Author’s response to reviews

Title: Thriving in Scrubs: A Qualitative Study of Resident Resilience

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Author’s response to reviews:

Dear Editors,

Thank you very much for the opportunity to revise this manuscript. We appreciate the reviewers’ comments and corrections and have outlined below our specific responses. We hope that with these revisions, the paper is selected for publication in Reproductive Health.

On behalf of my coauthors, yours sincerely,

Abigail Ford Winkel, MD, MHPE, FACOG

Reviewer reports:

Reviewer #1: Please check grammar (example line 99 "An assortment of innovative programs aim use everything from mindfulness training, reflective practice groups and cognitive behavioral therapy, to yoga classes and nutrition counseling to improve physician well-being")

--This sentence has been revised for clarity.

Along these lines it may be of value to the reader to discuss the why behind some of the statements such as line 154 "Thematic saturation was observed after 18 interviews." Does this mean that there was consistency between residents?
The concept of thematic saturation has been briefly explained. The reference provides further detail on the meaning of thematic saturation, which is essentially when the researchers have not merely “heard it all” (code saturation) but “understood it all”.

How were residents de-identified? Was each given a subject number as well as recording their postgraduate year? Also, please elaborate on how resident postgraduate year was incorporated into the analysis. This was subjectively noted (example line 216 Some residents, more commonly junior residents expressed less comfort exposing their vulnerabilities within the medical community.). This is especially important as the authors note (line 223) that there is a hierarchy within the resident team.

Residents were asked in the interviews to indicate their PGY year during the interview, and this was flagged with a code for each PGY-year. This was used to allow examination of the responses for junior residents compared to senior residents. Looking at the ways that the other codes differed between the two sets of transcripts informed the thematic analysis, as referred to in the lines that the reviewer mentions.

Line 337 please provide references so that readers may access these resources for their programs (e.g. Narrative Medicine workshops or Balint groups or Schwarz Center Rounds). Similarly, it would benefit from very specific outlined suggestions, possibly based on different issues or resources (example how to deal with the patient's death versus a lawsuit versus internal conflict within a class) for readers to immediately attempt to implement.

We have provided a few references although there are many different ways to implement Narrative Medicine, Balint Groups and Schwarz center rounds. Due to the limitations of the word count, we could not elaborate on each of the specific cases in which using such a tool would be useful.

Reviewer #2:

Overall:

1) The paper should have better editing. Grammar mistakes and run on sentences corrected and more concise paper overall.

1) I am confused how this cohort of residents were selected?

--This was not clear and we have rewritten the methods section. The names of the OBGYN residents in good standing in the program (not on a remediation program, leave of absence, etc.) were provided to the research assistants, who contacted them to obtain informed consent to participate.

"a theoretical sampling model guided the selection of residents thriving in Ob/Gyn"
I thought the OB/GYN residents at this program were a convenience sample, not a subgroup that were identified by peers and supervisors as the "resilient" ones.

--It is not a subgroup, or convenience sampling, but it does include the entire cohort of OB/GYN residents in good standing in the program. Intensity sampling focuses on selecting participants who have an intense but not extreme experience with the phenomenon. While there were not residents on personal leave at the time of the study, this has happened in the past and during the design of the study we felt that residents needed to be satisfactorily engaged in the program as determined by the clinical competency committee during twice yearly reviews.

How these residents were selected needs to be clarified and then how this selection process was limited and could bias data and results needs to be revised. In the limitations section and in the materials and methods section-not congruent.

--Thank you for pointing this out. We have expanded the methods somewhat to clarify the process and then revised the limitations where we think this was particularly confusing. We hope this makes it easier to interpret the data.

2) Missing: asking questions about self-perception of resilience prior to residency.

--This is true, we did not ask residents specifically about whether they felt they were resilient prior to residency as one of the questions on the interview guide. The reviewer’s point is important, though, and does come out in the theme that we did identify within the data: prior experience with adversity was often described by residents who then seemed to describe within the rest of their interview a greater resilience in managing the challenges of residency.

One central a priori question set out by the authors was whether resilience is a fixed character trait (presumably that a trainee starts residency with), or it is something that can be learned/taught. Were these questions asked in the interviews to get at this question?

--This is a very good point. We elaborated further in the second paragraph of the introduction to explain our interpretation of the available research on resilience, that it is likely both state AND trait. While our research question was not focused on the nature of the phenomenon of resilience, but rather how this phenomenon manifests in this context, we did nonetheless ask questions about personality style, etc. order to get at “trait” questions for each resident (e.g. question 5), and other questions about difficult experiences and how they coped with them to explore “state” manifestation of resilience further (e.g question 7, 8). [See below: the interview guide added to the end of this letter. If the editors feel it would be helpful, we can include this as an appendix to this research.]

Anything to suggest fixed vs dynamic traits and temporal relationships would be useful themes that are asked in the introduction. Such as, did you feel like you were a resilient person until stressors/adversity of residency overwhelmed those reserves… Did I miss these questions that are in the intro but not really in the data?
This is absolutely important and we do think that the aspect of resilience as a dynamic phenomenon that grows as it faces challenges rather than exists de novo within certain individuals comes out in this work. While it did not come out in a conversation with the resident comparing his or her perception of themselves before and after residency, we did see this emerge in the ways that residents spoke about challenges of different magnitude and at different times in their lives and residency.

3) The tree model:

I am confused why self-care is at the fruit bearing symbol (leaves) instead of roots or watering. The quotes from the residents to now sound like self care is aspirational or fruit bearing, but something that helps with the stress, both physical and emotional, and adversity of training and healthcare.

--Thank you for pointing this out, it is misleading. Rather than representing “fruits”, self-care/coping mechanisms on the branches represents a metaphorical proliferation of leaves, helping the organism to grow and thrive, making use of the influences around it, being able to absorb the water shed by the storms of adversity and able to respond and react to the rays from the the aspirational sun. Based on this comment, we have rewritten the description of the model.

4) Table 1: why is category 1 and 2 not together. Professional identity etc seemed to come, in part, and for some, from background. They did not sound distinct from the quotes.

--This is what we observed from the data as well. Professional identity did seem to emerge from background, which is illustrated in the conceptual model by the roots of the tree. While this theme unites the two categories, in the interviews, there were separate codes that emerged about the two different topics, which constituted two different categories. During the thematic coding phase, we observed the same connecting threads that the reviewer is picking up, which is why the final model does weave those two ideas together.

5) Under Tensions-One of the quotes articulated that always being part of a team, being high functioning in a team is a necessity—was both a support system, but also can be a source of tension, with competition and hierarchy, and personality conflict which causes more emotional drain. Teamwork maybe should be in both categories?

--Again, this resonates with what we observed as we were analyzing the themes. Teamwork certainly has the potential to be nourishing to resilience as well as be the source of adversity itself. We have added this to the table to draw this out.

6) Connecting the findings of these qualitative results to interventions to enhance is stretching the data from the study. It did not sound like the interviews asked what types of interventions
they had experienced in residency through the program, or employed on their own, or heard others utilize, what worked and what did not.

--Absolutely, the ideas that are raised in the discussion are not based on the data, but rather our sense of how understanding this conceptualization of resilience could inform decision-making at the level of which programs to implement. This by no means suggests that we know whether these programs would have the desired impact. We have revised the tone of the discussion section to clarify this.

5) It is too long.

Some theoretical concepts in the interpretation section are too removed from the actual study, maybe a place to cut. (392 - 394)

Other comments:

47: use active tense…. "we performed a qualitative study…."

56: grammar.. cultivating…

--We appreciate these detailed edits and have revised the segments indicated by the reviewer.

62: At first reading, it does not sound like conclusions are supported by results. But I think that the statement, "allow residents to attend to their personal needs and development" reflects the results of connections outside of medicine. This should be more clear.

Articulate this connection between a conclusion statement and your data/results more clearly.

--Thank you for this suggestion.

75: I would reference this sentence-we know some of the contributing factors from the literature. All except internal conflicts, and I am not sure what is meant by this.

87 - 90: This study has nothing to do with interventions-ie educational programs that may influence resilience development. This statement oversteps the study.

--We have revised these statements, and defer to the editors whether they would prefer we add a reference here. It was our understanding that the “plain English summary” did not include references.

99: grammar: aim/use
Connecting the findings of these qualitative results to interventions is a stretch. It did not sound like the interviews asked what types of interventions they had experienced in residency through the program, or employed on their own, or heard others utilize, what worked and what did not.

We have restructured the discussion so that it first discusses the findings of the study and the strengths and limitations, then interprets these. We have placed our interpretation of how we might use these insights to make decisions within the residency program at the end of the discussion because we feel this might be useful for other educators, but we have emphasized that future research will have to determine which interventions actually impact well-being.

The narrative medicine lens seems dominant and biases questions/interview content and results. But is explained satisfactorily.

--Thank you for this comment. As with all qualitative research, we knew that we brought our background into our reading of the data, and wanted readers to understand this as they read the paper.

What does this mean? Sampling strategy and data collection choices may have influenced conclusions.

--This is confusing as written and we have removed this.

I am confused how this cohort of residents were selected?

"a theoretical sampling model guided the selection of residents thriving in Ob/Gyn"

I thought the OB/GYN residents at this program were a convenience sample, not a subgroup that were identified by peers and supervisors as the "resilient" ones.
How these residents were selected needs to be clarified and then how this selection process was limited and could bias data and results needs to be revised. In the limitations section and in the materials and methods section—not congruent.

--This comment is consistent with the issues raised by reviewer #1. Please see above for further description. We have corrected the inconsistencies that were highlighted in the methods section, this was not congruent as the reviewer says and confusing.

376:

There is one tool that is generally accepted in the literature. Did they use this to select which OB/GYN residents would be invited to participate?

--It is likely that the reviewer is referring to the Maslach Burnout Inventory, which is the gold standard for assessing burnout. While we have used this tool among a previous residency cohort that included some of the individuals in this cohort (Winkel AF1, Feldman N, Moss H, Jakalow H, Simon J, Blank S. Narrative Medicine Workshops for Obstetrics and Gynecology Residents and Association With Burnout Measures. Obstet Gynecol. 2016 Oct;128 Suppl 1:27S-33S.), and it showed rates of burnout similar to those quoted in general for OB/GYN trainees, approximately 60%. For this current study, we were interested in resilience, which has not been demonstrated exactly to be the opposite of burnout. In fact, as we indicated above and included in this revised manuscript, we suspect that resilience may have elements of both state and trait, and may vary contextually. We assumed that given the high rates of burnout in this group in general, the trainees in good standing in this program would have understood the phenomenon of resilience, even if they might have experienced burnout. For the assessment of resilience, there is no consensus measure. There are many tools used to measure different aspects of resilience (the Professional Fulfillment Index, the Quality of Life Index, the Professional Quality of Life Scale, the Mini Z survey that focuses on work satisfaction/engagement, the Compassion Satisfaction and Fatigue Test, the Connor-Davidson Resilience Scale, the Brief Resilient Coping Scale (past coping behaviors), and the Resilience Scale -14 Smith’s Brief Resilience Scale, and others.) Since what we were looking for is how resilience is constructed rather than how much of it any one of these residents had, we did not use a quantitative measure to assess the participants.

APPENDIX A:

INTERVIEW GUIDE

We are interested in understanding more about how residents survive and thrive in residency. This interview is going to be about 45 minutes, during which time I hope to learn what is important to you in how you approach your work and life. If you prefer not to answer any of these questions, simply indicate that and we will move on to the next question. You can end the interview at any time. Your identity will not be known to other members of the research team aside from me, as the transcript will be de-identified for the purpose of analysis.
1. First, I’d like you to give me a little background on where you are now in your training. For example, what rotation are you on, how is it going, how what you are doing now relate to your career path?

Follow up items:

• What year of training are you in?
• What rotation are you on? How is it going?
• What was your educational background?
• Do you have a plan for your career after residency?

2. Tell me about early influences and any role models that may have influenced how you approach your work.

3. Can you describe any childhood or early adult experiences that influenced your coping style?

4. Can you think of aspects of your formal or informal education that influence your approach to work?

5. I’d like to understand you a little better. How would your friends describe you?

Follow up items:

• What helps you get through the ups and downs a typical day in residency?
• Describe a common difficult situation you encounter. How do you manage yourself during it?
• What motivates you?
• Consider: self-awareness, self-regulation, self-monitoring

6. Please describe a little bit about your life outside of work.

Follow up items:

• How would you describe your social support?
• Do you have any regular habits to care for yourself?
• Do you consider yourself religious or spiritual?
• What do you do to blow off steam?

• Consider: locus of control

7. Have there been any particularly challenging experiences in your life at work? Outside of work?

8. What does “resilience” mean to you? Can you describe for me someone who is particularly resilient? What about someone who is not particularly resilient (talk about types)

9. Should we have asked about anything else? Is there anything else you would like to add?