

How to Build Better Papers for Peer-reviewed Journals

These guidelines assume that you have

- researched possible appropriate journals and chosen the one that seems best suited for your present circumstances (by extension, this also means that you understand the nature of other choices still open to you)
- written the paper satisfactorily as a research article in general and, as needed, in any ways customary to your discipline/specialty.

The focus is on how to get the paper ready to send to the journal for possible publication.

The Paper's Content

Check the internal consistency and accuracy of the paper's content.

Examples:

(These examples are for a report of quantitative empirical research. Other kinds of articles would have different but similarly relevant questions.)

- Is the abstract done correctly and properly? (the content, not the format)
- Have you stated a hypothesis or research question (and the terms on which you expect the answer, if that is expected)?
- Compare the Methods and Results section: Do they mesh properly?
- Are all the methods components matched by reported results? Vice versa?
- Check the Discussion and/or Conclusion section: Are the conclusions or claims for the findings in proportion within the pattern of research on the question(s)
- Check the tables and graphs. For example,
- Do the numerical totals add up to correctly across rows and down columns?
- Do subtotals sum to the expected total and, if not, is an explanation given?
- Do the labels for the columns (in tables) or bars (in bar graphs) complete and cover the sequences they should? (Is every accounted for?)
- Compare the tables/figures and the related text. Do they say the same things? (Be sure to check all text—abstract, results, discussion, conclusion—and make changes in all if necessary. Also, if changes must be made, be sure that they do not require adjustments to the details or tone of the abstract or conclusion.)
- Check the tables, figures, and other illustrative material. Can each one be understood without referring to the text?

Authorship

Make last-minute changes to authorship and order of authors, if necessary. This should have been set at the beginning of the writing, but sometimes circumstances change and require changes when the paper is submitted. (Authorship should be determined by studying the journal's definition of authorship. Authors will often be required to sign a document affirming that they fit the definition.)

Some journals require that authors spell out the role(s) each played in the research and writing, usually using a standardized list of roles related to the journal's definition of authorship. Some journals retain this information whereas others publish it.

Editors (the executive editor or staff editors) will usually notice if the author list changes. Often they will question the authors:

- Were authors' names dropped because they should never have been listed?
- Were authors' names added because they should have been listed all along?
- Are last-minute changes unethical or at least contrary to the journal's stated policies?

Journal's 'Instructions to Authors'

Journals' "instructions" cover three general kinds of instructions/requirements:

- the format/structure of the paper
- laying out how to submit the paper
- required statements or forms that authors must submit (e.g., qualifying for authorship, institutional approval of research, scientific integrity)

Format/structure

Examples of instructions:

- length of the abstract
- what goes on the title page
- where to find more/full instructions
- what format to use for reporting content (e.g., CONSORT, MOOSE, QUORUM)
- specifications for references (how many? What kind?) format for reference citations
- how to report statistics, or how to use technical terminology in the field
- start some or all major sections on a new page
- where to place the figures (all at the back of the paper?) How to number them? How to write captions/legends
- whether to send original 'art' for graphs and illustrations and, if so, how to label them
- the order for different parts of the paper (e.g., where do the acknowledgements go?)
- whether must submit version for 'masked'/'blind' review

Submitting the paper

Examples of instructions:

- how to send the paper (electronically or print? Which electronic format?)
- whether required to send print; if so, how many copies
- whether a cover letter is required? What must be included in it? What may be included at the author's discretion?

Ethics issues (publication ethics, not ethics in the research process)

Requirements vary greatly. Some journals' having no specific requirements on ethics issues; others give detailed instructions about meeting specific requirements. The Uniform Requirements for Manuscripts Submitted to Biomedical Journals (www.icmje.org) and the Council of Science Editors' White Paper on Integrity in Publishing Ethics (www.councilscienceeditors.org) describe the issues and standards for journals' requirements.

Examples of requirements

- instructions commonly included about ethics issues (by virtually all journals, either when submitting the paper or after the paper is accepted)

- honorary and ghost authorship; missing authors
- duplicate or fragmented publication
- editor's/journal's right to pursue allegations of misconduct (undertaken by the journal or other institutions)
- instructions increasingly required about ethics issues
 - studies involving human subjects
 - institutional approval of the study required
 - nature of informed consent obtained and what standard(s) this consent met
 - studies involving non-human animals
 - institutional approval of the study
 - standards met for care of the animals
 - conflicts of interest (financial, but also personal and institutional)