience and context for empathy assessment in this environment requires further discussion. Given the variability of medical education processes across the globe, it would be helpful if the authors described briefly where in their medical school training the clerks were.

3. Similarly it would helpful to understand what communication skills training and empathy “curriculum” was part of the required curriculum in their institution before they participated in this visual arts program. As a North American (NA) reader I would infer this would be the first clinical year, and the 3rd of 4 total years of medical school. Is this true in their school in China? In addition communication
skills and discussion of empathic behavior and compassion often accompanies training during years one and two of a traditional NA curriculum with some schools revisiting this issue in the clinical years as well. Without knowledge of the background of the participants it is difficult to determine whether or not any intervention would be impactful on student reported empathy.

Minor Essential Revisions

4. I am uncertain why the authors titled this a “feasibility study”. They seem to have established a curriculum and investigated whether participation impacted a measure of learner empathy. I suggest the title be adjusted to reflect that.

5. The authors’ literature review correctly cites that there is little objective evidence of the impact of art’s training on medical education. The impact of visual arts training has evidence which supports improvement in observational skill. That is, students trained to observe changes in facial expression, posture, etc in two dimensional images and then relate such to physical sensations and emotions through the study of artwork, then demonstrate an enhanced ability to interpret/extrapolate these issues when tested on reviewing pictures, compared to control subject not given such training. No study has demonstrated impact in the clinical setting directly, nor has any prior study showed a link between such “observations” and empathy; although the authors they cite try to argue such a link does, or should, exist. The review they cite calls for future studies to have control groups and attempt to use behavioral outcomes. This study does neither. The authors should discuss why their methods were therefore appropriate given the state of the literature.

6. The study showed no statistical difference in the main outcome measure pre to post intervention. Other than low sample size in among the PGY1 group, and intensity of intervention, no other limitation is cited. Some additional theoretical revisions include: the relatively modest intervention during a time of intense clinical exposure – clerkship. Several studies have shown decrease in JSPE scores with onset of the intense clinical training years. The lack of change in their clerks self-assessment of empathy could represent a mitigation of their program on what may have been a decline in scores without such mitigation. This would be a result of lack of a control group and should be discussed.

Discretionary Revisions

None

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.