Reviewer's report

Title: Perception of graduates from eight medical schools in Vietnam on learning of key skills identified by teachers

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Reviewer: Enoch Kwizera

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General

Perception of graduates from eight medical schools in Vietnam on learning of key skills identified by teachers

Authors: Luu Ngoc Hoat, Nguyen Minh Son, E Pamela Wright

Reviewer: Enoch N Kwizera

1. Is the question posed by the authors new and well defined?

The question posed is new, at least in the context of Vietnam; and it is reasonably well-defined. However, the terms: “graduates from …… Vietnam”, “final year students”, “graduating class students”, and “doctors graduating” are used interchangeably in this manuscript thus causing unnecessary confusion. For example, at the beginning of the 4th paragraph under “Discussion”, the subjects are referred to as “The graduates …..” and as “ … the students..”, respectively, in two successive sentences. Clearly, the questionnaire was administered to final year medical students, and the subjects should consistently be referred to as such. It is, for example erroneous to state (under “Study participants”) that “The respondents represented 87%of the doctors graduating from these eight faculties that year in Vietnam.” This is erroneous because it implies that all final year medical students in Vietnam go on to graduate after first attempt of final year examinations, and that there is no attrition.

2. Are the methods appropriate and well described and are sufficient details provided to replicate this work?

The cross-sectional study design and the data collection by questionnaire were appropriate under the circumstances. However, besides the varying references to the subjects referred to above, the following other methodological shortcomings are noteworthy.

1. Reference is made to “…… the eight medical schools listed above”, but there is no such a list in the manuscript, besides Fig. 1 which depicts the regional location of the 8 medical schools in Vietnam.
2. Since the authors explain some of their findings on the basis of, e.g., the medical school size, they should characterise the medical schools in more detail than mere regional location. Examples: size (student numbers, staff:student ratio), years of existence, presence and extent of community-based education, urban or rural location, presence and size of postgraduate programmes (internship, registraships / residencies), etc. Such information would help substantiate some assumptions and / or arguments the authors make when discussing their findings, and should therefore be provided.

3. It is not plausible that only the 13% of all the final year medical students “.. who did not participate mostly had hospital duty or other activities that prevented them from joining the study” The authors also sort of contradict themselves in this regard, and suggest an element of ‘self-selection’ on the part of respondents, when (under discussion) they state, inter alia: “The proportion of students involved in this study in Thai Binh was lower (only 74%), so their result might be biased if only students with better performance were more likely to complete the questionnaire” . In any event, mention of % participation from the different medical schools and explanations thereof should be under results and discussion, respectively, not under methodology. The authors’ tendency to pre-empt discussion is also apparent under ‘results” (vide infra).

4. As this is an on-line journal, the authors should provide a copy of the entire questionnaire, as a separate link, rather than the ‘sample’ provided in Table 1, which in its presented format is complex, confusing, and certainly not helpful to this reviewer, nor (probably) to the potential reader.

I recommend removal of Table 1, and its replacement with the entire questionnaire, under a separate link if need be.

5. I agree that it would be impractical to ask students about all 557 skills in the KAS book, but I fail to see the basis of excluding an entire category of 254 skills (nearly half the skills in the KAS book) on the untested assumption that “ … because we supposed that students could more easily gain skills to that level.” The fact that the requisite competency level is: “Can do but need supervision” does not in itself guarantee student acquisition of the skill to the required competency level, especially when the authors state in the preceding paragraph (2nd paragraph under “Data collection tool”) that “ …. not all schools taught all skills included in the KAS book and others were only demonstrated…”. Furthermore, the authors do not state the randomisation method they used to select 124 out of 290 skills for the survey, and the basis for the said randomisation method. These observations / concerns should be addressed in a revised manuscript.

6. Under “Data collection”:

a. What exactly do the authors mean by “shortly before graduate examination”? Is it possible to provide an actual time reference, and would this have been the same for all 8 medical schools? Or is it possible that the survey could have taken place in some schools at a time when students were still undergoing training while at other schools the students had already completed their training, and were only due to sit their final examination? Would this perhaps explain the
reported (and refuted by this reviewer) 13% finalists not participating “because they had hospital duty” (read ‘ongoing clinical training’)

b. The justification of using self-assessment in a study of this nature should be reserved for “Discussion”.

7. The data analysis (including statistics) in this manuscript could have been enriched by including other analyses of variance besides CV, and by testing differences for statistical significance using classic and / or current instruments / methods. More importantly, in addition to the missing characterisation of the 8 medical schools as already intimated above, Figures 4 and 5 suggest possible confounders in terms of sites where students (might) learn the skills under review; which confounders, if they were or had been duly detected if or when piloting the research tool, might have made crucial differences to the design and conduct of this study. Should other statistical analyses be necessary, authors would have to present absolute numbers of final year students and respondents at each medical school and in each category.

8. The purpose and/or relevance of the second paragraph under “Data analysis” is not apparent to this reviewer.

3. Are the data sound and well controlled?

In the absence of the complete and coherently presented questionnaire (and of the other important characteristics of the individual medical schools), one struggles to ‘place’ the presented data into perspective. Still, some observations on the way the results were arrived at and are reported:

1. The first paragraph under: “1. Students’ perception on whether they reached the level of skill listed in the KAS book” is not readily comprehensible and should be re-phrased or preferably re-written. And is it a core objective that every newly graduating medical doctor in Vietnam should be competent at detecting morphine in urine? I am not so sure that this is the case (as I am also sure that it is not the case in other parts of the world), but I stand to be corrected.

2. Besides indicating that just over a third of final year students from ALL the participating medical schools reported 50% or less achievement of the required competence of skills under study, Table 2 is rather superfluous.

3. As already observed, the first time any mention is made of “larger” or “smallest” or “youngest” medical schools (or similar) is in the “Results” section, when one would have expected this sort of characterisation to be made under “Methods” (or “Introduction”). These descriptions are also used in an abstract manner, without specifying which medical schools belong to which categories. It would also be helpful to specify the presence, size, and extent of use of a Clinical Skills Laboratory at each medical school.

4. Under “Study sites for learning skills”, what is reported in the second paragraph “For public health departments …..” contradicts what is shown in Figure 5 in that no mention is made in the text of national and provincial hospitals as sites for the learning of Public Health skills.
5. Table 3 mixes attributes resulting in erroneously referring to the last line of column 3 as ‘mean’, when it is actually ‘sum’.

6. The legends accompanying the tables and figures are short and should have sufficient detail for a reader to get the message without recourse to reading the text.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

Besides the concerns alluded to above, including inadequate background information, and pre-emptying “Discussion” by moving some of this to “Methods” and / or “Results”, the manuscript adheres to relevant standards. However,

1. Figure 1 is not very informative, because it neither tells us more about the individual medical schools (size, age, rural / urban, etc.) nor more about the region it serves (population, rural / urban, etc)

2. As already mentioned, a copy of the full questionnaire as used by the researchers (and submitted here as a separate link) would be more informative than Table 1.

3. Some data in tables is repeated in figures (e.g. Table 3 and Figure 2) and if there are space constraints, a way of avoiding the duplication should be found. The authors should also avoid repeating in the text what is clearly depicted in the illustrations (and vice versa). More importantly, they should avoid repetition of (reporting) the results under “Discussion”, including repeated references to the illustrations.

4. Citation of all the 8 authors of a reference (latter part of second paragraph under “Discussion” departs from the usual use of “et al.” after citing one, or at most three authors.

5. Are the discussions and conclusions well balanced and adequately supported by data?

To a large extent, discussions and conclusions are adequately supported by data and are well balanced. There are, however, a few issues that need the authors’ attention.

1. There is no mention of (any) limitations of the study.

2. It is erroneous to state “… the students had completed all the requirements for graduation …..” unless passing the final year examinations, which they were yet to sit when they completed the questionnaire, was not part of these requirements.

3. The fact that they were on the verge of completing their undergraduate training is no guarantee for assessing their competences objectively. There should be a better way of establishing this objectivity.

4. In paragraphs 5 and 6 under “Discussion”, it is suggested required levels for clinical skills were probably defined and formulated more clearly, more
concretely, and more suitably than skills belonging to public health disciplines. Are / were the authors not in a position to verify this rather than leave it as mere conjecture?

5. The argument / suggestion that the high average proportion (84%) of self-reported achievement of all skills by respondents from Thai Binh could be due to the fact that “the proportion of students involved in the study was lower (only 74%) so their result might be biased if only students with better performance were more likely to complete the questionnaire” is flawed because in the same data set we have an even lower (70%) student involvement from Hanoi, with a low (67%) average proportion of self-reported achievement.

6. Although we are not told the relative sizes of the individual medical schools, Figure 4 shows that national / provincial hospitals were extensively used by all the medical schools for clinical skills training. Thus the argument that students from the smaller centres might have overestimated their level of skill achievement presumably because they “would have had less exposure to national or regional hospitals where the technical quality of the practice is very high and where students from the larger schools may have learned to be modest about their level of achievement” is also flawed and not backed up by what Figure 4 depicts. Furthermore:
   a. ‘small centre’ is not necessarily synonymous with “very low technical quality of practice”
   b. Large and/or ‘high tech’ hospitals are not necessarily the best places to learn basic clinical skills required by the generalist primary healthcare practitioner, because these centres deal with uncommon and complex medical conditions referred from primary and secondary levels which levels might be better settings for the learning of clinical skills by the students.

7. The likelihood of students overestimating their competency should not be a basis to “make the need for revision (of the skills in the KAS book) even greater”. If this (overestimation) is a problem, then it calls for better and more objective tools for assessing achievement of the skills, rather than mere revision of the requisite skills.

8. The fact that “most general doctors do not in fact use the public health skills very often …” might be a reflection of their deficiency in those skills which ought not to be interpreted as meaning that it is OK for the doctors to be thus deficient.

6. Do the title and abstract accurately cover what has been found?

For the title to accurately reflect what was done and what was found, the following changes are recommended:
   a. “Perception” should read “Perceptions”
   b. “graduates” should read “final year medical students”
   c. “learning” should be qualified as “learning and acquisition”

The abstract aptly summarises the paper.

7. Is the writing acceptable?
The writing is acceptable, except for the unnecessary repetitions already alluded to, and which should be curtailed in the revised manuscript.

Unless references 4 and 5 have been unequivocally accepted for publication (and not only “submitted”), they should be described as “unpublished observations”. And if they have been accepted and are indeed “in press”, then the style for both citations should be similar (not ‘(in press) 2007’ for one and ‘2007, (in press)’ for the other.

Reference 8 is incomplete / details are incomprehensible.

Confidential comments to editors
None.

Discretionary revisions

Major (non-discretionary) revisions are recommended as alluded to above

What next?
Re-submit after major compulsory revisions

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests