Author’s response to reviews

Title: Factors influencing trainee doctor emigration in a high income country: A mixed methods study

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Title: Factors influencing trainee doctor emigration in a high income country: A mixed methods study

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Reviewer reports:

Reviewer #1:

Well done on this interesting and much needed research. The topic area very relevant with the need to explore doctor’s emigration in high income settings and highlight the Irish doctors experience. This article adds greatly to current knowledge in this area.

Comment 1:

There were some small comments for this paper; Methods Was it looked at as to what postgraduate training the doctor was completing and whether that influenced their perception of career progression and training quality? For example issues of career progression may be more specific to one area (for example having to reapply to surgical schemes at each stage), as opposed to six year run-through schemes such as anaesthetics?

There could be a case for a hypothesis that not all training programmes would hold the same perception. This may be outside the remit of this study and if so maybe this could be an area for future investigation? Opportunity to learn from success factors of specific training programmes and how they assist retention (e.g. adequate supervision, consultation/NCHD ration, career opportunities).

Response

We thank the reviewer for this comment and the positive response to our manuscript. We tested the association of doctors’ current speciality with intention to remain or leave, and with the factors that might influence them to practice abroad. There was little difference and no statistically significant associations, at the univariable or multivariable levels, between specialty choice and doctors intentions to leave or remain in Ireland, which we now state in the revised text (p.9: line 19). While there were differences between training specialties in the proportions of doctors who agreed with the 20 statements of factors that would influence them to practice abroad, as reviewer 1 conjectures in respect to career progression and training quality, we have not reported these for the following reasons: the numbers of respondents per category across the 13 major specialties (disciplines) and an additional category of “other” were in many cases small, which meant that there was insufficient statistical power. Secondly, the questions on the factors were specific to the decision around emigration and not about specialty experiences; and we feel that reporting specialty-specific experiences could be misleading.

We agree with Reviewer 1’s identification of this as an area for further investigation. We started a new study in 2016 that will include a survey of all trainee and non-trainee NCHDs later in 2017 that we hope this will provide valuable information on the career choices, experiences and migration intentions of all NCHDs, including by specialty / discipline.
Comment 2:

You included those on a postgraduate training programme only - maybe just to give reasoning for why NCHD that were not on a scheme were not included as they may have some interesting insights as to why they chose not to apply.

Response

Since 2014, the Medical Council of Ireland (MCI) has been carrying out an annual survey of NCHD trainees, called “Your Training Counts” (YTC), which excludes NCHDs who are outside of formal postgraduate training programmes. Our sample was derived from the 2014 survey sampling frame, which had a response rate of 53% [n=1636]. Response numbers and rates have fallen in subsequent years: YTC 2015 - 37% [n=1035]; YTC 2016 - 26% [n=828]. In 2014, the MCI and the RCSI Health Workforce research team agreed on a set of questions on doctor emigration and the factors that might influence it, and included a question asking YTC respondents to consent to being followed up by the research team to take part in a survey on doctor emigration. As the YTC survey is limited to trainees we did not have the opportunity at that point to survey those who were not within a structured training programme. The new Medical Career Tracking study, where we plan a survey in late 2017, will give us that opportunity, using a different sampling frame of all (circa 6,000) NCHDs.

Comment 3

Page 10 - Just to clarify what you mean by bullying in this context? (Emotional, neglect etc?)

Response

Our question asked participants: “have you ever experienced bullying from other staff while working as a doctor in Ireland?” without providing a definition. The lack of a definition of bullying is also a criticism that has been made about the 2014 and 2015 Medical Council YTC reports [1]. Our recently published paper, also based on the qualitative data used in this paper, provides insights into the nature of bullying as experienced by NCHD trainees in Ireland – see http://www.sciencedirect.com/science/article/pii/S0277953617303507) [2]. We have now included this as a reference and also a second reference: Lyons et al 1995 [3], which provides the following definition of bullying, which fits well with our findings: “persistent, offensive, abusive, intimidating, malicious or insulting behaviour, abuse of power or unfair penal sanctions which makes the recipient feel upset, threatened, humiliated or vulnerable which undermines their self-confidence and which may cause them to suffer stress”.


The text has been amended on page 22, lines 22-24 as follows:

The nature of the workplace practices and experiences that participants considered as bullying were reported by us in a recent paper [53] and correspond with Lyons et al.‘s definition [54]. (Page 22: Lines 22-24)

Comment 4

Qualitative Methods

In your quantitative you did not include those that had left Ireland, however in the qualitative you did. This is not a problem as all can give insights but maybe just to give reasoning for this.

Response

Within our quantitative study respondents who were still in Ireland were asked about their intention to practice medicine in Ireland in the foreseeable future. They were then taken through a range of questions asking about factors influencing that decision. Those who had already left Ireland did not answer the question on (future) intention and therefore were not asked the questions on influences on their decision to leave or remain. Therefore we were unable to include those not in Ireland in the final analysis. However participants within the qualitative study were probed on their reasons for leaving which provided additional insight and depth and we have reported on those also to enrich the findings. We have included an additional sentence in the methods section on page 7, line 19-20:

Doctors who had left Ireland between 2014 and 2016 were not invited to respond to these intention-to-practice-abroad statements and therefore are not included in this analysis. (Page 7; lines 19-20)
Comment 5

Page 6. Line 53 - thematic analysis completed by one or more researchers?

Response

We have indicated in the previous sentence that coding was carried out by two authors (SC & NH). A coding framework was derived using thematic analysis. We have edited the sentence to provide more clarity as below:

All transcripts were entered into MAXQDA software, analysed by two authors (NH & SC) using thematic analysis [32] and then coded independently by both authors. (Page 7; line 25 & Page 8: line 1)

Comment 6

Limitations

Medical council of Ireland led survey - could there be reporting bias from subjects as not a fully independent study?

Response

We agree with the reviewer. There may have been a reporting bias as a result of the sample frame being derived from the Medical Council 2014 YTC survey, and have added the following text to the limitation section on p.24, given that we do not believe we can make valid conclusions on the nature of any such bias:

It is not possible to conclude if selection bias relating to response to the Medical Council survey resulted in a study sample that was more or less likely to report an intention to practice abroad. (Page 24; Lines 17-20)

Comment 7

Grammar/Spelling

Page 9. Line 22 - Put twenty two percent in words then as numerical in next sentence. Keep consistent. I would suggest numerical once over ten.
Response

We have used words for 22% as it begins the sentence. (Page 9: Line 9)

Comment 8

Page 19 Line 48 - missing full stop after perceived: Corrected

Reviewer #2:

1. Content

A welcome article adding to the growing body of knowledge on migration. It is of particular interest using a mixed quantitative and qualitative interview technique. This always gives the reader the opportunity to appreciate the quantitative findings with a few key quotes that illustrate the findings in impressive ways. It is hoped that some of the identified elements of discontent in the training situation get further researched to understand the reasons of trainer attitudes towards their trainees so that interventions can be designed to reduce these factors which contribute to generating losses from the future workforce.

Response

We thank the reviewer for their positive comments and agree with their view on the need for interventions aimed at reducing discontent.

Comment 9

2. Editorial

A few typing errors, etc. need to be addressed:

Page 4: line 9: move the citation in front of the comma: Corrected

Page 18, line 16: add a comma after "However": Corrected

Page 19, line 48: add a full stop after the word "perceived": Corrected

Page 22, line 58: spell out the abbreviation "ED" in a footnote: We have included “emergency department” italicised in squared brackets after the abbreviation.
Reviewer #3:

The authors of the manuscript „Factors influencing trainee doctor emigration in a high income country: A mixed methods study“ give information on an interesting and relevant topic. In total, the manuscript is well written. Research question and objective of the study are clearly stated. The authors chose a mixed methods approach, which is suitable for this kind of topic. The sample appears to be large enough to draw robust conclusions. Potential limitation in terms of the risk of a selection bias was mentioned and appropriately discussed. The approach of data collection analysis is comprehensively described and the analytical approach is appropriate. Main results of the study are presented and the conclusion was derived from and is mainly based on the results. In summary, I have only some small recommendations or advices.

Response

We thank the reviewer for their positive comments on our manuscript.

Comment 10

1. Although these results are based on an Irish sample, the results are of interest for other high-income countries as well. I want to ask the authors to give more information on the situation in other high-income countries and to link their results with this evidence. A more international focus would raise the informative value for an international audience.

Response

We have included a number of additional pieces of text to link our findings with other international studies on high income countries in addition to those that are currently there.

Lack of job satisfaction among doctors in the UK, Iceland and Greece has been associated with the decision to emigrate [12, 15, 34–37]. Whereas, in Ireland, for the most part, high levels of dissatisfaction with training, work and career opportunities among doctors in Irish hospitals highlighted major medical workforce systemic weaknesses, but were not predictors of intention to emigrate. (Page 19; line 26 & Page 20; Lines 1-4)
High levels of burnout and dissatisfaction with work-life balance among physicians have been reported in the US and can have negative repercussions on physicians' health and the quality of care they provide, issues which could be dealt with through structured mentoring programmes [47]. Trainee doctors in the UK reported how poor work-life balance detracted from learning, career progression, personal life and well-being [48, 50]. In Greece, a country similarly affected by the economic recession, low job satisfaction, fears of unemployment, and a lack of standardised training [35, 36] have been reported to influence the exit of doctors from the system. Austria, with one of the highest numbers of medical graduates among OECD countries sees 30% of its graduates emigrating [14] reasons for which include low ratings of undergraduate clinical training, unstructured postgraduate training curricula, low basic salaries, large amounts of administrative tasks, and long working hours [14, 51] (Pages 22; lines 2-12).

Comment 11

2. There is an ambiguous in the title of Figure 1. The authors write that Figure 1 presents "Percentage of participant’s in agreement with factors which would influence them to practice medicine abroad". This grammatical style of question reflects a potential ("would"). In supplementary Table 1, the authors ask explicitly, why the participants consider leaving. This grammatical style reflects a fact. This might be a small difference but both questions could lead to different answers (Looking first at the title of figure 1, I was not sure if the table presents the results the authors discussed). As the authors asked for facts this should be stated in the title of figure 1.

Response

We agree with the reviewer that there may be some ambiguity regarding the grammar used in the figure and table titles. However, we would like to point out that supplementary Table 1 uses the word “considering” which implies that the participant has not necessarily made up their mind and therefore is less of a “fact”. We believe the ambiguity relates to the words “considering” and “influence”. We have amended the title of Figure 1 to provide more clarity as follows.

Figure 1: Percentage of participants in agreement with statements that they consider would influence their decision to practice medicine abroad.

Comment 12

3. From my point of view, the authors stretch the point in their interpretation of their results. There is clear evidence that the work-life-balance, family reasons, and quality of training influence the decision of leaving. However, there is no clear evidence that career opportunities, earning or work conditions lead to the decision to leave.
As presented in Figure 1 these factors are mention by many participants but in both groups, those who want to leave and those who are not sure or do not want to leave. Therefore, the conclusion that these factors are responsible for the wish to leave, is not valid. However, there could be a push-pull mechanism. Factors like quality of training are transitory circumstances and rather push factors. Nevertheless, in the sample is a high proportion of participants who do not want to return to Ireland after finishing their training. Responsible for this could be better career opportunities, working conditions or earnings. These factors could be labelled as pull- or better stay-factors. Maybe, the authors should incorporate this analysis (logistic model; Return: yes/no as dependent variable) into their study.

Response

We agree with Reviewer 3’s point that most of the work and career related factors (apart from training and personal factors) were reported almost equally by those considering leaving and those planning to stay. We have now made this point more clearly in the first paragraph of the Discussion on page 19, lines 24-26. The Discussion then, as before, draws attention to the discriminating factors that emerged from the univariable and multivariable analyses. We have also deleted text from p.23 lines 2 to 7 in the discussion, where we had misinterpreted the findings; and have deleted a phrase from the Abstract – see page 3, lines 5-6.

On the point of additional analysis examining the “return” variable as a dependent variable on push and pull factors, we believe the analysis would become too complex and might be misleading. The Likert scale questions specifically asked respondents about factors that might influence the decision to leave; they were not general statements about experiences of training and working in Ireland, and they were not linked to the question on likelihood of return to Ireland. Moreover, the quantitative analysis was of doctor’s still working in Ireland where a decision on returning to Ireland would be more speculative than one on leaving Ireland. Therefore, while an analysis that used ‘return to Ireland’ as a dependent variable might yield statistically significant associations, we believe this would be an over-stretching of the data.

Comment 13a

4. There are to more factors that deserve a more thorough discussion. Firstly, there is a marginally significant difference between physicians employed by private or public employers. Even if this result is officially not significant, there should be a short discussion. Is there any evidence that illuminates this difference?

Response

This is true; however the variable is “Private/ Other”, of which “Other” includes the categories of research (n=13), maternity leave (n=16), career break (n=3), not working (n=1) and other (n=12).
Those in the private health system totalled 30 doctors. We collapsed the variable to give a more robust category to compare against those in the public sector. When compared with the full set of categories the result is non-significant (P=0.100). Most of the doctors who were on maternity leave or undertaking a period of research were previously training in the public sector, and most of these would be returning to work in the public sector to complete their postgraduate training, which in Ireland almost wholly takes place in the public sector. The numbers working long term in the private sector are too small to demonstrate a significant difference.

Therefore, this particular sample, which excluded NCHDs (junior doctors) in non-training posts (a higher proportion of whom are likely to be working in private sector posts), is not suitable to explore a possible difference in migration intentionality among doctors in the private vis-a-vis the public sector. We have included an additional footnote in Table 1 (Page 10) to outline the additional categories in the “Private/ Other” category of the “Employment status” variable as follows:

** Private/ Other: Other category includes Research (n=13), maternity leave (n=16), career break (n=3), not working (n=1) and other (n=12).

Comment 13b

Secondly, physicians, who are older, married, or have children have a higher motivation to leave. This result is counterintuitive, as younger single should have a higher flexibility. This aspect should be discussed in a more comprehensive manner, as it has a potential effect on political planning and decision-making.

Response

This is indeed an issue to be highlighted for workforce planning and decision making. We have included an additional sentence in the final paragraph pointing to a possible reason why doctors who are older, married or have children, have a higher motivation to leave.

“This is particularly relevant given the finding that doctors who were married, had children or were older indicated they would leave for family or personal reasons, a group far more likely to establish roots abroad due to their need to establish their careers due to their relationship commitments. These groups of doctors have perhaps been hardest pressed throughout the economic recession, are likely more motivated to exit medical practice in Ireland in order to provide better opportunities and lifestyles for their families.”

(Page 23; Lines 16-22)
Comment 14

5. In the qualitative results section, the authors are labelling the participant sometimes as R# or Respondent# or Participant#. This should be standardized.

Response

We apologise for this error and have corrected the text with all labels reading as “participants”.