

Global Health Pathway - Advice for Scientific Publications

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Below are general thoughts and advice for medical students on scientific publishing. These points are based on personal experiences and will not be applicable in every situation or to every person.

1. It is important to understand the process of publishing:

- a. A draft is written, and shared with all co-authors for comments and feedback; revisions are made, and the manuscript is finalized and submitted to a journal. The revision process typically takes several months and you will likely go through several rounds of revisions before finalization. Give your co-authors at least 2 weeks (if not longer!) to review a manuscript and provide comments.
- b. After submission, a journal editor reviews the manuscript and decides if they want to reject (you are notified of this outcome) or send to peer review (you may or may not be notified of this). During peer review, other scientists read your manuscript and recommend whether it should be published. It can take several months for a paper to make it through peer review (highly dependent on the journal).
- c. The editor reads these reviews and makes a decision: accept (very rare at this stage), revise & resubmit (make changes in response to the reviewers' comments and concerns, and send this revised manuscript back to the journal for reconsideration), or reject (which I encourage you to think of as "revise & resubmit to a different journal"). If you get a revise & resubmit, there's usually a deadline for resubmitting (typically between 1-3 months but again, highly journal-dependent). Extensions are often granted if you cannot make the timeline.
- d. This process then repeats: you revise in response to reviewer comments, resubmit, the editor re-reads, may send it back to the reviewers to re-review, etc. You may go through multiple revise & resubmits at a journal before getting an acceptance.
- e. After a manuscript is (finally!) accepted, you will work with the editors and/or the publisher on the publishable version of the paper – sometimes there are journal style rules, or you may need to fix or check certain things once the manuscript is typeset.
- f. The final step before publication is that the corresponding author of each manuscript will be asked to review page proofs (the final layout of the manuscript). This usually has a very quick turn-around (24-48 hours).

2. Things journals care about:

All journals care about originality (the findings can't have been published elsewhere) and sound methodology. Some journals also care about importance/innovation. Check journal review criteria to understand their priorities – and their scope (only submit papers to journals that are a good match for your topic and methods). Also, well- and clearly-written manuscripts fare better.

3. Start a list of possible target journals.

Start by looking at your bibliography and where other related articles have been published. Then check relevant logistical considerations; depending on your project, this may include: whether there are any fees for publication (these can be quite expensive – note that some funders will pay for this, or there may be waivers for certain types of authors), whether different article types are accepted (full research articles versus short reports etc.), word count, and scope. Also you can check the journal's "impact factor" (a measure of how often articles in that journal are cited) if you want to consider this too.

4. Plan out your results.

Make table shells – i.e., all the row & column headers of each table but without actual data/numbers; make sketches of figures. This will help you plan your "story," think about framing, figure out which analyses you're going to undertake. You will likely initially include much more than what makes it into the final version of the paper -- but it is good to start broad, and then narrow down once you are clear on the story you want to tell.

5. Outline the introduction.

Start broadly with the motivation (why should readers care about this topic), then move to the specific context you're looking at, and end with clearly-stated research question(s). Your job with the introduction is to encourage the reader to continue reading your article, and to demonstrate what gap in the literature your article is filling.

6. Read other articles as examples.

Read articles as examples of structure, tone, level of detail, length of each section, etc. These can be other articles that you've enjoyed, other articles on related topics, other articles from your target journals. Do not copy, but use these articles as education and inspiration.

7. Differentiate Results from Discussion.

Remember that **Results** are what you found; **Discussion** is how what you found fits in to the broader literature. Where does it agree or disagree, why might this be the case. What are the limitations of your analysis and questions that remain, and what should future research should address to close these gaps.

8. References

Use reference management software early & often! This will make your life immeasurably easier particularly as you go through edits with coauthors, and revise & resubmit processes.