Your Research Manuscript

- A study that hasn’t been published
- Its structure is not much different from other graduate research papers
- Traditional IMRaD Model
  - Introduction
  - Methods
  - Results, and
  - Discussion

New IMRaD Model

- Title
- Abstract
- Keywords
- Introduction
- Methods
- Results
- Discussion
- References

- Title
- Introduction
- Methods
- Results
- Discussion
- Abstract
- Keywords
- References, throughout

Title

- Descriptive, concise, precise, and interesting
- Key indicator to attracting readers’ interest
- Avoid
  - Lengthy titles
  - Unnecessary words (e.g., “A Study of...”)
  - Abbreviations (e.g., “Role of IMRC to JVAD...”)

Introduction

- May be the hardest section to write in the manuscript
- Introduce the field of study
- Narrow the focus using specific references
- Justifies the research
- May include a statement of purpose (hypothesis, predictions, purpose, objectives, etc.)
Introduction: What should you write?
- Include
  - Basic terminology from your field (e.g. theories, names, definitions)
  - Key studies that led to your study
- Don’t Include
  - Exhaustive literature search
  - Specific details from your study (later section)

Methods
- Generally the easiest section to write
- Presented in logical order
- May include sub-headings
- Complete description of “how” you conducted your study
- Detailed enough so others can repeat your steps
- Includes human use approval information

Methods: What should you write?
- Include
  - All materials, quantities, and study locations
  - Citations of novel techniques
  - Equations and statistical techniques used
- Don’t Include
  - Picky details
  - Extensive narrative on previously validated methods
  - Results, of any type

Results
- Also, a very easy section to write
- Summary of your findings
- Presents details in the same order as the research objectives, answering the purpose
- Narratives precede tables/figures, but do not repeat entire information load from tables/figures
- Depending on publication type, no discussion

Results: What should you write?
- Include
  - Summary of your findings (i.e. stats, trends)
  - Tables and Figures
  - References to tables and figures
- Don’t Include
  - Raw data
  - Same information twice
  - Too many figures
  - Interpretation of your results

Discussion
- Answers most important questions posed in the introduction (previous studies)
- An interpretation of your results, with implications and recommendations
- Explain findings in context to hypotheses or objectives with reference to your results
- Comments on findings’ significance and potential for future study
### Discussion: What should you write?

- Include
  - Relationships to studies cited in the introduction
  - References to tables and figures
  - Summary/Conclusion

- Don’t Include
  - A repeat account of your results
  - Any new ideas not in the introduction
  - Exaggerations beyond the scope of your findings

### Abstract

- Most critical component beyond the title
- Usually limited to a specific word count
- States main objective
- Summarizes the most important results
- Includes major conclusions
- Poses new avenues of research

### Keywords

- Many publications now require keywords
- Facilitates online search mechanisms
- Can be used to cross-index articles through online databases/indexing services
- Choose words that relate to the most important descriptors of your manuscript

### References

- Refer to the publication guidelines
- Refer to a style manual for correct format
- Include every study cited in your manuscript
- Avoid typos, especially in authors' names, scientific names, etc.

### Submission Guidelines

- Review journal submission guidelines
- Find “Calls for Papers” for conferences
- Follow the guidelines
- Seek assistance from “experienced” writers in your field
- Editor/Conference chair “may” be contacted for help in developing your manuscript

### Summary

- Essential research manuscript components:
  - Introduction, Methods, Results, and Discussion
  - Title, Abstract, Keywords, and References
- Writing strategies include knowing which section must be written first and which are easiest to write
- Submission guidelines dictate which components are needed, but citation style is a constant