PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Multiple and multi-dimensional transitions from trainee to trained doctor: A qualitative longitudinal study in the UK
AUTHORS	Gordon, Lisi; Jindal-Snape, Divya; Morrison, Jill; Muldoon, Janine; Needham, Gillian; Siebert, Sabina; Rees, Charlotte

VERSION 1 – REVIEW

REVIEWER	sue Kilminster University of Leeds UK
REVIEW RETURNED	24-Jul-2017

GENERAL COMMENTS	I think this paper offers an interesting approach towards contributing to work directed at increasing understanding about these complex issues. Overall, I think the paper could be more fully located in the relevant literature and related theoretical perspectives. Using audio diaries in this context is a novel approach and I would like to have seen a more detailed analysis of the data which engaged more fully with current understandings about transitions. For eg What sort of situations prompted the participants to make a recording? How did the participants understand the prompt "transition experiences"? What aspects did they think were significant? etc etc These issues are all relevant to this paper, especially if you are arguing that the paper has implications for practice. I am concerned that only a partial analysis of the themes you identified is presented in this paper - what is the justification for this? I think it is important to present qualitative data in the text, with analysis, rather than in tables as here. . I was not particularly convinced by the MMT approach but it is a reasonable choice .

REVIEWER	Antonia Rich Research Associate University College London, UK
REVIEW RETURNED	07-Aug-2017

GENERAL COMMENTS	How doctors experience transitions is a worthwhile topic particularly given concern about doctors' well-being and this being a challenging time. Longitudinal nature of the study permits exploration over time. Also use of audio-diary is a real strength as it allows data collection to be contemporaneous – rather than what is typical in a qualitative study of asking participants to reflect on past events. It's perhaps worth highlighting strengths of utilising this method further. It feels a long article to read. The word count given is 5850. My understanding is that BMJ Open articles should be 4,000 words and would benefit from an edit. Context: Not all readers will be medics – so I good to make explicit that by trainee doctor you mean post-grads, not medical students. Would be helpful to provide brief overview of Framework Analysis as not all readers will be familiar Title: perhaps could add 'in Scotland' to the sentence to provide the reader with more context Abstract: the sentence in results L.54 says 'positive and negative' impacts – it looks like they are all negative? Strengths and limitations: The sentence regarding strength of 'large amount of qual data collected from a diverse sample', needs tempering. I agree that the audio diary and longitudinal nature of the study means you have a rich data set, however the sample size is relatively small and participants are not actually that diverse? The majority of trainees are from medicine and is acknowledged in the discussion, most where White. All are in Scotland. Did you collect data on whether or not participants had qualified in the UK or overseas? Given the research showing that international medical graduates and non-White UK graduates do less well on a range of outcomes such as assessments and recruitment, it would have been interesting to see if there were differences in terms of transitions for white vs non-white UK grads and IMGs vs UK trained doctors. So I don't think diverse is an accurate term to use to describe the sample. Introduction: First para – research by Jindal-Snape & Miller – can further details be given. We are not sure what the differences are between 'copers' and 'non-copers' – is it psychological factors or broader social factors? Combination of the two? The last para on page 4 is justifying why looking at transitions is an important area of research. I wonder whether this could be strengthened further. Is there any evidence that doctors are more likely experience increased stress, mental health difficulties at the time of transition? Think it would be good to place the paper in the wider context of the pressures of doctors at the moment in terms of well-being. Page 5, L 25. Suggests that higher-stage trainees feel 'less

	prepared'. Than whom? I wasn't clear. Page 6, L 54. 'One European country'. Could you state the country? I think more informative for the reader. Page 7. L 10 talks about different lengths of training in different specialities. I agree important, but many readers will be aware of this variation so best to be explicit what this is Page 7. Line 14 talks about geographical locations – as all participants are in Scotland, perhaps better to say different settings? Page 7. Line 29. Discuss sig others in theoretical underpinnings section – I don't think you need this sentence Methods p. 7, line 48. Longitudinal narrative inquiry – is a method, not a methodology? P 8., Line 53. I would be specific about what the ethical and institutional approvals were and replace 'one UK country' with Scotland. How were the four health boards selected? I wondered whether participants were given anything for participating given the time commitment. Sampling: I was confused as to why SAS doctors are included as they are not in training? I would remove or needs a strong justification. Table 1 – acronym of ALD is a bit confusing – as there are only two doctors in this category, perhaps better just to specify the speciality for each I'm not sure Table 2 adds much. Perhaps better as an appendix? Findings: I wondered why the quotes are in a table instead of interspersed through the text? It feels a bit disjointed this way, as a reader, you read the relevant para in the results, but then have to find the table, find relevant quote etc. On page 12, line 48, it states 'the other themes will be presented elsewhere'. I wasn't clear why they are not described in this paper. An overview is given in Table 3 of these themes, so then you are curious to learn more about them! Have these themes be written up for publication elsewhere? If so, can you provide reference? I think little point in providing overview of the themes in table 3 if more info is not going to be provided. The quotes are interesting, but lengthy You talk in the intro about the different training pathways and different lengths of time to train – which I agree is important, but I couldn't see any mention of this in the findings? I would be interested to know if there are differences depending on speciality but does not seem to have been discussed.

	Discussion: The discussion needs strengthening – it needs to clearly discuss the findings and place the study in the context of the wider literature. It doesn't read like a discussion of the findings, more a review of strengths of the paper and feels a little repetitive in the sense it says the results are multiple and complex, which we expected from the intro, but I'm left with the sense that I don't know therefore what this study actually added? I'm sure there are interesting results – they need pulling out in the discussion. So we are clear what this paper found and placing in context of the wider academic research. What are the similarities and diff's between other studies, what does it add?

VERSION 1 – AUTHOR RESPONSE

Reviewer 1:
Overall, I think the paper could be more fully located in the relevant literature and related theoretical perspectives.

Author response:
We have revisited our literature review according to some specific comments from the second reviewer (see later). We now think that our revised paper is more located in the current literature (within the confines of the word count). More specifically: We have moved our introduction to the MMT (multiple and multidimensional transitions) theory into the literature review and referenced other theories that have been used in previous studies to help locate where our paper sits. Furthermore, throughout the revised literature review, we now reference MMT to build our argument as to its relevance as an underpinning theory to research doctors' transitions. We have also provided additional detail in our revised paper regarding doctor burnout (on page 3&4) which we think helps the reader see why transitions research is important.

Reviewer 1:
Using audio diaries in this context is a novel approach and I would like to have seen a more detailed analysis of the data which, engaged more fully with current understandings about transitions. For eg What sort of situations prompted the participants to make a recording? How did the participants understand the prompt "transition experiences"? What aspects did they think were significant? etc etc. These issues are all relevant to this paper, especially if you are arguing that the paper has implications for practice.

Author response:
We asked participants about their understandings of transitions in each interview and found that their understandings had become more sophisticated and nuanced over time (e.g. some participants at the start of the study articulated transitions to be moving from one thing to another, but by the end of the study were describing it as an ongoing process which affects many aspects of an individual's life). We have not added extra detail to our revised paper about this because we are writing up trainees' conceptualisations of transitions for another paper (as described in our revised paper). However, we have added a sentence to our revised methodology section to clarify how we sensitized participants to transition experiences. It now reads (page 10): "The prompt sheet asked participants to describe an aspect of their transition experience to date; how this affected their ongoing transition experiences; how these experiences were supported; and whether these experiences were affecting their health

and well-being in any way. The initial interviews sensitized participants to the type of stories they could share in their LADs (for example: adapting to new roles; their relationship with colleagues, or transitions they were experiencing in other aspects of their lives)."

Reviewer 1:
I am concerned that only a partial analysis of the themes you identified is presented in this paper - what is the justification for this?

Author response:
We have fully analysed all themes in our study but only presented a selection in this paper, as we found it impossible to present all themes in sufficient depth and detail, plus longitudinally in the one paper. Note that we have already been asked to reduce the size of this paper and yet we only present a few of our themes. We have therefore decided to take the unpresented themes out of Table 2, but we have kept reference to them in the text, so that the reader is aware that there will be subsequent papers presenting our other themes. It now reads (see pages 11&12): "In this paper, we focus on three themes only that are specific to addressing the research questions posed earlier in this paper: Multiple transitions; Supporting successful transitions; and multiple and multi-dimensional transitions interacting and impacting (see Table 2 for a description of these three themes). The three other themes (conceptualisations of transition; transition narratives; and shifting identities) are being prepared for publication elsewhere".

Reviewer 1:
I think it is important to present qualitative data in the text, with analysis, rather than in tables as here.

Author response:
Thank you for this comment and we agree with both reviewers that including the quotes in the text near the relevant analysis is a better approach for the reader. We originally put text in Tables for reason of word count and because of the syle of previous BMJ Open papers where we have presented quotes in Table s(see: Rees et al. 2014; Gordon et al. 2015). However, we have removed the tables and amalgamated the quotes into the text in the current revised paper. This has inevitably increased the word count of the revised paper, something that the second reviewer was concerned about, but this cannot be helped. We have wherever possible tried to edit the quotes so that they are less wordy.

Reviewer 2:
Longitudinal nature of the study permits exploration over time. Also use of audio-diary is a real strength as it allows data collection to be contemporaneous – rather than what is typical in a qualitative study of asking participants to reflect on past events. It's perhaps worth highlighting strengths of utilising this method further.

Author response:
Thank you for your positive comments. We have added a sentence to the strengths and limitations section of the revised discussion highlighting further the strengths of our methods. It now reads (page 3): "The longitudinal nature of the study permitted exploration over time and the use of audio-diaries allowed collection of data that were contemporaneous rather than a reflection on past experiences as is typical with much qualitative data on this topic."
Reviewer 2:
It feels a long article to read. The word count given is 5850. My understanding is that BMJ Open articles should be 4,000 words and would benefit from an edit.

Author response:

Whilst we appreciate that our paper has a higher than 4000 word count, we feel that our word count is justified by our rich data where we have attempted to give our participants' stories sufficient justice (note that many general education and social sciences journals have word counts of 7000). Also, we have published similarly sized qualitative papers in BMJ Open previously (e.g. Rees et al. 2014; Gordon et al. 2015). Having said this we have done a hard edit across the paper to try and reduce the word count including editing our quotes. However, as above, the integration of quotes into the text (as requested by both reviewers) has increased the word count of the revised paper.

Reviewer 2:
Context: Not all readers will be medics – so I good to make explicit that by trainee doctor you mean post-grads, not medical students.

Author response:
We have added a sentence to clarify the definition of trainee doctor in our revised paper, which now reads (page 5): "We use the term 'trainee doctor' to refer to the years following graduation with a medical degree, where doctors in the UK will first experience a range of clinical settings (working for two years as a Foundation doctor) before moving to a core (for example, medicine) or specialty training pathway (for example, cardiology)."

Reviewer 2:
Would be helpful to provide brief overview of Framework Analysis as not all readers will be familiar.

Author response:
In our methodology section, we already included the 5-stage process of framework analysis we used, but in our revised paper we have added to this a sentence which defines what Framework analysis is.

Reviewer 2:
Title: perhaps could add 'in Scotland' to the sentence to provide the reader with more context
Author response:
Due to the small size of Scotland, we feel that including this level of disclosure in the final paper has the potential to make participants identifiable. So, while we have not added the word Scotland to the title, we instead add the word 'UK' to the title.

Reviewer 2:
Abstract: the sentence in results L.54 says 'positive and negative' impacts – it looks like they are all negative?
Author response:
Thank you for noting this. We have removed "positive and negative" from the revised abstract.

Reviewer 2:
Strengths and limitations:
The sentence regarding strength of 'large amount of qual data collected from a diverse sample', needs tempering. I agree that the audio diary and longitudinal nature of the study means you have a rich data set, however the sample size is relatively small and participants are not actually that diverse? The majority of trainees are from medicine and is acknowledged in the discussion, most where White. All are in Scotland.
Author response:
We have tempered this strength in our revised paper to now read (page 3): "A rich qualitative dataset collected from trainees in various specialties and training sites should enable transferability of our findings to other healthcare settings."

Reviewer 2:

Did you collect data on whether or not participants had qualified in the UK or overseas? Given the research showing that international medical graduates and non-White UK graduates do less well on a range of outcomes such as assessments and recruitment, it would have been interesting to see if there were differences in terms of transitions for white vs non-white UK grads and IMGs vs UK trained doctors. So I don't think diverse is an accurate term to use to describe the sample.

Author response:
Our study did not set out to include a comparison between overseas and UK qualified graduates, so we did not purposively sample for origin of first degree. We do, however, argue that there is diversity in terms of gender and specialty (17 sub-specialties were represented), although for reasons of maintaining participant anonymity we cannot state which in the paper. Note that the lack of ethnic diversity in our sample is not unusual for many Scottish settings (GMC 2016). However, we agree with the reviewer that it would be interesting to explore the transitions between UK and overseas trained doctors, and white and non-white UK trained doctors, so we have added words to this affect in the future research section of our revised discussion (page 29): "Finally, we would encourage further research with trainees from general practice settings and black and minority ethnic (BAME) groups (both UK and overseas trained doctors) to examine whether our findings are transferable to a more diverse population of trainees and in order to compare and contrast the trainee-trained doctor transition between diferent types of trainees".

Reviewer 2:
First para – research by Jindal-Snape & Miller – can further details be given. We are not sure what the differences are between 'copers' and 'non-copers' – is it psychological factors or broader social factors? Combination of the two?

Author response:
We have added some extra detail from this research in our revised paper (although remaining mindful of not increasing our word count too much). This sentence now reads (page 4): "Jindal-Snape and Miller have argued that transitions can be times of severe adversity, as what might be seen as everyday minor hassles by some (such as difficulties with a new colleague) can be viewed as major critical incidents by others, especially when these accumulate without any resolution over time."

Reviewer 2:
The last para on page 4 is justifying why looking at transitions is an important area of research. I wonder whether this could be strengthened further. Is there any evidence that doctors are more likely experience increased stress, mental health difficulties at the time of transition? Think it would be good to place the paper in the wider context of the pressures of doctors at the moment in terms of well-being.

Author response:
We have strengthened this statement further in our revised paper by specifically referring to work by Westerman et al. (2013) on page 4. This sentence now reads: "Indeed, research from Westerman et al. concluded that, among 2643 new consultants in the Netherlands, a perceived lack of readiness for professional transitions led to increased stress and risk of burnout. [5] Worldwide, concerns regarding doctor burnout as well as its potential link to poor quality patient care have come to the fore. [6, 7]"

Reviewer 2:
Page 5, L 25. Suggests that higher-stage trainees feel 'less prepared'. Than whom? I wasn't clear.

Author response:

We have altered this sentence in our revised paper to clarify our meaning. It now reads (top of page 6): “Recent research suggests that specialty trainees feel underprepared for the non-clinical responsibilities associated with being a trained doctor”.

Reviewer 2:
Page 6, L 54. ‘One European country’. Could you state the country? I think more informative for the reader.

Author response:
We have now added the country to our revised paper. It now reads (page 7): “Longitudinal research on this particular topic has been undertaken in the Netherlands only, involving several interviews with newly qualified consultants, focussed specifically on their supervisory role when on-call.[28]”

Reviewer 2:
Page 7. L 10 talks about different lengths of training in different specialities. I agree important, but many readers will be aware of this variation so best to be explicit what this is

Author response:
There is already a footnote with a link to the UK training pathways website (on page 5) in our paper. However, we have added a brief example of this (mindful of word count) in our revised paper to help clarify what we mean here. This now reads (page 7):
“Finally, studies to date have tended to be cross-sectional and have focused on specific specialties, despite there being variability in the length of training across specialities (for example, GP training is four years whilst some surgical specialties can be up to nine years).”

Reviewer 2:
Page 7. Line 14 talks about geographical locations – as all participants are in Scotland, perhaps better to say different settings?

Author response:
Mindful of our previous comments regarding maintaining participant anonymity, we have altered this sentence in our revised paper, which now reads (bottom of page 7): “The study reported in this paper attempts to address these research gaps by including trainees working in a range of specialties and contexts…”

Reviewer 2:
Page 7. Line 29. Discuss sig others in theoretical underpinnings section – I don’t think you need this sentence

Author response:
Because we have moved our theoretical underpinnings section to the introduction, this line is now redundant and we have removed this sentence.

Reviewer 2:
p. 7, line 48. Longitudinal narrative inquiry – is a method, not a methodology?

Author response:

We understand that there is much discussion in the academic community about what is and what is not a methodology. We argue that longitudinal narrative enquiry in this study is the methodology (i.e. the reseach approach) and the methods are longitudinal audio diaries and interviews. Similarly, other authors have used terminology in this way. See, for example, Monrouxe (2009) or Crozier and Cassell (2016). Note that both of these papers are provided in our reference list.

Reviewer 2:
P 8., Line 53. I would be specific about what the ethical and institutional approvals were and replace 'one UK country' with Scotland.

Author response:
Due to our concerns about maintaining anonymity that we have already described above and given that there are no actual perceived benefits from saying the study was based in Scotland (other than satisfying reader curiosity), we still do not use the term Scotland in our paper. Additionally, Scotland is not dissimilar to the rest of the UK in terms of healthcare and healthcare education provision. So, we think making the UK context clear is sufficient.

Reviewer 2:
How were the four health boards selected?

Author response:
The boards were selected by convienience sampling in that they were geographically located near the research team. Additionally, the boards selected provided diversity in terms of context (e.g. inner city and remote and rural, large acute hospital and small GP practice etc.) We have added a brief sentence to explain this (and within the confines of word count). See bottom of page 8, which now reads:"Participants were invited by email to take part through local educational leads in four health boards. The different health boards provided contextual diversity (for example, inner city, remote and rural, large acute care, small primary care services, etc.)"

Reviewer 2:
I wondered whether participants were given anything for participating given the time commitment.

Author response:
Participants were provided with a transcript of every audio-diary entry; transcripts that they could make use of in their e-portfolios if they wished. We have clarified this in our revised paper. It now reads (page 10): "Participants were emailed the transcript of every diary entry for their own records, which they could make use of in their eportfolios if they wished."

Reviewer 2:
Sampling: I was confused as to why SAS doctors are included as they are not in training? I would remove or needs a strong justification.

Author response:
We understand why this might seem unusual. The SAS doctor that completed the whole study was trying to transition back into higher-stage training and therefore we decided to include them. We have

added an explanatory sentence to our revised paper regarding this, which now states (page 9 in Table 1 notes):
"#A SAS doctor is a Staff Grade, Associate Specialist or Specialty doctor who is in a non-training role and who has at least four years postgraduate training (two of these in a relevant specialty). We have included this SAS doctor as they were attempting to transition back into higher stage training at the time of the study." However the other SAS doctor only took part in the first interview and did not progress further in the study as they were not transitioning. We have therefore removed this participant from our paper.

Reviewer 2:
Table 1 – acronym of ALD is a bit confusing – as there are only two doctors in this category, perhaps better just to specify the speciality for each

Author response:
We are concerned that by stating the specialty of these two doctors, that we will jeopardise their anonymity. Following discussion with all authors, we have decided to state that one participant was laboratory-based and the other was anaesthetics.

Reviewer 2:
I'm not sure Table 2 adds much. Perhaps better as an appendix?

Author response:
We hoped that this table would give readers a sense of the data collected at each stage. We are happy that this is added as an appendix and have revised the paper along those lines.

Reviewer 2:
I wondered why the quotes are in a table instead of interspersed through the text? It feels a bit disjointed this way, as a reader, you read the relevant para in the results, but then have to find the table, find relevant quote etc.

Author response:
Thank you for this comment and we agree with both reviewers that including the quotes in the text near the relevant analysis is a better approach for the reader. As outlined above, we have removed the tables and amalgamated the quotes into the text in our revised paper. However, despite our editing of the whole manuscript to attempt to reduce word count, this reorganization of quotes has increased the word count of our paper (as described above).

Reviewer 2:
On page 12, line 48, it states 'the other themes will be presented elsewhere'. I wasn't clear why they are not described in this paper. An overview is given in Table 3 of these themes, so then you are curious to learn more about them! Have these themes be written up for publication elsewhere? If so, can you provide reference? I think little point in providing overview of the themes in table 3 if more info is not going to be provided.

Author response:
We only present a selection of our themes in this paper, as we found it impossible to present all themes in sufficient depth and detail, and longitudinally in the one paper. As already described above,

we have taken the unpresented themes out of the table, but kept reference to them in the text, so that the reader is aware that there will be subsequent papers. It now reads (page 11&12): “In this paper, we focus on three themes only that are specific to addressing the research questions posed earlier in this paper: Multiple transitions; Supporting successful transitions; and multiple and multi-dimensional transitions interacting and impacting (see Table 2 for a description of these three themes). The three other themes (conceptualisations of transition; transition narratives; and shifting identities) are being prepared for publication elsewhere.”

Reviewer 2:
The quotes are interesting, but lengthy.

Author response:
As part of the hard edit of the whole paper in order to reduce word count, we have edited many of the quotes whilst trying to maintain their meaning.

Reviewer 2:
You talk in the intro about the different training pathways and different lengths of time to train – which I agree is important, but I couldn’t see any mention of this in the findings? I would be interested to know if there are differences depending on speciality but does not seem to have been discussed.

Author response:
Whilst the reviewer makes a very interesting point, it was not within the remit of our analysis (or research questions) to address this issue. We do not have sufficient data in each of the sub-groups (e.g. medical, surgical) to make adequate comparisons. However, we now state in our revised discussion that further research is necessary to allow for such comparisons.

Reviewer 2:
The discussion needs strengthening – it needs to clearly discuss the findings and place the study in the context of the wider literature. It doesn’t read like a discussion of the findings, more a review of strengths of the paper and feels a little repetitive in the sense it says the results are multiple and complex, which we expected from the intro, but I’m left with the sense that I don’t know therefore what this study actually added?

Author response:
With respect to reviewer 2, we find this comment a little vague. In our original discussion, we summarise our key findings and discuss them by comparing them with previous research and theory (research and theory already introduced in our introduction section). Plus, we go onto outline the methodological strengths and challenges of the study (note that another reviewer asked us to add more to this section) before finishing off with the implications for educational practice and further research. We have looked for repetition in our discussion and tried to reduce this, plus we now make explicit statements in our discussion about what our study adds to the literature in this domain. For example on page 25: “By using a longitudinal qualitative approach and drawing on Multiple and Multi-dimensional Transitions (MMT) Theory, our current study suggests that adaptations to change happen over lengthy time-periods and that adaptation processes are non-linear. Similarly, individuals can have positive and negative transition experiences simultaneously, in the same or different domains of their life. This study therefore emphasises that the trainee-trained doctor transition is personal, complex, and multi-dimensional, with transitions often interacting with, or instigating other transitions; for the trainee and/or others such as family members, patients and colleagues”.[2, 15] We hope that these changes satisfy the reviewer.

Reviewer 2:

I'm sure there are interesting results – they need pulling out in the discussion. So we are clear what this paper found and placing in context of the wider academic research. What are the similarities and diffs between other studies, what does it add?

Author response:
As with our above comment, we feel quite strongly that in our original submission we discussed our key findings by comparing them with existing theory and literature (flagged in our introduction). As above, we have tried to make it clearer in our revised discussion what the current study explicitly adds to this literature, and in particular flagging what is different. We hope that these changes satisfy the reviewer.

VERSION 2 – REVIEW

REVIEWER	Antonia Rich UCL
REVIEW RETURNED	18-Oct-2017

GENERAL COMMENTS	The authors have done a lot of work and the paper is very much improved particularly in terms of structure e.g., qualitative quotes now immersed in the text, and clarity - it's much clearer to read, and more detailed explanation where necessary e.g. MMT. I understand the authors' comment concerning anonymity, however I'm afraid I suspect it is obvious the research took place in Scotland from the fact that the declaration of funding is NHS Education for Scotland, the text refers to health boards and all the authors bar one are affiliated to Scottish universities. I just spotted a few typos: P11. Line 12. See Appendix A far p.16. Line 19. Should be new para for quote p.17. Line 42. Quote should read 'new consultant'? p.29. Line 26. Diferent

VERSION 2 – AUTHOR RESPONSE

Thank you for taking the time to review this paper and we are delighted with the decision to publish with minor revisions.
In response to these revisions, we have made the following amendments.
P11. Line 12. See Appendix A far- this has now been changed to "for"
p.16. Line 19. Should be new para for quote- this has now been adjusted as per suggestion
p.17. Line 42. Quote should read 'new consultant'?- this has now been changed from now consultant to "new consultant"
p.29. Line 26. Diferent- the spelling has been corrected to "different".
We look forward to confirmation that we have met the requirement for publication.