



# **A GUIDE TO PUBLISHING IN SCHOLARLY JOURNALS**

# The structure of an article

## Section Purpose

- **Title** Clearly describes contents
- **Authors** Ensures recognition for the writer/s
- **Abstract** Describes succinctly what was done
- **Keywords** Ensures the article is correctly identified in abstracting and indexing services

## Main text

- **Introduction** Explains the hypothesis
  - **Methods** Explains how the data were collected
  - **Results** Describes what was discovered
  - **Discussion** Discusses the implications of the findings
  - **Conclusion** Comment on important, validity, and generality of conclusion
  - **Acknowledgments** Ensures those who helped in the research are recognized
  - **References** Ensures previously published work is recognized
- Supplementary material Provides supplementary data for the expert reader

## Article structure

Title

Abstract

Keywords

(IMRAD)

☐ Introduction

☐ Methods

☐ Results

☐ And

☐ Discussions

Conclusions

Acknowledgements

References

Supplementary data

**Make your article as  
concise as possible**

## Types of authorship

- **First author:** the person who conducts or supervises the data collection, analysis, presentation and interpretation of the results, and also puts together the paper for submission
- **Co-author:** makes intellectual contributions to the data analysis and contributes to data interpretation, reviews each paper draft, must be able to present the results, defend the implications and discuss study limitations

## Key author responsibilities

### Authorship:

- Report only real, unfabricated data
- Originality
- Declare any conflicts of interest
- Submit to one journal at a time

### Avoid:

- **Fabrication:** making up research data
- **Falsification:** manipulation of existing research data
- **Plagiarism:** previous work taken and passed off as one's own



## Your ultimate checklist for reviewing a paper

### First impressions

- ☐ Is the research original, novel and important to the field?
- ☐ Has the structure and language used appropriate?

### Abstract

- ☐ Is it really a summary?
- ☐ Does it include key findings?
- ☐ Is it an appropriate length?

## Introduction

- Is it effective, clear and well organized?
- Does it really introduce and put into perspective what follows?
- Suggest changes in organization and point authors to appropriate citations.
- Be specific – don't write "the authors have done a poor job"

## **Introduction**

The introduction should be brief, ideally one to two paragraphs long. It should clearly state the problem being investigated, the background that explains the problem, and the reasons for conducting the research.

You should summarize relevant research to provide context, state how your work differs from published work and importantly what questions you are answering.

Explain what findings of others, if any, you are challenging or extending. Briefly describe your experiment, Hypothesis(es), research question(s), and general experimental design or method.

Lengthy interpretations should be left until the Discussion.



## Methodology

- ❑ Can a colleague reproduce the experiments and get the same outcomes?
- ❑ Did the authors include proper references to previously published methodology?
- ❑ Is the description of new methodology accurate?
- ❑ Could or should the authors have included supplementary material?

## Methods

(Materials and Methods or Experimental Methods, etc.) The key purpose of this section is to provide the reader enough details so they can replicate your research. Explain how you studied the problem, identify the procedures you followed, and order these chronologically where possible. If your methods are new, they will need to be explained in detail; otherwise, name the method and cite the previously published work, unless you have modified the method, in which case refer to the original work and include the amendments. Identify the equipment and describe materials used and specify the source if there is variation in quality of materials. Include the frequency of observations, what types of data were recorded. Be precise in describing measurements and include errors of measurement. Name any statistical tests used so that your numerical results can be validated. It is advisable to use the past tense, and avoid using the first person, though this will vary from journal to journal.

## Results and discussion

- Suggest improvements in the way data is shown
- Comment on general logic and on justification of interpretations and conclusions
- Comment on the number of figures, tables and schemes
- Write concisely and precisely which changes you recommend
- List separately suggested changes in style, grammar and other small changes
- Suggest additional experiments or analyses
- Make clear the need for changes/updates
- Ask yourself whether the manuscript is worth to be published at all

## Results

In this section you objectively present your findings, and explain in words what was found. This is where you show that your new results are contributing to the body of scientific knowledge, so it is important to be clear and lay them out in a logical sequence. Raw data are rarely included in a scientific article; instead the data are analyzed and presented in the form of figures (graphs), tables, and/or descriptions of observations. It is important to clearly identify for the reader any significant trends. The results section should follow a logical sequence based on the table and figures that best presents the findings that answer the question or hypothesis being investigated. Tables and figures are assigned numbers separately, and should be in the sequence that you refer to them in the text. Figures should have a brief description (a legend), providing the reader sufficient information to know how the data were produced. It is important not to interpret your results - this should be done in the Discussion section.

## Discussion

In this section you describe what your results mean, specifically in the context of what was already known about the subject of the investigation. You should link back to the introduction by way of the question(s) or hypotheses posed. You should indicate how the results relate to expectations and to the literature previously cited, whether they support or contradict previous theories. Most significantly, the discussion should explain how the research has moved the body of scientific knowledge forward. It is important not to extend your conclusions beyond what is directly supported by your results, so avoid undue speculation. It is advisable to suggest practical applications of your results, and outline what would be the next steps in your study.

## Conclusion

- Comment on importance, validity and generality of conclusions
- Request toning down of unjustified claims and generalizations
- Request removal of redundancies and summaries
- The abstract, not the conclusion, summarizes the study

## **Acknowledgments**

This section should be brief and include the names of individuals who have assisted with your study, including, contributors, reviewers, suppliers who may have provided materials free of charge, etc. Authors should also disclose in their article any financial or other substantive conflict of interest that might be construed to influence the results or interpretation of their article.

## References, tables and figures

- Check accuracy, number and citation appropriateness
- Comment on any footnotes
- Comment on figures, their quality and readability
- Assess completeness of legends, headers and axis labels
- Check presentation consistency
- Comment on need for colour in figures



## References

Whenever you draw upon previously published work, you must acknowledge the source. Any information not from your experiment and not "common knowledge" should be recognized with a citation. How citations are presented varies considerably from discipline to discipline and you should refer to the guide for authors for the specific journal.

Quotes that appear in the article, if long, should have their own indented paragraph. Otherwise, if they are in the natural flow of the article they should be within quotation marks. In both cases they should include a reference.

The references section that appears at the end of the article includes all references cited in your article. This section is in contrast to a bibliography, common in books, where works read but not necessarily cited in the text are listed. The manner in which references are presented also varies from journal to journal and you should consult the journal's guide for authors.

# SOURCES

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**A guide to publishing in scholarly journals**