



The research paper and its abstract

1. The research paper

The research paper usually follows the IMRaD pattern.

IMRaD stand for: (Introduction _Materials and Methods_ Results and Discussion)

There are different sorts of research papers and thus variations on this pattern. For instance, instead of Materials and methods, one may find Patients and Methods or Subjects and Methods. Moreover, every Journal has **its own specific requirements** and style. For example, in the New England Journal of Medicine, the pattern is Background, Methods, Results and conclusions, whereas in The Lancet it is Background, Methods, Findings and Interpretation.

1.1. The Title

The title is the most read part of the research paper and is therefore extremely important. It should reflect the contents of the research article. It must be precise, concise and informative, and stimulate interest in the work. The average number of words is between 10 and 15.

1.2. Introduction

The introduction highlights the background and the objectives of the study. It presents a review of the literature, the current state of knowledge, and the nature and scope of the research. It also contains the description of the main purpose of the study. It is usually written in the simple present or present perfect.



1.3. Materials and Methods

This section is a detailed description of the study, how it was designed and carried out. The protocol and the inclusion and exclusion criteria (participants) are presented. The equipment used is described precisely with references. Information is given concerning ethical aspects and informed consent. This section may contain subheadings to present methods of measurement and statistical analysis. The tense used is the simple past, and the passive voice is predominant as the object of the study is what matters.

1.4. Results

The results present the main findings of the study, very often in the form of tables or graphs. They need to be clearly and simply stated without comment. The simple past used predominantly. However, some results have a general scope and may be expressed in the present tense.

1.5. Discussion

The aim of the discussion is to highlight the significance of the findings but also any limitations of the methods used in the study. It also compares the results with other published findings and discusses possible differences or similarities. It must propose a conclusion which will lead to further research. There is no predominant tense in this section. Modal verbs are very frequent to underline the fact that the interpretation of the results can be challenged.

Definition: A **research paper** is an **essay** in which you explain what you have learned after exploring your topic in depth. In a **research paper**, you include information from sources such as books, articles, interviews, and Internet sites. You also use your own ideas, knowledge, and opinions.

- **Research articles** are published in journals/magazines. A **research article** is an original **research** published **in a** peer-reviewed journal
- **Research papers** are presented at conferences. However, a **Research paper** is also original **research** published **in a** conference and presented as an oral presentation or as a poster.