

# Key Elements of a Formal Report

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# Outcomes:

- identify the appropriate sections of a formal report
- describe the information required in each section
- design the structure of your own formal report
- organize your results into logical sequence

# IMRAD Model

Introduction—Methods—Results—Discussion

What was studied? (Introduction)

What have others said? (Literature Review)

How was the problem studied? (Methods)

What did you find? (Results)

What do these results mean? (Discussion)

# Introduction

The introduction establishes a research context, articulates a problem (including its significance), and describes how the problem will be addressed.

The literature review will generally appear in this introductory section.

# Introduction: Sample Sentences

*Poursae & Hansson:*

The term ... can generally be defined as .... However, as in the present study, it is often used to describe ...

There are large numbers of studies of ..., and some research has been carried out on the ... process.

While there has been some investigation of ..., as far as the present authors have been able to ascertain, there is no evidence ...

# Methods

The methods section is a statement of research procedure.

You are providing this statement of your method because your reader needs to understand your specific procedure.

You are not providing step-by-step instructions.

# Methods: Sample Sentences

*Poursaee and Hansson:*

This study involves three different ...

Three sets of ... were prepared as follows.

The ... was monitored and is shown in Fig. 3.

A standard ... design was used for determining the relative ...

# Methods: Sample Sentences

*Klinsky et al.:*

Recognition of these challenges led to a methodology which ...

This study used an exploratory design to elicit ...

The important part of this methodology was that both the quantitative and qualitative data was used to inform analysis.

For this study, we designed three ...

# Results

The results section is a summary of your findings (provided in both prose and visual form).

Your goal is to provide a lucid summary that will allow your reader to appreciate the interpretation of your research.

# Results: Sample Sentences

*Poursaee and Hansson:*

... are shown in Fig. 8. These data are the average of ...

After ... weeks exposure to ..., however, all ... exhibited ...

# Results: Sample Sentences

*Klinsky et al.:*

As seen in Fig. 2 the quantitative data suggests that participants are likely using ...

Several patterns emerge when ...

When this initial assessment is further probed by qualitative data analysis it becomes clear that ...

As discussed throughout, these results are exploratory but provide some first glimpses into ...

It is striking that across participants the key arguments [from some perspective] are ...

# Discussion

The discussion section gives your interpretation of your results: the implications of your research.

You need to explain the importance of your findings and how this work might be continued in the future.

# Discussion: Sample Sentences

*Glanz et al.:*

Our study found a strong association between ...

This study is the first to examine this relationship in a well-defined cohort with ...

Our results are consistent with 3 previous studies that showed ...

This study has several potential limitations.

These results have important implications for families and the physicians who care for them.

Future research should focus on ...

# Discussion: Sample Sentences

*Poursaee and Hansson:*

Two observations can be made from these data:

It had been assumed that .... However, this was not the case....

This could be attributed to a number of factors:

The average values of ... are given in Fig. 15. As can be seen, there is no significant difference in ...

The behaviour of ... is very similar ... and so there is no apparent advantage to the use of one or the other.

# Suggested Structure

Title

Abstract

Introduction

Method

Results (and Analysis)

Discussion

Conclusion

References

# Titles

Research article titles should:

- Indicate the topic of the study
- Indicate the scope of the study
- Be self-explanatory (to people in your field)

And might:

- Indicate the nature of the study

# Abstract

- A short, self-contained, accessible summary of the entire text.
- Between 100 and 350 words
- An abstract will be used for three main purposes:
  1. Deciding whether to read the whole text
  2. Remembering key findings or citation information
  3. Understanding a text (pre-reading)

# Abstract

- An abstract should give a good and accurate first impression.
- An abstract should be intelligible to a broad audience.
- An abstract should stand alone, without reference to anything beyond itself.
- An abstract should answer a few basic questions:
  - ★ Why did you undertake this study?
  - ★ How did you do the study?
  - ★ What did you find?
  - ★ What do these findings mean?

# Abstract Tips

- Do not use acronyms or symbols or anything that will require the reader to have information not provided by you.
- Do not refer to material that is not in the text; that is, the reader should not encounter anything in the abstract that won't be discussed in depth later.
- Make sure that your *key terms* appear in your abstract.
- Try creating a reverse outline of your full text in order to highlight the basic structure and important ideas.
- Put a lot of emphasis on the first sentence or two—work on getting a very clear statement of the full thesis right off the bat.
- When deciding on level of detail, ask yourself what your reader will need to fully appreciate the argument.

# References

- **YOU MUST INCLUDE REFERENCES**
- Author, Date referencing is preferred for in-text citations
- Consistency is important!

# Fine details...

- All figures should have a label and caption (below the figure)
- All tables should have a label and caption (above the table)
- Be consistent in your referencing style
- Include a citation list
- **EDIT YOUR WORK**

Glanz, J.M., McClure, D.L., Magid, D.J., Daley, M.F., France, E.K., Salmon, D.A., & Hambidge, S.J. (2009). Parental refusal of pertussis vaccination is associated with an increased risk of pertussis infection in children. *Pediatrics* 123 (6), 1446–1451.

Poursaee, A., & Hansson, C.M. (2008). The influence of longitudinal cracks on the corrosion protection afforded reinforcing steel in high performance concrete. *Cement and Concrete Research* 38, 1098– 1105.

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