**Components of a Scientific Research Paper**

A scientific research paper communicates scientific work to a wide audience. Without publishing results, the important data collected, analyzed, and interpreted is inaccessible to the scientific community and hence of little or no value. In order to advance the science, researchers must share their results. Publishing data and results provides an opportunity to explain why the work is important and how it might be applied. To get to the point of publication, authors first must have a firm understanding of what should be included in the paper or what are the components of a scientific paper.

Many journals provide general guidelines that explain how a paper should be organized, but these guidelines rarely specify exactly what should appear in each section of the paper. The components of a scientific research paper are the following.

1. Title
2. Author Information
3. Abstract
4. Keywords
5. Introduction
6. Methods
7. Results
8. Discussion
9. Conclusion
10. Acknowledgements
11. **Title**

The title should be specific enough to describe the contents of the paper, but not so technical that only specialists will understand. The title should be appropriate for the intended audience. This assists other investigators in rapidly identifying articles of interest to them.It should be short (50 characters or less than 15 words)–most journals enforce a limiton the number of characters that can be included in the title.A study regardingthe advantages of having a short paper titlesuggests thatpapers with shorter titles are more frequently cited.A title serves two main purposes: Attracts a potential audience; Aids in indexing and retrieval in electronic form. Phrases such as ‘A study of’, ‘Research on’, ‘A report of’, ‘Use of’ etc. may be avoided from the title.

1. **Author Information**

The persons who made substantial contributions to the work are entitled to for authorship. According to the International Committee of Medical Journal Editors (ICMJE), anyone who fulfils all of the following criteria can be an author:

1. Contributes significantly to the conception, design, execution, and/or analysis and interpretation of data
2. Participates in drafting and/or revising part of the manuscript for intellectual content
3. Approves of the version to be published
4. Agrees to be accountable for all aspects of the work
5. **Abstract**

An abstract, or summary, is published together with a research article, giving the reader a "preview" of the paper. Such abstracts may also be published separately in bibliographical databases. They allow other scientists to quickly scan the large scientific literature, and decide which articles they want to read in depth. The abstract should be one paragraph, of 100-250 words, which summarizes the purpose, methods, results and conclusions of the paper. The abstract should not contain any abbreviations or citations or footnotes and should stand alone.

1. **Keywords**

Keywords make the research paper searchable. The authors These keywords, or Medical Subject Headings(MeSH), can be found using the MeSH browser. MeSH terms are common in scientific research; using MeSH terms for keywords ensures that you are using the most relevant searchterms available.which is available online. Copy and paste the text of the paper into the textbox, and MeSHOn Demand returns a list of MeSH terms relevant to the text

1. **Introduction**

The introduction begins by introducing the broad overall topic and providing basic background information.  It then narrows down to the specific research question relating to this topic and present information gap in the available literature associated with the topic.  It provides the purpose and focus for the rest of the paper and sets up the justification for the research.

1. **Methods**

The Methods should describe specific design of study and provides clear and concise description of procedures performed.

1. **Results**

The results section contains the data collected during the study.The results section is the heart of a scientific paper.The results section always begins with text, reporting the key results and referring to figures and tables as proceed. In this section, much of the important information may be in the form of tables or graphs.

**Figures**: First and foremost of all, figures (e.g. an image, drawing, or a graph) must be relevant. An appropriately selected figure conveys important data regarding the points mentioned in the manuscript. It is through the help of a figure that a key point is best conceived in the minds of readers. Each figure or figure part should be numbered.

**Tables**: When properly used, tables capture information concisely, and display it efficiently. Including data in tables rather than text frequently makes it possible to reduce the length of the text. Each table should have a number and a title. When multiple tables are used they should be numbered consecutively in the order they are cited in the text.

1. **Discussion**

The purpose of the discussion is to interpret and compare results.The discussion section is also a place where authors can suggest areas of improvement for future research.In many cases the results and discussion are combined into one section if the flow of the manuscript is better when combined.

1. **Conclusions**

At the end of the results and discussion section, the researcher must make his conclusion. The conclusion is just a brief restatement of the whole paper, that is, those things discussed in the methods as well as the findings.

1. **References**

The scientific paper should cite all the literature that have been examined in the conduct of the study. Whatever is cited in the research paper (intext citation) should be backed up by the references. There is no hard rule on the number of references that can be included, but some scientific journals prescribe a limit, say a maximum of 30.

**Acknowledgments**

This is a short section acknowledging contributors not named as authors, funding sources and organizations that supported the work. This is an optional section and should be as brief as possible. Many funding agencies required acknowledgments along with the specific grant number that supported the work.