IMRAD Structure Summary

Let’s imagine that your research has been on X.

When you began your research on X, you had an aim. In order to achieve this aim you found a method. With that method, you produced some results. With these results you probably either proved something, disproved something, or found nothing conclusive.

* introduction
* Materials and Methods
* Results
* Discussion

**The Introduction** should supply sufficient pertinent background information to allow readers to understand why the study was performed. It must include a rationale for the study, a clear statement of the purpose of the study, and the investigators’ hypothesis or hypotheses. When writing the introduction for a journal paper publication, it should be brief (often, 2 or 3 paragraphs will suffice). It should focus on identifying the specific problem the study is meant to address; describing how the study addresses the problem, differs from previous studies, or improves our understanding; and explaining what the present study was meant to do and what hypotheses it was meant to test.

**The Materials and Methods section** should describe the study design in sufficient detail to allow others to re-produce the study. A subsection detailing statistical methods used to summarize data, evaluate data distributions, and test hypotheses, along with a statement regarding the cut-off for significance used for hypothesis testing, should be provided.

Appendices and methods-related figures should be cited parenthetically. Products (including soft-ware), equipment, and drugs should be identified in the text by chemical or generic names or descriptions. For all statistical tests, authors are required to indicate whether applicable test assumptions were met.

When citing software products, a footnote should be used to cite the software (eg, PROC GLM, SAS, version 9.2, SAS Institute Inc, Cary, NC) and a reference should be used to cite a user’s guide (eg, SAS/STAT 9.2 user’s guide. Cary, NC: SAS Institute Inc, 2008;page number).

**The Results section** should provide data that are clearly and simply stated without discussion or conclusions. Tables and figures should be cited parenthetically. Authors should refrain from repeating within the text data that are also presented in tables and figures and are encouraged to report the number of subjects included in any statistical calculations (eg, means, medians, and results of statistical tests), particularly if that number differs among described variables.

**The Discussion section** should focus on findings in the manuscript and should be brief (generally no more than 2,000 words) in journal paper writing, containing only discussion that is necessary for the interpretation of findings. The major findings, including whether hypotheses stated in the introduction were supported, should be given in the first paragraph. Strengths and weaknesses of the study should be acknowledged, and the discussion should end with the principal points that readers should take away.