Reviewer’s report

Title: Assessing the training needs of medical students in patient information gathering; a qualitative study

Version: 0 Date: 24 Nov 2019

Reviewer: Marcy Rosenbaum

Reviewer's report:

This paper addresses topics of interest to the medical education community using a qualitative interview approach with learners and clinicians to explore their perspectives on learning. First I will summarize the main concerns I have about the paper in its current form:

- I had some confusion about the main focus of this research because of the use several different terms. In the introduction and discussion the authors talk mainly about clinical communication while in methods they identify the focus to be such things as "information gathering" and "medical interviewing" and in the results several quotes seem to be more focused on the content of information (history taking, knowing what questions to ask) rather than the process of communication. Describing the rationale between choice of these terms would be helpful to interpreting results and conclusions.

- Methods could be clarified in terms of aim and rationale for participant selection as well as analytical methods.

- Some lack of clarity in presentation of results and selection of quotes

- Make a stronger statement about what this study adds to what is already known

I think this can be a useful paper with major revisions that address these concerns. Below I provide detailed feedback to the authors to help them strengthen the paper.

Page 4, 1st paragraph, line 9-10. Would be helpful to clarify what element "this" is referring to in this sentence. "There is less evidence in the existing literature for how students can be prepared for this element of clinical communication". Is it the variability of communication in the clinical setting and/or the need for flexibility. Might restate this?
The third paragraph about procedural skills learning seems oddly placed in the introduction. I wonder if it should come right after the paragraph on communication variability as the paragraph seems to be saying that because of this variability a step wise procedural approach may not suffice? (Note: One could argue that communication skills models provide a similar framework to components of procedural skills in regard to being able to use the skills flexibly depending on what the "procedure" e.g. history taking, bad news telling, etc, calls for? If the authors choose to leave the paragraph as is I think it needs a transition statement or two before moving to the methods.

AIM p4, line 54: Not sure the parentheses is necessary here since whose perspective is being shared is key to the aim.

METHODS:

* First sentence: "Participants were invited to participate in voluntary semi-structured interviews on the topic of information gathering in medicine." This is the first mention of "information gathering" which is just one component of clinical communication. The authors need to clarify why they chose this particular focus?

* How participants were recruited needs to be described further and clarified.

  o A total of 32 students were invited and it is unclear why this particular sample and also the overall distribution the researchers were aiming for and why. Also the authors could explain why they chose to interview students at different levels - was it just because they responded or were they hoping to get a cross section of students? Also, just checking that

  o Similar in regard to medical professionals, why were these particular people invited, what were their characteristics that led to them being invited (e.g. in the limitations it note something about being effective communicators)? Were the authors aiming for a particular mix of professionals? Also, it states that a total of 19 were invited and 19 participated though 1 declined? Since you include gender for students should probably include it for professionals. Were the medical professionals also teachers of medical students or separate - this has implication for your conclusions about faculty development. Were they affiliated with the university or did they work in other settings?

  o Were the authors aiming for a particular overall N or did they end up with a final group based on theoretical saturation?

  o I was surprised at the age range of your medical students, particularly that at least one is listed as 67 years old - this might merit at least a footnote explanation?
Overall it would strengthen the paper to discuss why you chose to interview both students and practicing health professionals as this is one of the more unique aspects of the research. What were you hoping to discover and be able to compare between these groups?

It would be helpful to have a little more explanation of the medical school curriculum such as when students are in the classroom and when they start clinical rotations? Is this a 4 year or 6 year medical school program? What is the extent of their communication training - how many and what type of sessions, when in the curriculum as well as if any faculty development occurs related to this. This would assist readers in assessing the merits of the papers conclusions that communication teaching needs to be improved.

P5 Materials and procedures - first sentence; "...followed by a question about the role of interviewing in their specialty area, and a question about challenges related to medical interviewing." This is the first mention about a focus on medical interviewing, as opposed to communication skills or information gathering mentioned in the aim? Please clarify.

Also, were these the only questions asked of all participants? If there were others, for example those related specifically to teaching/learning, it would be useful to have interview questions included in manuscript.

Can authors clarify, is this study data that was collected as part of a larger study looking at something else - it would be helpful for authors to clarify this "The data were rich with themes and concepts concerning multiple aspects of medical communication. Here, we explore themes relating to the training of medical students, from both students' and clinicians' perspectives."

Identification of themes not completely clear, was this based on salience in terms of majority of respondents identifying aspects of each theme or were they chosen In some other way - for example, grouping all concepts that came up, regardless of how many raised them, under overarching themes. Might benefit from some clarification.

If any type of qualitative coding software or other software was used in coding and analysis this should be stated and referenced

Last sentence: "Insights from the experienced clinicians that parallel communication in investigative interviewing can be found in. .. I found this sentence confusing and am not sure it adds to this paper (or should at least be saved until you discuss "Investigative interviewing", a field I was not familiar with, in the conclusions)."
RESULTS

* I am not sure how helpful it is to have the number of participants who addressed each theme listed (especially for those themes only expressed by very few participants such as role modeling N = 7) - it depends on your approach to qualitative research.

* Some of the quotes are not completely clear in regard to what they are talking about. For example the first two in "learning from experience" as well as the first student quote, seem more like are talking about diagnostic reasoning and pattern recognition rather than communication skills or information gathering skills per se, except for knowing what questions to ask? Do the authors have other quotes that are more specific about communication skills? In learning from practice, similarly, quotes seem to be focused on history taking.

* In Role Model section, P10, some quotes seem out of place or not particularly relevant including the one that starts with {The teaching experience could be improved} not clearly about role modeling rather the learner being observed and the negative role model example is about giving feedback to a learner more than role modeling communication/interviewing? Perhaps you could relabel the theme as mentoring/teaching so observation of learners, feedback etc also applies?

* Structure of the consultation section, second sentence, "utility of having a solid understanding of effective information gathering strategies. Clinicians described and demonstrated an ability to have a conversation and then return to the structure to cover outstanding content. I was sure how clinicians "demonstrated" this ability? Perhaps moving the quote that starts "I think sometimes I might sound to an untrained observer……" to be first after this intro statement would make it clearer? Also the quote starting Experience helps you…, is this about information gathering or information giving?

Discussion

* The authors make a compelling argument regarding key challenges in clinical communication that have been identified in the literature and are reinforced by some of the data from their study. My concerns about the discussion section include:

  o I do not get a clear sense of what this study adds beyond reinforcing what we already know. A stronger statement based on the data would need to be made

  o Some of the conclusions/interpretations are stated more strongly and/or don't fit with the data as a it was presented in the results. For example:
Students valued role-play with simulated patients over that with peers - while their preference for SPs over peer role play is clear, data on this in the results placed more emphasis on students not valuing "mock" interviews. Perhaps more about the perceived benefits of SPs should be added to results?

"Mirroring patient centredness through student-centred teaching is recommended [47] but was not reflected in the learning experiences of the experienced clinicians or students in this study. Several clinicians mentioned teaching senior students or junior doctors using a style which could be regarded as learner centred, but most of the more junior students in this study had not yet experienced such learning opportunities." In the data presented, I did not get a clear picture of if learner-centered approaches were being used in either the classroom or clinic?

The lack of clarity of focus between communication skills, history taking, interviewing and information gathering throughout the paper is also present in the discussion. For example, the discussion of structure as a means to "set one free" as cited from Silverman et al, refers to having a structure for communication skills, both content and process. My impression from the data presented in the results on structure was that it was mainly referring to the content of the medical history and not structure in terms of a organized process/communication skills model such as the Calgary-Cambridge guide. I think this distinction would need to be further clarified in both the results and discussion.

I am not sure how much the inclusion of several references and aspects of investigative interviewing to the discussion adds. If part of the overall intent of the paper/study was to use the approach to investigative interviewing as a framework for assessing the effectiveness of medical interviewing this could be stated in the paper introduction. Otherwise I would suggest either omitting this focus in the discussion or clearly limiting it to just a few sentences - first defining what investigative interviewing is and then saying that field has a unique approach not currently used in medical education that offers some new insights.

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

No

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?
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No
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Not relevant to this manuscript

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