Reviewer's report

Title: Quantitative and Qualitative Perceptions of the 2011 Residency Duty Hour Restrictions: A Multicenter, Multispecialty Cross Sectional Study

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Reviewer: Jacqueline de Graaf

Reviewer's report:

Tierney et al. studied quantitative and qualitative perceptions of the 2011 RDH restrictions, using a multispecialty, multipersonnel and multisite approach. In a cross sectional design, a survey with quantitative and qualitative questions was distributed to residents and faculty of two different specialties (GS and IM) in 3 different hospitals.

The quantitative data were analyzed by cross-site, cross-specialty and cross-position comparison. The main question addressed was what is the perceived impact of RDH restrictions on residents and faculty (i.e. table 2 analyzed together + table 4 analyzed by position).

The next two questions were:

A. is the impact perceived differently among specialty – so is there a difference between IM and GS? This is reported in Table 5 which is based on only 11 responders in GS and 146 responders in IM. No cross comparison between positions is provided, most likely due to small numbers. In addition no cross-site comparison is made because only 1 site (which one?) is included.

B. is the impact perceived differently among hospitals? This is reported in table 3. However now no data are presented on cross specialty and cross position are presented.

Therefore the presentation of the results are confusing. It is not clear why and when the authors decide to do or not to do what comparison.

The qualitative data are only presented for the whole group together, so no comparison cross specialty and/or cross position and/or cross hospital. Please present who were the responders of the qualitative data.

The additional value of this study is that qualitative data were gathered and reported. The qualitative data offered new insights into the perceived strengths and weaknesses. However, in the discussion section it is indicated that the qualitative data do not support the quantitative data which is remarkable and interesting. How do the authors explain this? How do you suggest to interpret the data?
The effect of different medical schools on the perceived impact of RDH

Residents who trained at osteopathic medical schools reported significantly more negative views of DHR than those who had trained at allopathic or international medical schools, suggesting an influence of undergraduate medical training. The authors put this forward throughout the manuscript as one of the main findings. Is it possible that this is a chance finding? Do the authors suggest that this result implicates that undergraduate medical education should be aware of and discuss RDH when guiding students in career development? Was there any cross-specialty difference in what medical school they visited? Please include a short explanation what is meant by osteopathic versus allopathic medical school because this is not directly obvious for readers outside the USA/Canada

Please number your comments and divide them into

- Major Compulsory Revisions

1. Abstract – result - conclusion: the authors conclude significant differences in the overall perceptions of DHR across specialty (internal medicine more positive than general surgery) and across position (first year residents more positive than senior residents and faculty). This conclusion is based on 11 GS residents (3 PGY1 + 8 PGY2+) versus 146 IM residents. This may be statistical significance but this conclusion appears not valid because 11 residents cannot be representative for all GS residents. Please respond.

2. The qualitative data are only presented for the whole group together, so no comparison cross specialty and/or cross position and/or cross hospital. Please present who were the responders of the qualitative data. Only IM?

The additional value of this study is that qualitative data were gathered and reported. The qualitative data offered new insights into the perceived strengths and weaknesses. However, in the discussion section it is indicated that the qualitative data do not support the quantitative data which is remarkable and interesting. How do the authors explain this? How do you suggest to interpret the data?

- Minor Essential Revisions

2. Line 66: were interns included too? Where are the data?

3. Line 82: what do the authors mean by ‘residency program statistics were obtained from PD’s directly’?

4. Line 100: resident response rate was 49% (168/341) – did the response rate differ between GS en IM residents? how high was the faculty response rate? Only 11 GS residents are included (of whom only 3 PGY1) - in which hospital did they work?

5. Line 141: qualitative data are described for all the whole group, including both residents and staff of GS en IM (and also 12 ‘other’ respondent). Please specify who completed the qualitative data survey. Are there any cross-specialty and/or cross-position and/or cross-side differences in the qualitative data?
6. Line 166: you state that individuals in the GS residency program reported more concerns about the DHR than those in IM in the quantitative arm of the study. This is not reported in the result section: here is only referred to the data in Table 5. Unfortunately the cross-specialty comparison could only be performed at 1 hospital – which hospital?

7. Line 193: the authors do acknowledge that only 1 GS program participated limiting the power of the cross-specialty comparison. Additionally no cross-site comparison is possible. Again the number of responders in the GS program is so low and heterogenous (PGY1, PGy2+ and faculty) that conclusions seem invalid. Please respond.

8. Line 211: ‘felt’ should be deleted

9. Line 216-221: this conclusion is not supported by the data but is the suggestion of the authors.

10. Table 1: only n=11 (7%) GS residents are included versus 147 IM residents. How about the n=10 ‘other residents’. I suppose they are from different specialties? Did you exclude these ‘10 others’ from the analysis?

11. Residents who trained at osteopathic medical schools reported significantly more negative views of DHR than those who had trained at allopathic or international medical schools, suggesting an influence of undergraduate medical training. The authors put this forward throughout the manuscript as one of the main findings. Is it possible that this is a chance finding? Do the authors suggest that this result implicates that undergraduate medical education should be aware of and discuss RDH when guiding students in career development? Was there any cross-specialty difference in what medical school they visited? Please include a short explanation what is meant by osteopathic versus allopathic medical school because this is not directly obvious for readers outside the USA/Canada

- Discretionary Revisions

11. In the discussion I miss discussion about the sleeping hours and how DHR affect career development. About both items the authors do report data in the result section.

12. Line 198: It is unclear to me why and how the length of content analysis is associated with stronger opinions of the weaknesses than the strengths. Is there any evidence for this reasoning? I think it is an association with no direct ‘causality’.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

'I declare that I have no competing interests'