

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Long-term contribution of international electives for medical students to professional identity formation: A qualitative study
AUTHORS	Hayashi, Mikio; Son, Daisuke; Nanishi, Keiko; Eto, Masato

VERSION 1 - REVIEW

REVIEWER	Anna Kalbarczyk Johns Hopkins Bloomberg School of Public Health, USA
REVIEW RETURNED	17-May-2020

GENERAL COMMENTS	<p>Thank you for the opportunity to review your manuscript on the role of international electives in professional identity formation for medical professionals. Overall the manuscript is well-written, cited, and framed. More details are needed in the methods section to clarify the authors' decision and approaches. I also think there may be relationships between a number of the emergent themes that could be further explored. I hope the specific comments below on each section are helpful to the authorship and editorial team.</p> <p>Methods - Setting - do students choose to complete electives in these countries or are these the settings available to them through formal programs offered by the institutions? These decisions may be more reflective of institutional partnerships than of students' own choices.</p> <p>The description of the narrative reflections is unclear. I would recommend starting the data collection section with the reflections and then describe the interview procedures. The authors should clarify the instructions given to the students for the reflections - that is, what were they asked to write about, in what time frame (i.e. immediately following the international elective? during the elective? within three months following the completion of the elective?). It is also unclear why some reflections were excluded - authors should be explicit in their reasoning, or just state that these were not located.</p> <p>Analysis - if the research question was derived through theory, why did the authors select an inductive approach? What codes emerged through this process?</p> <p>Results - please clarify if a quote comes from the interviews or the documents. Overall, I think the results section could use more analysis and information. Often only one or two quotes is presented for a given theme and some of them don't align well with the theme</p>
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	<p>itself. Could the authors consider reorganizing this or combining similar themes to present a more robust view of the data? Each theme really seems to relate to aspects of the "self" which makes sense given that the tools asked participants to reflect on identity. Is there other literature on identity that could help guide the authors in terms of re-organizing the data?</p> <p>Page 14, lines 15-17 - unclear how this relates to the data or reflection on an international rotation. Page 17, quote in lines 10-20 - how does this relate to target-setting or decision-making and leadership?</p> <p>Did any participants really reflect deeply on skills gained or experiences they had that truly shaped future decision-making? Specific examples would strengthen this section.</p> <p>Did differences emerge in these themes for different types of participants? Male vs. Female; Participants in different specialties; Participants who had different types of experiences (i.e. clinical vs. research; or HIC vs. LMIC)?</p> <p>Discussion - I would like to see authors specifically link the discussion back to the results, particularly in the paragraph on cultural competency. In the results there were excellent quotes about medical professionals having different insight into members of their community because of their experiences. That link should be made explicit here.</p> <p>Table 1 - it is interesting there are so many more male than female participants - should be noted in the results. You could also add numbers of those who went to high-income vs. low-and middle-income countries in the results section itself. When you present quotes it might also be interesting to note one or two demographic features of the participants including gender and location of their elective). This could help ground the quotes for the reader.</p> <p>Figure 1- I imagine the relationships presented here are more interconnected than this figure shows. Couldn't perspective transformation influence diversity of values or vice versa? I would suggest the authors review this approach as it might help restructure results and demonstrate any linkages.</p>
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REVIEWER	Chris Willott King's College London UK
REVIEW RETURNED	21-May-2020

GENERAL COMMENTS	<p>This is a really interesting piece. Very small alterations necessary: P9 line 29-30. Overshadowed should say 'based on' P12, line 35-36. Themes don't 'emerge', they are the product of decisions made by the researchers.</p> <p>One thing I would like to see changed is that you describe having spoken to only Japanese people as a limitation. Rather, I would see this as a strength. It means that you can't extrapolate beyond Japan, but that doesn't matter. I would like to see more reflection on the uniqueness of Japanese medical and education culture and the</p>
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	impact this had on the students when they went abroad and when they returned to Japan.
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REVIEWER	Cynthia Ruth Howard University of Minnesota United States
REVIEW RETURNED	25-May-2020

GENERAL COMMENTS	<p>Thank you for doing this study and for presenting your results in this manuscript.</p> <p>The study aim is clearly stated and addresses a question, which begs to be answered. There is considerable discussion as you review that international health electives play a significant and one might add positive role in the professional identity formation of young health care providers. I have a few recommendations for you to make this paper stronger and perhaps better reflect your results.</p> <p>First and perhaps most importantly from my perspective, might you look at the responses you received from the participants and give specific examples of how their international elective impacted their practice now - 10 years later. The example under the 4th identified theme, Diversity of Values is a good example of how the comment relates to the theme, however the other comments do not clearly relate to the theme. Might there be examples recorded in the interview, which would clearly relate the comment to the theme? For example, under the 5th theme - did the experience of observing team practice in medical care result in the medical student developing into a physician who now practices team based medical care, contributing to the health of his/her team and that of the patient and family. The comment under leadership does not reflect the impact on the individual in terms of his/her leadership skills, attitude, position?</p> <p>Secondly, I am interested in how the themes related to the country in which the elective was done? and to the type of rotation - clinical versus research?</p> <p>Third, what about the sixteen participants who also wrote reflective essays at the conclusion of their elective - was there a long term correlation with what they considered most important to their own personal development and who they are 10 years later? This might partially answer the question you raise in the discussion regarding the continuum of PIF.</p> <p>Fourth, I am interested in all 36 themes. It would be interesting to see a table with all 36 themes and the number of interviews supporting each theme - what was the most common theme for example?</p> <p>Fifth, were the authors global health faculty, familiar with international electives in such a way that the conversation with the participants could clearly address the questions asked?</p> <p>Finally, I think what you address is better captured in the term, cultural sensitivity - curiosity or humility rather than cultural competency.</p> <p>As someone involved in providing pre-international elective and post debriefing to medical students and residents - and faculty - I am most interested in your findings, but want to know more!</p> <p>Thank you.</p>
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VERSION 1 – AUTHOR RESPONSE

Responses to Reviewers

Reviewer 1 (Anna Kalbarczyk):

1) Thank you for the opportunity to review your manuscript on the role of international electives in professional identity formation for medical professionals. Overall the manuscript is well-written, cited, and framed. More details are needed in the methods section to clarify the authors' decision and approaches. I also think there may be relationships between a number of the emergent themes that could be further explored. I hope the specific comments below on each section are helpful to the authorship and editorial team.

Answer: We are extremely grateful for your review, comments, and advice. We have revised the original manuscript to comply with your suggestions. The yellow highlighted sections of the tracked copy of the main document indicate text amended after due consideration of your recommendations.

2) Methods - Setting - do students choose to complete electives in these countries or are these the settings available to them through formal programs offered by the institutions? These decisions may be more reflective of institutional partnerships than of students' own choices.

Answer: To answer this astute question, more than half of the students accomplish their electives within the purview of formally available institutional programs. However, some students do complete electives of their own choosing. We have inserted this clarification in the paragraph pertaining to the setting in the method section.

3) The description of the narrative reflections is unclear. I would recommend starting the data collection section with the reflections and then describe the interview procedures. The authors should clarify the instructions given to the students for the reflections - that is, what were they asked to write about, in what time frame (i.e. immediately following the international elective? during the elective? within three months following the completion of the elective?). It is also unclear why some reflections were excluded - authors should be explicit in their reasoning, or just state that these were not located.

Answer: We found your comment and advice valuable and have revised the data collections section, which now begins with narrative reflections and subsequently describes the interview procedures. Each medical student was instructed to submit a narrative and reflective report immediately upon the completion of the international electives. The report required students to describe the type of training they had received in their domain, to record their emotions, to describe the difficulties and rewards the actual experience, and to outline their interactions with the local medical students. These reports were then shared freely with the faculty and with other medical students. Some reflections were excluded from this data collection only because the reports did not exist. We have added the above details to the paragraph on data collection in the methods segment.

4) Analysis - if the research question was derived through theory, why did the authors select an inductive approach? What codes emerged through this process?

Answer: The inductive approach to data analysis allowed the data to speak for themselves through the appearance of conceptual categories and descriptive themes. The research question was partly theory-driven; however, we did conduct a primary level thematic analysis to determine themes. After we discovered the themes, we engaged in further team discussions and re-examined the literature to identify the appropriate conceptual perspective. As described in the results section, this process elucidated that international electives for medical students could promote reflective self-relativization and contribute to the professional identity formation of the medical students by building cross-cultural

understanding. This clarification has been added to the data analysis segment of the methods section.

5) Results - please clarify if a quote comes from the interviews or the documents. Overall, I think the results section could use more analysis and information. Often only one or two quotes is presented for a given theme and some of them don't align well with the theme itself. Could the authors consider reorganizing this or combining similar themes to present a more robust view of the data? Each theme really seems to relate to aspects of the "self" which makes sense given that the tools asked participants to reflect on identity. Is there other literature on identity that could help guide the authors in terms of re-organizing the data?

Answer: We re-examined the data in response to this critique and were able to re-categorize and rearrange some of the themes. In addition, we reviewed the quotes we had included for each theme. It should be noted that the data, whether they were collated from interviews or reports, were presented in a manner that would allow us to incorporate the characteristics of the participants. Both interview and report data have been cited in some instances to elucidate the relationship between the international electives and their subsequent impact. While the previously mentioned method of inductive coding was employed for the reorganization of the data, no new theories were extracted or examined based on scholarly literature on professional identity formation. We have revised the results section to reflect these changes.

6) Page 14, lines 15-17 - unclear how this relates to the data or reflection on an international rotation.

Answer: We used a different quotation to cite data to address this issue. Thus, this portion no longer exists in the revised text. The modifications we have made may be reviewed in the results section.

7) Page 17, quote in lines 10-20 - how does this relate to target-setting or decision-making and leadership?

Answer: We reviewed the data in response to this comment and decided to replace the above statement with a quotation that also demonstrated a more specific link to leadership. We have incorporated this modification in the results section of the revised document.

8) Did any participants really reflect deeply on skills gained or experiences they had that truly shaped future decision-making? Specific examples would strengthen this section.

Answer: The section in question discussed career design, and we reexamined the compiled data to appropriately respond to your question. Specifically, the quotes presented from the participant reports and interviews quotes evidence that the experience of building relationships with role models they encountered during the accomplishment of their international electives exerted a direct impact on the prospective decision-making processes of the medical students. The revised results section encompasses this clarification.

9) Did differences emerge in these themes for different types of participants? Male vs. Female; Participants in different specialties; Participants who had different types of experiences (i.e. clinical vs. research; or HIC vs. LMIC)?

Answer: We reevaluated the data in light of the questions asked, paying special attention to the differences in destinations and the selected international electives. The review elucidated that it was easier to recognize diverse values in low to middle income countries, hence the destination chosen for the international electives did exercise influence. The reexamination also indicated that students who chose to conduct research for their international electives may tend to select careers as

researchers in the future. In terms of sex-based differences, although only a few female students participated in the study, themes such as work-life balance and career support were found to be specifically significant for female students. We have added a segment on the differences discovered in the selection of electives and participant characteristics to the results section. We would be grateful if you could review and affirm our rectifications.

10) Discussion - I would like to see authors specifically link the discussion back to the results, particularly in the paragraph on cultural competency. In the results there were excellent quotes about medical professionals having different insight into members of their community because of their experiences. That link should be made explicit here.

Answer: As you have pointed out in this excellent suggestion, the assertion that medical professionals display distinct insights into members of their communities is important to the discussion of cultural competency. In addition to making this connection explicit, we have also added some content on the uniqueness of Japanese culture at the end of this paragraph of the discussions section to reveal the extent of the impact.

11) Table 1 - it is interesting there are so many more male than female participants - should be noted in the results. You could also add numbers of those who went to high-income vs. low-and middle-income countries in the results section itself. When you present quotes it might also be interesting to note one or two demographic features of the participants including gender and location of their elective). This could help ground the quotes for the reader.

Answer: As mentioned above, we have included specific information on the number of participants, the differences in electives, and sex-based distinctions in a segment on differences in training content and participant characteristics in the results section. With regard to Table 1, the editor indicated a concern about the possibility of identification of individual participants. Thus, we have deleted the information about the postgraduate year of the participants. However, we have added information on participant characteristics with each quotation used in the results section. This clarification has been incorporated in the results section.

12) Figure 1- I imagine the relationships presented here are more interconnected than this figure shows. Couldn't perspective transformation influence diversity of values or vice versa? I would suggest the authors review this approach as it might help restructure results and demonstrate any linkages.

Answer: As mentioned above, we were able to re-categorize and organize some of the themes after a thorough review of the data. The process of this reexamination revealed significant associations between the themes of perspective transformation, self-development, and diversity of values. Figure 1 has been modified on the basis of this new awareness, and the results section has been amended to reflect the changes.

Reviewer 2 (Chris Willott):

We value your comments and suggestions. The yellow highlighted sections of the tracked version of the revised document represent text altered after due consideration of your remarks and suggestions.

1) This is a really interesting piece. Very small alterations necessary:
P9 line 29-30. Overshadowed should say 'based on'

Answer: We appreciate your commendation of our work and have amended the text as asked.

2) P12, line 35-36. Themes don't 'emerge', they are the product of decisions made by the researchers.

Answer: We appreciate your advice and have rectified the text in accordance with your recommendation.

3) One thing I would like to see changed is that you describe having spoken to only Japanese people as a limitation. Rather, I would see this as a strength. It means that you can't extrapolate beyond Japan, but that doesn't matter. I would like to see more reflection on the uniqueness of Japanese medical and education culture and the impact this had on the students when they went abroad and when they returned to Japan.

Answer: Your perspective is much appreciated. Medical students in Japan are in a learning environment with fewer immigrants than there are in learning environments in other developed countries. As they do not have much experience in deep communication with people from other countries, we thought that the various experiences they had during their international electives would be important opportunities for them to not only acquire career and medical knowledge and skills but also grow as human beings. That would be significant. The uniqueness of Japanese educational culture is represented by the reference to the internalization of hansei or kaizen, concepts that are very Asian in their nature and applications. It is our belief that an individual element of contemplation is triggered when medical students around the world transfer the concepts they have learned during the course of international electives to the process of socialization. The results we have obtained corroborate that this process of insight modification does occur in Japanese culture in the community of medical professionals after students experience international electives. The discussion section has been amended in accordance with the details mentioned in this response.

Reviewer 3 (Cynthia Ruth Howard):

1) Thank you for doing this study and for presenting your results in this manuscript. The study aim is clearly stated and addresses a question, which begs to be answered. There is considerable discussion as you review that international health electives play a significant and one might add positive role in the professional identity formation of young health care providers. I have a few recommendations for you to make this paper stronger and perhaps better reflect your results.

Answer: We have revised the manuscript in accordance with your apposite suggestions. The yellow highlighted sections of the tracked copy of the main document indicate the text modified after due consideration of your feedback and comments.

2) First and perhaps most importantly from my perspective, might you look at the responses you received from the participants and give specific examples of how their international elective impacted their practice now - 10 years later. The example under the 4th identified theme, Diversity of Values is a good example of how the comment relates to the theme, however the other comments do not clearly relate to the theme. Might there be examples recorded in the interview, which would clearly relate the comment to the theme? For example, under the 5th theme - did the experience of observing team practice in medical care result in the medical student developing into a physician who now practices team based medical care, contributing to the health of his/her team and that of the patient and family. The comment under leadership does not reflect the impact on the individual in terms of his/her leadership skills, attitude, position?

Answer: We find the points you have made extremely pertinent and thus, we reviewed the quotations we had included for each of the extracted themes. We also presented the data, regardless of whether

they were collated from interviews or reports, in a manner that would reflect the characteristics of the participants. Acting on your advice, we cited both interview and report data to clarify the relationship between the international elective courses and their impact after 10 years. We have also modified the section on leadership as you have asked, and have enhanced specificity. The information provided here has been incorporated in the results section of the revised paper.

3) Secondly, I am interested in how the themes related to the country in which the elective was done? and to the type of rotation - clinical versus research?

Answer: We reevaluated the data to attend to this query, paying specific attention to the differences in destinations and the selection of international elective courses. The results illuminated that diverse values were more visible in low to middle income countries; hence, the destination did make a difference to some extent. The reexamination also indicated that students who chose to conduct research for their international electives may tend to select careers as researchers in the future. We have added a segment on the differences discovered in the selection of electives and participant characteristics to the results section. With respect to Table 1, the editor indicated a concern about the possibility of identification of individual participants. Thus, we have deleted the information about the postgraduate year of the participants. This clarification has also been incorporated in the results section. We would be grateful if you could review and affirm our rectifications.

4) Third, what about the sixteen participants who also wrote reflective essays at the conclusion of their elective - was there a long term correlation with what they considered most important to their own personal development and who they are 10 years later? This might partially answer the question you raise in the discussion regarding the continuum of PIF.

Answer: As mentioned above, we reassessed the data and appended data collected from both reports and interviews to the results obtained for some of the participants to uncover long-term correlations with personal development. We also probed long-term correlations between the elements medical professionals considered most important to their growth and where they would like to be in 10 years. The results of this investigation indicated the preeminence of the presence of a mentor or role model. We have presented the relevant review of the extant literature in the section of the introduction that relates to professional identity and socialization. Previously conducted studies have demonstrated that role models and mentors constitute the most robust factors for professional identity formation in both clinical and non-clinical settings. The outcomes of the analysis conducted in the present study are aligned with the results obtained by previous studies. The role models encountered by medical students during the accomplishment of their international electives exerted a significant impact on their subsequent personal development. The elucidation provided here has been added to the discussion section.

5) Fourth, I am interested in all 36 themes. It would be interesting to see a table with all 36 themes and the number of interviews supporting each theme - what was the most common theme for example?

Answer: To respond appropriately to your interest, Table 3 now exhibits the number of interviews conducted for each theme.

6) Fifth, were the authors global health faculty, familiar with international electives in such a way that the conversation with the participants could clearly address the questions asked?

Answer: To answer this pertinent question, we listened to the presentations delivered by the medical students after they had accomplished their international elective programs and we continue to engage with medical students who participated in the international electives program through our mentoring

and teaching routines. Therefore, we are certainly eligible to address the questions that were asked. We have added this information to the methods section.

7) Finally, I think what you address is better captured in the term, cultural sensitivity - curiosity or humility rather than cultural competency.

Answer: We appreciate your suggestion of this terminology and have incorporated it in the revised manuscript.

8) As someone involved in providing pre-international elective and post debriefing to medical students and residents - and faculty - I am most interested in your findings, but want to know more! Thank you.

Answer: We really appreciate your endorsement of our work. We have modified the manuscript to comply with your recommendations. We hope that we have been able to satisfy all your revision requirements.

VERSION 2 – REVIEW

REVIEWER	Anna Kalbarczyk Johns Hopkins Bloomberg School of Public Health, USA
REVIEW RETURNED	24-Jun-2020

GENERAL COMMENTS	This manuscript is much improved and I appreciate the authors' attention to details and to reviewers' comments. I only have a few minor language recommendations specific to the new section in the results on participant differences. - page 19 lines 12-17 - suggest minor edits to make more clear. (e.g. "may have made them realize to the presence..." is unclear). - line 38, is it conversely? page 20, line 3 suggest deleting " as a result of the differences between male and female" and making minor edits to the sentence.
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REVIEWER	Chris Willott King's College London UK
REVIEW RETURNED	19-Jun-2020

GENERAL COMMENTS	The authors have addressed the comments I made on the initial submission.
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VERSION 2 – AUTHOR RESPONSE

Responses to Reviewers

Reviewer 1 (Anna Kalbarczyk):

1) This manuscript is much improved and I appreciate the authors' attention to details and to reviewers' comments. I only have a few minor language recommendations specific to the new section in the results on participant differences.

Answer: We sincerely appreciate your review and comments. We have revised the manuscript in accordance with your apposite suggestions. The yellow highlighted sections of the tracked copy of the main document indicate text amended after due consideration of your recommendations.

2) page 19 lines 12-17 - suggest minor edits to make more clear. (e.g. "may have made them realize to the presence..." is unclear).

Answer: We appreciate your advice and have rectified the text in accordance with your suggestion.

3) page 19 line 38, is it conversely?

Answer: Thank you for this pertinent suggestion. We have revised this sentence in accordance with your recommendation.

4) page 20, line 3 suggest deleting " as a result of the differences between male and female" and making minor edits to the sentence.

Answer: We appreciate your commendation and have amended the text as asked.

Reviewer 2 (Chris Willott):

1) The authors have addressed the comments I made on the initial submission.

We value your comments. The yellow highlighted sections of the tracked version of the revised document represent text altered after due consideration of reviewer's suggestions.