Author’s response to reviews

Title: Biomedical journal speed and efficiency: a cross-sectional pilot survey of author experiences

Authors:

Joshua Wallach (joshua.wallach@yale.edu)

Alexander Egilman (alexander.egilman@yale.edu)

Anand Gopal (anand.gopal@yale.edu)

Nishwant Swami (nishwant.swami@yale.edu)

Harlan Krumholz (harlan.krumholz@yale.edu)

Joseph Ross (joseph.ross@yale.edu)

Version: 1 Date: 27 Oct 2017

Author’s response to reviews:

RIPR-D-17-00018

Reviewer reports:

Reviewer #1: The authors report on an electronic survey of corresponding authors of recently published articles indexed in Medline. The 8-item survey was developed and administered to ascertain corresponding authors views on publication time and efficiency of the publication process. Approximately 20% of corresponding authors completed the survey.

1. My major concern with this survey is the differences between the responders and non-respondents and whether these differences confound the results. My interpretation is that the two groups differ from one another in more ways than they are similar. It’s unclear whether multivariable analysis might have helped tease out some of these issues?

Response: We would like to thank the reviewer for this comment. We agree that there may be certain differences between the respondents and non-respondents. We collected a handful of variables that could be used to compare respondents and non-responders, in order to better understand response biases: country of publication, study design, journal impact factor, and the h-index, total number of publications, and type of email address for each corresponding author. We originally reported these items in Table 1 for all of the 1604 eligible respondents. However, we believe that this number should have included all of the authors who opted out, had emails that bounced, had emails that returned with an away from office message, or had emails that were changed/incorrect. After updating our analyses, we found that corresponding authors had
more publications (p=0.03) and were more likely to have non-institutional or Gmail/Yahoo/Hotmail/Aol email addresses (p=0.003). We have revised our text to better address this limitation.

With respect to the suggestion for a multivariable analysis, as this was a feasibility study, we did not set out (pre-specify) to perform any multivariable analyses. After re-examining our data and the outcomes of interest, we are not sure whether any multivariable analyses are necessary. Our primary goal was to report medians (IQRs) for the key survey variables.

We have updated our Table 1 (page 8-9) and ‘Limitations’ section to address some of these additional concerns.

On page 12 (‘Limitations’ section):

"Furthermore, we found differences between respondents and non-respondents that suggest some response bias. In particular, non-respondents were more likely to have non-institutional email addresses and had more publications. These differences may suggest that the two groups differ from one another in more ways than they are similar and is a limitation of our study. Subsequent studies should explore these possibilities, ideally with larger survey samples that would permit multivariable analyses to account for potential differences between the respondents and non-respondents.'

2. While the authors may have achieved some degree of diversity in terms of respondents, the respondents seem like early career researchers given the number of publications and h-index. As such, I'm not sure there is sufficient response diversity to make strong meaningful conclusions.

Response: We agree with the reviewer that the respondents could be early career researchers. In our manuscript, we try not to make any strong conclusions. Instead, our ‘Discussion’ section focused on outlining potential reasons that could explain our findings. Our primary goal was to understand the feasibility of the survey and to use the findings to inform future research. That being said, our ultimate goal is to understand publication efficiency. In order to communicate additional concerns, we have updated the limitations section:

Page 12 (‘Limitations’ section):

"Based on the relatively low median h-index and number of publications, it is also possible that the majority of the respondents were early career researchers or less prolific investigators. As a result, our sample may not have sufficient diversity to draw generalizable conclusions."

3. Page 3, lines 15-16. The authors state "The publication of a scientific manuscript is considered the final stage of the scientific process......". I don't think implementation scientists would agree. Indeed, there is a good argument that the publication of an article to be an early part of the dissemination and uptake process. I'd recommend the authors revise this sentence accordingly.
Response: We appreciate the point being made by the Reviewer. Furthermore, we agree that the public dissemination of an article should be an early part of the dissemination and uptake process. However, we were attempting to communicate perceptions of the research process and how it relates to publication. In order to clarify, we have revised the sentence.

On Page 4 (‘Background’ section), we have added:

"The publication of a scientific manuscript is often considered the final stage of the research process, initiated once a project is complete and ready for peer judgment; it involves manuscript preparation, peer review, revision, and in many cases, re-submission to multiple journals before acceptance."

4. Page 4 between Study sample and design and Data extraction. I would recommend moving the first paragraph on page 6, beginning "In January 2017,..." and inserting it between the study sample and design and data extraction sections. I think it flows better and is an easier read. Can the authors comment on the estimated time to complete the survey, likely brief but I'm fastidious about methods.

Response: We would like the thank the reviewer for this suggestion. We have moved the paragraph to Page 6, right above the “Survey instrument development” section. We decided to place this paragraph after the “Data Extraction” section because we believe that it is important to first outline the data extraction for the entire sample before focusing on the sub-sample (survey respondents).

With respect to the estimated time to complete the survey, although we had included an estimated survey completion time in our email to the corresponding authors, we had not reported this in the full manuscript. We have now updated our manuscript to include the following sentence:

Page 6:

"Authors were informed that the survey should take less than 5 minutes."

5. Page 4, Data Extraction

Can the authors include a box with appropriate definitions or guidance used to classify the study types. For example, as a clinical epidemiologist I can imagine an observational study might be a case control, cross section or cohort but would benefit from knowing precisely how the authors operationalized this. Similarly, there is not always agreement as to what a systematic review is (Liberati et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. PLoS Med. 2009 Jul 21;6(7):e1000100). Such information will facilitate the replication of the authors’ methods. I was unsure what the design architecture category "other" study design meant.
Response:

We appreciate the opportunity to clarify this issue. Our study design classifications were based on key words or phrases provided in the title, abstract, and/or methods section of the text. For instance, we classified a study as a “systematic review and/or meta-analysis” if the authors included the words “systematic review”, “systematic search”, “meta-analysis”, or “rapid systematic review.” Considering that our study was not focused on establishing/determining compliance with the PRISMA statement, we did not verify whether these met all of the reporting requirements to be classified as a systematic review or meta-analyses.

In order to increase clarity, we have included the a Box on Page 6 clarifying the follow categories:

"Observational or other study: Case-control, cross-sectional, cohort, retrospective analyses of data collected prospectively, case-study/series, pharmacokinetic studies.

Clinical trial: Single or multi-arm prospective interventional studies with or without randomization.

Systematic review and/or meta-analysis: Any mention of the words “systematic review”, “systematic search”, “meta-analysis”, “rapid systematic review” in the title and/or abstract"

6. Page 6, line 56. Some readers (from countries whose first language is not English) may not understand what is meant by "failed". Some clarity would be useful, such as the email bounced back.

Response: Thank for this comment. In order to address this concern, we re-downloaded data from the Web-based survey platform we used for this project, Qualtrics. We got additional information about the number of emails that “bounced” and the number of authors that “opted out.” Furthermore, we found that there was another corresponding author who had completed the survey, bringing our total respondent count to 337. We learned that three additional email addresses for non-respondents had “failed” or were incorrect. In order to improve clarity, we have provided additional information to help readers understand what is meant by “failed”. In particular, this includes emails that bounced, returned with an away from office message, or were changed/incorrect. Please see our response to comment #7 for the updated text.

7. Page 6, line 56-57. The authors report a survey response completion rate. What was the response rate (different from the completion rate - I'm interpreting the authors meaning of this to be those respondents who answered all 8 questions). Did some respondents start the survey and not complete all 8 questions - response rate?

Response: We appreciate the opportunity to clarify. In the results, we focused on reporting the “response rate”. By response rate, we actually mean the number of authors who answered any question. Among the 337 corresponding authors, all of the authors answered all of the questions.
In order to improve clarity, we have updated the ‘Results’ section of the manuscript. Furthermore, in the ‘Results’ section (Page 10), we have now reported the number of authors who were actually able to provide approximate months and years of first submission and acceptance.

Page 8 (‘Results’ section):

"Of the 1780 surveys distributed, 27 corresponding authors opted out or requested that we stop emailing them and 149 emails failed (e.g., emails that bounced n=64, returned with an away from office message n=70, or were changed/incorrect n=15), leaving 1604 eligible respondents, of which 337 submitted a survey (response rate of 21.0%) (Figure 1). All of the responding authors completed all of the survey questions (completion rate of 100.0%). Similar response rates were observed when we limited the sample to authors with U.S. articles or educational institution email addresses (e.g., universities or medical schools)."

Page 10 (‘Results’ section):

"The median time from first submission to journal acceptance and publication, among the 212 authors who were able to provide approximate months and years, was 5 months (IQR, 3-8; Figure 3) and 7 months (IQR, 5-12, Figure 2d)."

8. Page 8, lines 9-11. I'm not sure I understand these results - there was 1 peer review and 3 peer reviews, on average (median) to achieve manuscript acceptance. I'm sure I'm misinterpreting this - some peer reviewers provided no peer reviews?

Response: Thank you for this comment. These are the median total number of times the manuscript was sent out for review and the median total number of actual reviewers. In the ‘Methods’ section of our manuscript, we outlined that authors were asked to report the total number “journals that sent the manuscript for external peer review” and the total number of “external peer reviewers that reviewed the manuscript across all submissions to all journals”. In order to improve clarity, we have updated the ‘Results’ section of our manuscript:

Page 10:

"The median total number of journals that sent the manuscripts out for external peer review was 1 (IQR, 1-2) and the median total number of external peer reviewers that reviewed the manuscripts across all submissions to all journals was 3 (IQR, 2-4)."

9. Page 10, Limitations section. I think it is important to note that the respondents differed from the non-respondents.

Response: Thank you for this suggestion. Please see our responses to this concern above (comments #1 and #2).
Reviewer #2:

Thanks for asking me to review this paper which sought to understand the experience of published biomedical authors. The results seem fairly straightforward and are appropriately analysed

1. Comments

The authors identify the major issue which is the low response rate of the authors. It is hard to know how this may have affected the results but my specific worry would be that there is substantial under-representation of authors who had a prolonged/poor publishing experience or who simply could not recall what happened before the current submission.

It would seem to be especially likely that there is a bias in the sample given how highly the authors rated their own research. The finding that authors have a quick publication time and a low number of peer reviews suggests that either authors are getting quick rejections or are not recalling all the submissions. Hence, it would be useful to explore this result further.

Response: Thank you for this comment. In the second paragraph of the ‘Discussion’ section of our manuscript (Page 11), we outline: ‘The results from this study are likely subject to recall bias, including an inability of corresponding authors to remember specific details about a manuscript’s submission history. Considering that non-respondents had more publications than respondents, it is possible that non-respondents were unable to recall the submission history for one of their published articles.” We also address this issue in the ‘Limitations’ section on Page 12. Please see our response to Review 1’s comments #1 and #2.

2. Furthermore, it would be useful to see the data for the number of journal submissions as a scatter plot - I think this would be informative.

Response: We appreciate the suggestion to include the number of journal submissions as a scatter plot. However, the number of journal submissions ranged from 1 – 10, with the majority of respondents reporting that 1 or 2 submissions were necessary. This type of clustered data does not work well for a scatter plot, considering we do not have a corresponding x or y variable to consider alongside the number of journal submissions variable. That being said, we have created a histogram illustrating response frequencies. In response to this comment as well as comment #7 below (“I don’t think figures 3 and 4 are needed”), we have decided to include all four histograms in one multi-panel figure, which includes the histogram with the number of journal submissions.

3. I appreciate that this may not have been asked but I would like to know if there was data on the time of submission at the last journal submitted to, not just the first.
Response: Thank you for this suggestion. We agree that this would be interesting to investigate. However, this was a pilot survey and we do not have this information. We will certainly consider this question if we decide to perform a larger follow-up study.

4. The authors should provide a copy of the survey that was sent.

Response: Thank you for this suggestion. We have included the survey questions in the supporting (additional) materials.

5. I think it would be worth commenting further on differences between the article types, which from figure 2 does seem to be substantial. For example, I am surprised that systematic reviews were published in the lower impact factor journals.

Response: Thank you for this suggestion. We have included a section in our ‘Results’ section that provides estimates of median times and a table (Table 2) with author/article characteristics by study type.

Page 9:

"Author and journal characteristics across study design categories are provided in table 2 (Table 2)."

Page 10:

"The median times from first submission to journal acceptances for clinical trials, observational or other studies, and systematic reviews and/or meta-analyses were 6 (IQR, 3-11), 5 (IQR, 3-8), and 4.0 (2-6), respectively. The median times from first submission to publication for clinical trials, observational or other studies, and systematic reviews and/or meta-analyses were 7 (IQR, 6-12), 7 (IQR, 5-12), and 6 (IQR, 5-9), respectively."

6. Incidentally, Figure 2 needs a fuller legend. It was not interpretable in black and white, which is how I printed it out to review first(!)

Response: We agree that our original Figure 2 was difficult to read after it had been uploaded. We have decided to remove the trend lines and confidence interval shading. The updated Figure (now Figure 3) should be more interpretable.

7. I don't think figures 3 or 4 are needed.

Response: Thank you for this comment. Please see our response to Review 2’s comment #2 above.
8. I am heartened by the fact that more than half the authors would have considered submitting a preprint. This would be an issue worth exploring further.

Response: Thank you for this comment. We agree that this is worth exploring further in a future investigation.

9. It would be useful to see how this result changed over time and I hope the authors will repeat the work. In future work I think it would be useful to assess if there was any difference between OA and subscription journals. Were there any questionable journals identified?

Response: We would like to thank the reviewer for their interest in this work. We did not identify any questionable (“predatory”) journals in our sample. We agree that future investigations should collection information about journal characteristics.

10. The number of author with failed email addresses seems rather high

Response: Please see our response to Reviewer #1’s comments #6 and #7, wherein we explain that we have updated our results to clarify what we mean by “failed” email addresses. This includes emails that bounced, returned with an away from office message, or were changed/incorrect.