



Review Article

Practical aspects of drafting and submission of a manuscript: A brief note for novice medical researchers and students

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ABSTRACT

Drafting and submitting a manuscript can be a daunting process for novice medical researchers and students. Medical evidence, clinical guidelines, and protocols are the outcomes of medical research conducted in academia. However, owing to poorly prepared manuscripts and repeated rejections, numerous researchers face difficulties in disseminating their findings. This article aims to provide an outline of important practical aspects of drafting and submitting a manuscript for medical professionals and novice researchers, such as guidelines to adhere to, ethical aspects of scientific writing, common reasons for rejection, revising a draft, selecting a journal to publish, tips to identify predatory journals, and the use of language in the manuscript. By following these guidelines, novice researchers can enhance the quality and impact of their scientific contributions, ultimately fostering advancements in medical knowledge and patient care.

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1. Introduction

Once medical researchers complete their research, drafting a manuscript can often feel like a hectic task. Training programmes and resources are available across the databases to learn about structuring and drafting a robust manuscript. Once novice researchers are familiar with the preparation of manuscripts, the next hurdle is to identify which journal to choose, practical steps to approach a journal for submission, details of accompanying files with the manuscript, how to revise and reply to editors and peer reviewers, ethics to follow while publishing, and so on. This review is the second part of two series of papers attempts to deliver an outline about preparing a manuscript for medical professionals and novice researchers; this paper will cover practical aspects, publication ethics, reasons for journals, journal selection and other pertinent aspects of submission of a scientific manuscript in any suitable journals.

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2. General Guidelines for Manuscript Drafting

International Committee of Medical Journal Editors (ICMJE) in their website has provided general guidelines for drafting a manuscript related to biomedical research. These guidelines are followed by most of the indexed journals irrespective of publisher. However, it is recommended to understand author guidelines of selected journal to publish manuscript, as there can be specific instructions from journals. Depending on study design authors need to adhere to specific reporting guidelines. All reporting guidelines are freely available to download and use at the EQUATOR network website.¹ Table 1 depicts some of the important reporting guidelines.

3. Choosing an Appropriate Journal

Selection of journal is often a cumbersome task for researchers. This is not a straight forward process as well. Numerous factors need to be considered before selecting a

Table 1: Reporting guidelines based on common research designs

Research design	Guideline	Expansion
Randomized controlled trial (RCT)	CONSORT	Consolidated Standards of reporting trials
Observational studies (Case control and cohort studies)	STROBE	Strengthening the Reporting of Observational studies in Epidemiology
Systematic reviews and meta-analysis	PRISMA	The Preferred Reporting Items for Systematic Review and Meta-Analysis
Study protocols	SPIRIT	Standard Protocol Items: Recommendations for Interventional Trials
Case Reports	CARE	CASE REport guidelines
Qualitative research	SRQR and COREQ	Standards for Reporting Qualitative Research and Consolidated criteria for Reporting Qualitative Research
Economic evaluations	CHEERS	Consolidated Health Economic Evaluation Reporting Standards
Quality Improvement Studies	SQUIRE	Standards of Quality Improvement Reporting Excellence
Clinical Practice Guidelines	Agree and RightI	Appraisal of Guidelines for Research & Evaluation and Reporting Items for practice Guidelines in Health Care
Diagnostic/Prognostic studies	STARD and TRIPOD	Standards of Reporting of Diagnostic Accuracy Studies and Transparent Reporting of a multivariable prediction model of Individual Prognosis or Diagnosis

journal to publish a manuscript. Few of them are; topic of your research, area of research, target audience, reputation of the journals, publication cost, article type, length of the article and indexing of the journal also. Main thing to be aware of is to stay from predatory Journals. Experience with journals and specialty of medical field in which researchers work with also matters. Ideally this selection can be done by journal finders of different publishers after considering aforementioned factors. Once journal is selected researcher should read and understand aims and scope of the journal again to ensure whether the manuscript falls into it.^{2,3}

Numerous online journal selections are present. The JANE-Journal/Author Name Estimator portal (<http://jane.biosemantics.org>) determines the top 50 journal choices based on your submitted title or abstract. Various publishing firms like Elsevier, Wiley, and Springer have identical online platforms. Relying solely on such websites is unwise. You may look over the recommended journals to find the best selection or use them to complement information gathered from manual or other search techniques.⁴

3.1. Quality of a journal: Indices that reflects quality

What criteria should authors take into account when evaluating a journal's credibility, reliability, quality, and practices? Regrettably, there is currently neither a reliable list of credible or illegitimate journals nor an automated method to assist scholars in identifying articles that adhere to publication criteria. General consensus is that authors consider the publications they currently utilise for their

studies or clinical work when creating a list of potential journals for submission. To identify significant publications in a particular field of study or those suggested for tenure and promotion evaluations, one can consult mentors and colleagues. Consulting with mentors and colleagues can be beneficial when exploring a subject beyond one's expertise or while beginning a scientific writing career. Initial screening in all prominent data bases such as MEDLINE, Scopus and Web of Science will help to scrutinize journals legitimacy. Despite all screening authors can get scammed by predatory journals, journals with just financial motives and no efforts to improve quality of manuscript with proper peer review and editorial process.

Two indicators, journal impact factor (Clarivate analytics) and cite score (Scopus) are good measures to identify quality of journals. Both indicators are the ratio between number of citations of published articles and number of citable articles published in stipulated time period (4 years for Cite score and 2 years for impact factor). SCImago Journal Ranking in Scopus data base and Altmetric in PLOS One data base are two other measures to predict quality of journals. Limitation of these citation reports is that they are often from paid sources. Journal ranking based on impact factor called Quartile scores can also be relied on for quality. Q1 depicts top 25% journals based on impact factor on a particular discipline, Q2 is range of 50% to top 25%, Q3 range from 50% and lower 25% and Q4 is the lower 25%. The most esteemed journals in a particular discipline are those in the first quartile, Q1.

3.2. *Predatory journals: Tips to identify*

Identifying predatory and fake journals is crucial for researchers aiming to publish their work in reputable venues. Key tips include thoroughly checking the journal's website for signs of credibility, such as clear editorial policies, contact information, and association with recognized academic institutions. Researchers should verify the journal's inclusion in reputable databases like PubMed, Scopus, or Web of Science, and be wary of those promising unusually fast publication times or requesting high fees upfront.⁵ Examining the editorial board for recognized experts in the field, reading past issues to assess the quality of published articles, and consulting resources like the Directory of Open Access Journals (DOAJ) or Beall's List can also help. Additionally, networking with colleagues and seeking advice from mentors can provide valuable insights into the legitimacy of a journal. By taking these precautions, researchers can avoid the pitfalls of predatory publishers and ensure their work reaches a credible audience.⁶

4. Reasons for Rejection of Manuscript

For every researcher, the night mare is when they need to face rejection of a manuscript from any indexed journal. Rejection is not a dead end, but it's an open learning context. Analyse the reasons for rejections stated by the editor or peer reviewers and rectify all shortcomings listed before the next submission. Indexed journals rarely accept a manuscript without providing suggestions for modifications.

Manuscripts may be rejected for several reasons, which can be broadly classified as technical or editorial. Technical reasons typically necessitate further efforts, such as conducting supplementary experiments or analysis, prior to the publication of your work. Technical grounds for rejection encompass insufficient data, an inadequate sample size, or the absence of proper controls. Inadequate analysis, such as the utilisation of unsuitable statistical tests or a complete absence of statistical methods, Using an inadequate or outdated methodology to address your hypothesis, which has been exceeded by newer and more effective methods that yield more reliable outcomes, Inadequate research motivation occurs when the hypothesis is unclear or lacks academic validity, or when the data fails to address the given topic and the findings are inaccurate because they are based on unsupported assumptions.

Editorial reasons for rejection may include the following: This submission is outside the journal's scope and does not offer significant advancements or relevance for publication. Disregarding research ethics and/or publication ethics, such as failing to obtain written informed consent from patients, obtaining approval from an institutional ethics committee for biomedical research, engaging in unwanted self-citation, significant plagiarism, not adhering to COPE

guidelines, inadequate organization, or failure to adhere to a journal's formatting guidelines. The author's analysis and methodology lack sufficient detail for readers to properly comprehend and replicate them. Exhibits subpar linguistic proficiency, rendering it incomprehensible to peer reviewers and/or readers, study presents its rationale in a convoluted manner or presents the material in a disorganized way.⁷

Some other general reasons for rejections from peer reviewers' part are: lack of novelty, presence of severe flaws in the adopted methodology, topic not relevant to the current medical research landscape, authors failing to give proper interpretations of findings, reviewers discretion based on expertise in the field, poor literature review, recent large-scale studies available on the same topic, and finding out simultaneous submission of the same manuscript in multiple journals. At times, the author's country of origin, favouritism, and inappropriate presentation of tables and figures can also lead to the rejection of the manuscript.^{8,9}

4.1. *Use of language*

Using proper language, tense, and grammar is essential when preparing a scientific manuscript in medical research to ensure clarity, precision, and professionalism. Authors should employ clear and concise language, avoiding jargon and overly complex sentences that might confuse readers. The use of appropriate tense is critical: the past tense is typically used for describing the methods and results of the study, while the present tense is more suitable for discussing established knowledge and interpreting findings. Additionally, maintaining proper grammar and punctuation is vital to convey the research accurately and prevent misunderstandings. Consistency in terminology and adherence to the specific stylistic guidelines of the target journal also enhance the manuscript's readability and credibility. By meticulously focusing on these linguistic elements, researchers can effectively communicate their findings and contribute valuable insights to the medical community.¹⁰

Common errors in language use while preparing a scientific manuscript in medical research can significantly undermine the clarity and impact of the work. One frequent mistake is the misuse of tenses, such as mixing past and present tenses within the same section, which can confuse readers about the timeline of the study. Another error is the use of vague or ambiguous terms, which can obscure the meaning and reduce the precision of the findings. Overly complex sentences and excessive jargon can also detract from readability, making it difficult for readers to follow the research narrative. Additionally, improper use of punctuation and grammatical mistakes, such as incorrect subject-verb agreement or inconsistent use of singular and plural forms, can disrupt the flow of the manuscript.¹¹ Ensuring consistency in terminology and following the specific language guidelines of the target journal are also

crucial yet often overlooked aspects. Addressing these common errors through careful editing and proofreading is essential for producing a clear, professional, and impactful scientific manuscript.¹²

5. Publication Ethics

While preparing a manuscript or while attempting to disseminating a research study researchers will face numerous questions in mind as follows;

1. Can I be the first author of my student's project or thesis?
2. Can I submit an article to two journals simultaneously?
3. Can I make my friend a co-author (no contribution)?
4. Can I cite my own previous study without rationale in the new article?
5. Can I publish a case report without consent?

Answers for all above questions are COPE (Committee on Publication Ethics) guidelines which deals with all ethical aspects of publication in medical research.^{13,14}

Plagiarism is the most common issue associated with publication ethics. Authors are prohibited from using the words, figures, or ideas of others without giving proper attribution. It is necessary to include citations for all sources when they are used, and the reuse of terminology should be restricted and properly acknowledged or quoted within the text. Any manuscripts discovered to contain plagiarised content from other writers, regardless of whether the original work was published or unpublished, will be rejected and the authors may face sanctions. It may be necessary to edit or retract any articles that have been published.

The manuscript should clearly describe the approval and consent obtained from study subjects, the relevant Institutional Ethics Committee, permissions for data collection instruments, and consent for replication of any images or methods. These details should be included in the section on Ethical Considerations. It is important to verify any fabrication or falsification of data in the paper and confirm the accuracy of the data in the statistical part. Avoid submitting the same manuscript to more than one journal at the same time, as this goes against publication ethics. Additionally, it is important to refrain from publishing various aspects of a study in multiple journals, a practice known as salami slicing. Unless the segmented portions necessitate the formulation and testing of a new hypothesis.

The ethics of authorship also need to be fulfilled; a mutual consensus should be present between authors based on the contribution and gravity of input by each author into the manuscript. The order of authors and corresponding author allocation will also be done with agreement. Avoid undue inclusion of authors who don't have any significant contribution to the manuscript, but rather just pave the way

for setting permissions or being the head of a department (ghost and gifted authorship). All authors should have access to the contents and must be held responsible for the data and interpretations associated with them. Ideally first author of manuscripts derived from student thesis are student themselves, not the guide. However, it is a good practice to get the manuscript revised and approved by guide before submission.

The practice of citing one's own published work in later articles without proper relevance or out of context to the current manuscript is known as self-citation, which is not a good practice. Self-citation is often done by authors to improve their citation metrics, like the g and h indexes. However, some expert authors in a specific field who might have contributed significantly to a field may publish articles that do have connections to previous articles. In such situations, self-citation is justifiable.

5.1. Revisions and re submission of manuscript

After reviewers return your manuscript for revision, you should revise it based on their feedback and comments from reviewers/editors. In most cases, the editor who worked on your manuscript will write you a note explaining what they want changed and providing links to the reviews. In most cases, you will find instructions on how to submit a revised manuscript, such as when and how to highlight the changes, as well as directions on how to structure your amended work, in this type of letter. It is imperative that you express gratitude to the editors and reviewers for their time and feedback while making revisions to your manuscript and responding to their suggestions.

Respond to the comments by outlining and highlighting the significant changes made to your revised manuscript, then answering each comment in detail in your response letter/reply to editor letter. Carry out the extra statistical analyses and modifications in the manuscript that the reviewers have suggested (unless you think they won't improve your work; if that's the case, explain why in your reply to editor letter). Respond with an academically sound and courteous argument if you disagree with anything said. If your paper undergoes a second round of peer review, remember that the reviewers will also have access to this letter. Use a different colour text, highlight the changes, or use Microsoft Word's Track Changes tool to clearly show the key adjustments in the text. This goes beyond just outlining the modifications in your detailed cover letter. Return the amended manuscript along with the reply to editor letter within the editor's specified time frame. Reply to editor file can be simply prepared with a table in it as depicted in Table 2.

Table 2: Example of a table presenting with reply to comments

Reviewer 1 Comments	Reply to comments	Modifications made
1. 2. Reviewer 2 Comments	Reply to comments	Modifications made
1. 2.		

5.2. Final thoughts before submission

Keep words simple and accurate. Avoid complex sentences keep them short. Use paragraphs to signpost the content of each section. Ensure the writing style is in keeping with the journal e.g. use of active or passive voice (scientific or reflective paper?). Unclear writing often implies to editors –unclear thinking and lack of attention to detail. Ensure you always use the in-house referencing style of the journal. Do not exceed the word limit in your final manuscript.¹⁵

Ensure continuous feedback on your drafts - it is not possible to produce a final manuscript on the first attempt. Make sure that your work is completed by the editors' specified time limit. Verify the presence of any errors in spelling and grammatical glitches. Compare your paper with the journal's Instructions to Authors / Contributors Guidelines, specifically for line space, font, title page, conflict of interest form, author contribution details, blind manuscript without author details and author details for correspondence. Make sure that all cited sources are included in the Reference List. Check whether it is necessary to have both physical copies and digital copies. Draft a letter accompanying to the editor, sometimes called as covering letter. Make sure to preserve a duplicate of the finalised manuscript. Revision dates for journals might range from a few weeks to three months, depending on the magnitude of the modifications required. Notify the editor right away if you doubt you can return the amended paper within the specified period. You must reach out to them about getting an extension as soon as possible, because they may be able to do it.

6. Conclusion

In conclusion, the process of drafting and submitting a manuscript in medical research is a meticulous endeavor that demands precision, clarity, and adherence to specific guidelines. By meticulously planning the structure, rigorously following journal submission requirements, and ensuring thorough peer review, researchers can enhance the quality and impact of their work. Effective communication with co-authors and transparency in reporting are also crucial to maintaining integrity and credibility. As the landscape of medical research continues to evolve, staying

informed about best practices and emerging trends will be essential for researchers aiming to contribute meaningful and impactful findings to the scientific community. Through dedication and a methodical approach, the challenges of manuscript preparation can be navigated successfully, leading to advancements in medical knowledge and ultimately, patient care.

7. Source of Funding

None.

8. Conflict of Interest

None.

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