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# How to Increase Your Likelihood of Scientific Publication


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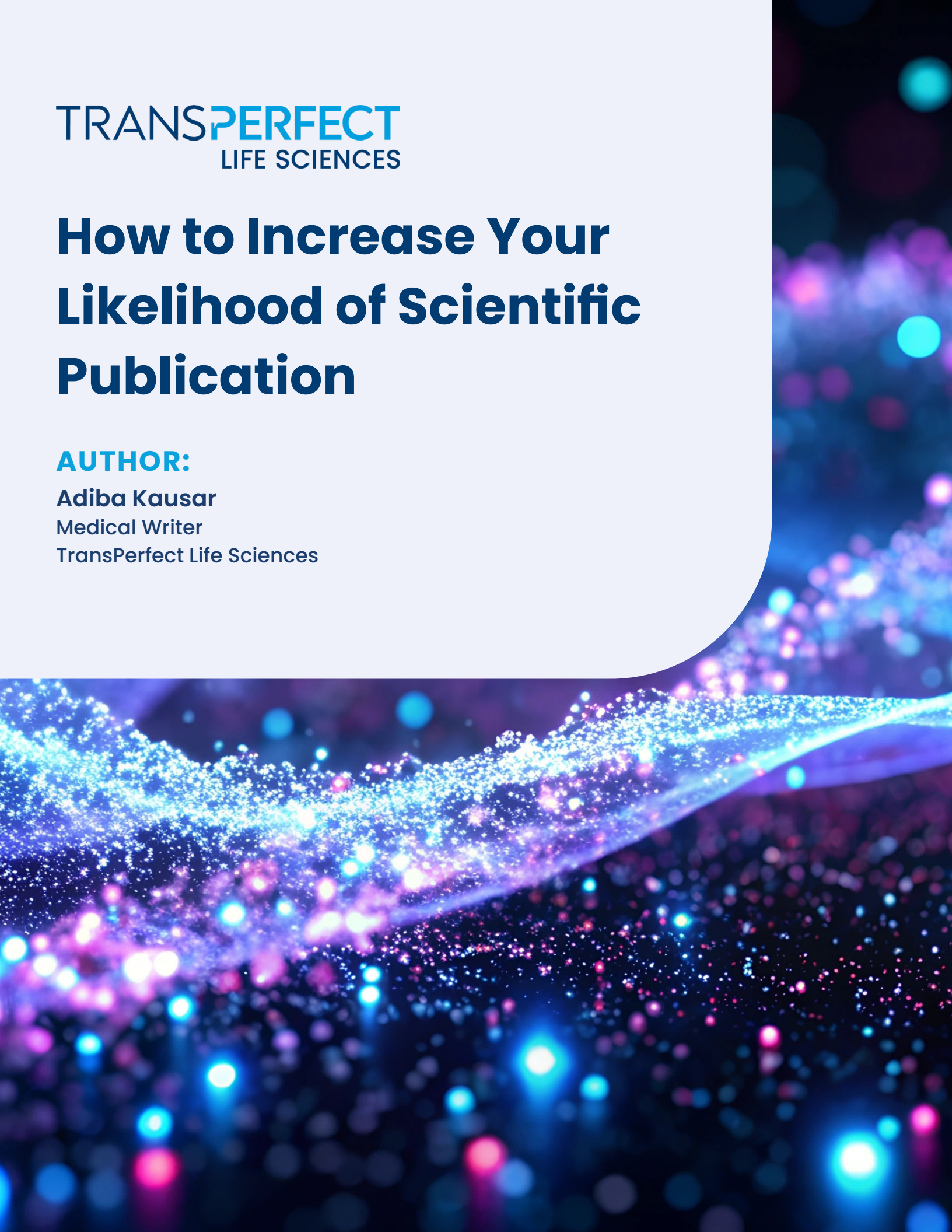


## Summary

Writing a scientific manuscript involves considerable planning and organization to boost your chances of publication in a peer-reviewed journal. Here, we show you how to develop a thorough plan to present research logically and how to avoid the common pitfalls of authorship, so you can overcome the chances of rejection for publication.


## Introduction

Writing a scientific manuscript involves considerable planning and organization to boost your chances of publication in a peer-reviewed journal. If a manuscript is not written carefully, the odds of publication may be slim regardless of a unique hypothesis or robust data. A well-written manuscript is a uniform, balanced document that consistently presents clear ideas. Since a manuscript is the first attempt to publicly share novel research, the research should be documented in a manner that allows the reader to follow the reasoning and validate the conclusions. Authors should develop a thorough plan to present research logically. Knowing the common pitfalls of authorship can help you overcome the chances of rejection for publication.

## Cultivate your idea

The first step before developing the manuscript should be a literature search of the intended topic. This not only assists in evaluating the current state of field knowledge but also helps to find out whether the subject is original or recognized. Additionally, a literature search becomes the foundation of citation. Formulate a focused question to get the most out of your literature search through databases such as PubMed, Medline, and Cochrane Library.

## Regulatory Consulting

Need help with technical or regulatory questions? Working in a regulated industry can be challenging, and it's important to understand and strategically plan for compliance requirements. TransPerfect can research and navigate local regulations for user-facing content, consent forms, and labeling needs—helping you avoid costly errors and compliance headaches down the line.

## Identify the journal

Find the best-suited journal for the topic you have chosen. Read through each journal's author instructions and plan your manuscript so it adheres to the instructions for the journal you have selected as your top choice. Decide the type of article you would like to submit.

Different journals may have different requirements specific to the article type, including variations in word count, figures, tables, references, supplemental information, patient consent, and more. Read other academic papers in your target journal to get a better sense of the acceptable style, tone, and structure of admitted papers. You can contact relevant journal editors through the journal website to discuss your submission plan if needed.

## Answer these questions before writing your manuscript:

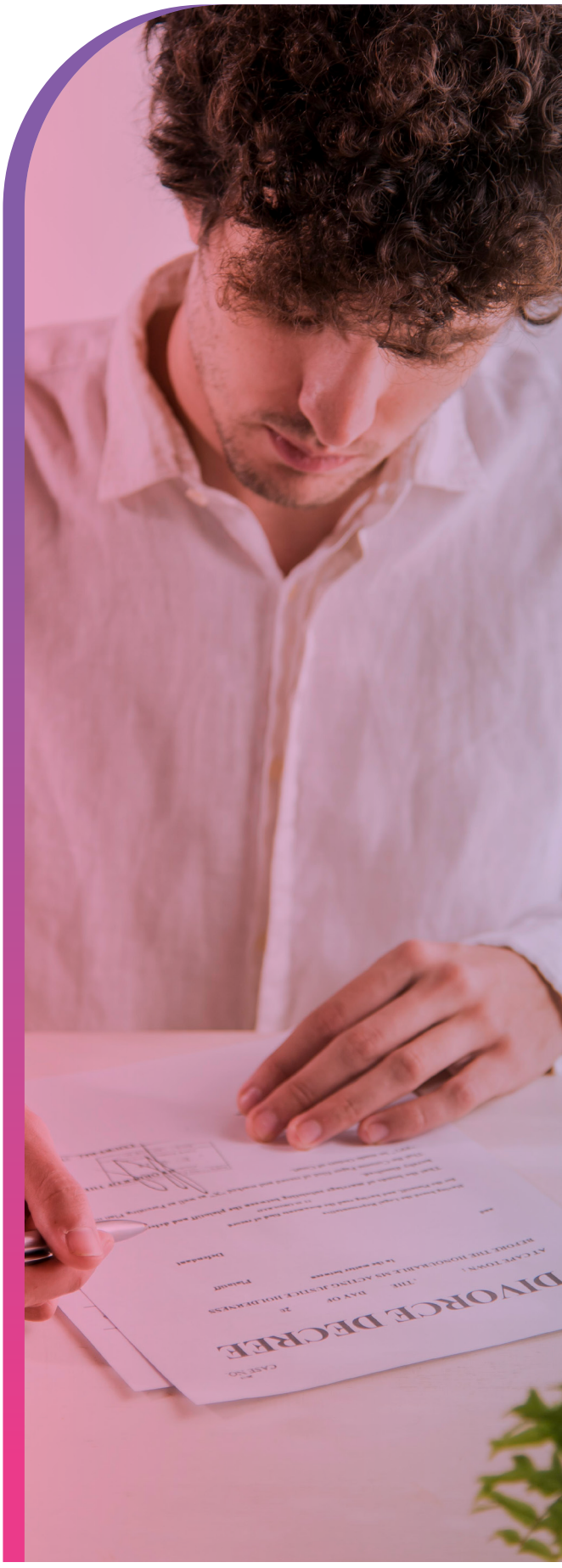
- Will the manuscript present a novel idea or scientific outcome?
- Is the topic generalizable to a large audience, or is it only relevant to specialists?
- How does the hypothesis differ from past literature?
- Is the topic within the scope of the journal?
- If the manuscript is not accepted to your top choice journal, what are other journal choices for the topic?
- What are the journal's author guidelines?

## Prepare an outline

Every research activity is determined by a logical flow of activities that your manuscript should record carefully. Organize a draft by starting a bulleted outline of your manuscript with key points for each section. The manuscript sections may have minor variations depending on the journal, but, typically, every manuscript should follow the IMRAD format: Introduction, Methods, Results, and Discussion. While writing a manuscript, however, it's best to fill in each section of the outline in the order listed below for better results:


1. **Figures, graphs, and tables –** Begin by selecting the tables, graphs, and figures that correspond to the main findings.

2. **Methods –** Add sentences describing the study design, study centers/sites, study objectives, subjects, inclusion/exclusion criteria, methodology, sample size calculation, data analysis, and safety analysis, etc., as applicable.
3. **Results –** Include information on the subject disposition, demographics, and main findings.
4. **Discussion –** Add a summary of major findings in concise sentences. Include the previous literature that you intend to compare with your research. Do not forget to include study limitations.
5. **Conclusion –** Provide a clear statement that justifies your research hypothesis and how useful it is for the respective field of study.
6. **Introduction –** State the rationale behind your research, prepare a list of previous literature, and state previous research limitations.
7. **Abstract –** Leave this section for last after you've completed the main body text.
8. **Title –** Compose a title that reflects the theme of your research, including specific keywords to index your manuscript.
9. **Keywords –** Note keywords per the journal's author guidelines.
10. **Acknowledgments –** Disclose any potential conflicts of interest and author contributions.
11. **References –** Finish off with a list of references you plan to cite to support the paper.




## Write the first draft

After you've finished your outline with the key points of your manuscript, use the same order to fill it in with complete sentences.

Figures, graphs, and tables offer readers an overview of the study results. Condense key outcomes and parameters into tables to make the manuscript space-effective, and offer figures that depict the main findings. Common errors with tables include inaccurate citation of tables, differences between the data presented in the table versus the text, inaccurate arithmetic, and duplicate information.

Graphs enrich the reader's understanding of data and allow the depiction of complex relationships between variables. Common errors encountered with graphs include incorrect use of scales, unclear design elements, and incorrect graph types.

**Methods** should be sufficiently detailed to facilitate reproducibility. This section should only include information available at the time the plan or protocol was being written. A common error in this section is writing about results and discussion instead of simply providing information on how the research was conducted.

**Results** should broadly include study recruitment, sample characteristics, and findings from the analysis.

- Recruitment comprises study duration, patient flow, the generalizability of results, and selection bias.
- Sample characteristics correspond to whether groups are compared at baseline.
- Findings from the analysis include the primary, secondary, and exploratory outcomes assessed in your research. However, it should be correlated with the methods. For every outcome in the methods, there should be a result provided. Summarize the collected data in the form of descriptive statistics, and then report an inferential statistical analysis of those findings. Safety reporting should always be included.
- The results section should be written in the past tense. Include all results, whether negative or positive. Supplementary information guidelines should be followed carefully per the selected journal.

**Discussion** depicts a comprehensive conclusion of the results. The discussion should interpret the results section with regards to the original hypothesis and compare the similarities and differences of the results with available literature. However, do not reiterate the results. No new findings should appear in a discussion that did not come from the results section. Avoid any statement that goes beyond your findings. Be sure to include study limitations, discrepancies, and possible future research that may answer questions your findings raise.

**Conclusion** shows how your findings advance the field of research in that particular area of study. Your conclusion section should be supported by the data presented throughout the paper. Do not repeat your abstract or list your study results. Justify each finding and its use in the field.

**Introduction** reflects the process of scientific discovery. Discuss the scientific publications listed in the outline to determine the rationale behind your work. Discuss the shortcomings or limitations in existing literature thus far. Emphasize the possibility of determining novel mechanisms or interventions. An engaging introduction that asks the core questions and emphasizes how your work contributes to the particular field should hook a reader, and so, a peer reviewer. Avoid pitfalls like including too much general information and failing to report relevant literature.

**Abstract** portrays the entire manuscript in a nutshell. It should be clear in summarizing the intervention or problem and the core research questions, as well as note the parameters under consideration. An abstract should utilize the maximum allowable word count.

**Title** should be informative and should reflect the theme without revealing findings or conclusions. Make the title clear and brief, and provide keywords. Don't use non-standard acronyms, jargon, numerical values, or special characters such as colons.

**Keywords** make a manuscript more capable of being searched. Check the journal-specific author guidelines for instructions on the number of keywords permitted, labels, definitions, thesaurus, and range. Avoid using words with broader meaning and those already part of the title.

**Acknowledgements** thank those who have contributed to your research, such as funding agencies, writing assistance, and proofreaders.

**References** should be cited in the text and reference list. Do not inflate your article with too many references. Avoid using excessive self-citations, unpublished research, personal communications, and publications that are not peer-reviewed. This section is most prone to errors, so ensure the references and corresponding citations conform to the journal-specific author guidelines.

## Lastly, critically assess your manuscript

Before submitting your article, you should critically appraise your paper. The initial draft of a manuscript is subject to significant changes, so a submission should never be rushed. Re-read your manuscript thoroughly and proofread it with colleagues for a second opinion, if possible. Carefully check your manuscript for spelling and grammatical errors. Address and correct all potential shortcomings.

Guidance to prepare a manuscript can be found by visiting the International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. Guidance on specific study designs is provided by the Enhancing the Quality and Transparency of Health Research (EQUATOR) Network.

An effective publication offers elements that grip a reader and drive the process of a strong argument with a perceptible, authorial voice. For more information on how to develop a strong manuscript, contact us at medicalwriting@transperfect.com.

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