

Checklists to help you get the IMRAD structure right

Many journals expect that your research paper be written and formatted in the **IMRAD structure**. This includes the following sections: Introduction, Methods, Results, and Discussion. This document contains a list of things you need to remember when preparing different sections of your paper.

[CTRL+click on the checklist you'd like to access.]

- [Checklist 1 – Introduction](#)
- [Checklist 2 – Methods](#)
- [Checklist 3 – Results](#)
- [Checklist 4 – Discussion and Conclusion](#)
- [Checklist 5 – Title](#)
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Checklist 1 – Introduction

The Introduction section should set the context for your study and research problem. It should provide background information and explain what your study is about and the purpose behind it.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Have you explained how the research makes an important contribution to the field?		
Have you provided a brief overview of previously published works on the topic?		
Have you stated your hypothesis/research question clearly?		
Have you given a brief explanation about why it is important to have your research question answered?		
Have you clearly stated the scope of your study? If there were any limitations to the study, have you mentioned them?		
Have you described the study design clearly and concisely?		
Have you mentioned briefly whether the study achieved its objectives?		

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Checklist 2 – Methods

The Methods section should provide a detailed explanation of how you conducted your research and the materials you used in the process. Remember that other researchers should be able to replicate your research and reproduce the findings.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Have you defined what your subject/study population was?		
Have you stated your sampling criteria?		
Have you described the study design in detail, including the hypotheses, your rationale and assumptions, and variables used?		
Have you clearly stated the controls set for your study and defined the control group(s) against which your data were compared?		
Have you spoken about the tests carried out, number of replications, parameters measured, and in what form the data has been collected?		
Have you described the steps of your experimental procedure concisely, in the chronological order in which they occurred?		
Have you stated which instruments you used, along with calibration procedures, measurement technique, and manufacturer details?		
Have you provided information about the reagents and chemicals used as well as supplier information?		
If you used calculations to arrive at a reading/result, have you mentioned the calculation method?		
Have you mentioned what methods you used to analyze the collected data and which statistical tests were carried out?		
Have you stated how you addressed the ethical concerns (if any) raised by your study?		

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Checklist 3 – Results

The Results section should present your research findings in detail along with all the data.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Have you been concise, presenting mainly your converted data and providing only as much raw data as is required for clarity?		
Have you stated the important results first?		
Have you stated all other results in a chronological order?		
Have you presented the results of the control group?		
Have you organized the text into smaller units using subheadings?		
Have you included even the negative results?		
Have you used the correct units?		
Have you placed the tables and figures as requested in Instructions to Authors?		
Have you numbered tables separately from figures?		
Have you numbered both tables and figures as requested in Instructions to Authors (usually consecutively)?		
Have you provided a precise legend for each table and figure?		
Have you confirmed that you have not presented the same data both in a table and in a figure?		
Have you divided very large tables into multiple tables?		
Do the numbers in your tables and figures add up correctly?		
Have you considered whether you want the illustrations in your paper to be in color or black-and-white?		
Have you mentioned the p value where required?		

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Checklist 4 – Discussion and Conclusion

The Discussion and Conclusion section should interpret the findings and discuss the impact that your research may have on the field of study.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Have you stated the important findings and your interpretation of them?		
Have you discussed the implications of the results attained?		
Have you mentioned the limitations and strengths of your study?		
Have you explained what you learned from the study?		
Do your statements and arguments flow logically?		
Have you used simple, lucid statements?		
Have you explained the differences and exceptions in your findings?		
Have you made sure that your results are not overgeneralized?		
Have you ensured that the findings are not inflated?		
Have you checked the studies you have cited? You should not cite all previous studies.		
Have you included any tangential or irrelevant issues? If yes, then omit them.		
Have you criticized other studies? Your aim should be to talk about how your study stands in relation or comparison to other studies. You cannot criticize or find fault with other studies.		
Have you ensured that the conclusion is directly related to your research question and stated purpose of the study?		

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Checklist 5 – Title

The Title of a research paper should briefly convey what the study is about and should draw readers to your paper.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Is your title brief? Check your journal’s requirements for word length.		
Does it convey exactly what your paper is about?		
If you’ve conducted a specific type of experiment or analysis does your title reflect it?		
Does it include keywords from your paper?		
Have you used abbreviations or jargon in the title? You shouldn’t!		

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Checklist 6 – Abstract

The Abstract should function like a movie trailer—it should offer a preview of your research, highlight key points, and help readers decide whether to view the entire work.

Have you done this?	Have you done it yet? Mention “YES” or “NO”	Next steps (list things you need to do to complete this task)
Did you write your Abstract before writing the whole paper? You shouldn’t! The Abstract should be the last part you write.		
Have you mentioned the major objectives/hypotheses and conclusions from the Introduction and Conclusion sections?		
Have you mentioned key sentences and phrases from your Methods section?		
Have you identified the major results from your Results section?		
Have you arranged the sentences and phrases selected from all sections together into a single paragraph in the following sequence: Introduction, Methods, Results, and Conclusions?		
Have you made sure that this paragraph does not contain new information that is not present in the paper?		
Does your Abstract contain undefined abbreviations or group names? It shouldn’t!		
Have you made sure that you haven’t discussed previous literature or added reference citations in your Abstract?		
Have you linked your sentences to ensure that the information flows well, preferably in the following order: purpose; basic study design, methodology and techniques used; major findings; summary of your interpretations, conclusions, and implications?		
Have you confirmed that there is consistency between the information presented in the Abstract and in the paper?		
Have you asked a colleague to review your Abstract and check if the purpose, aim, methods, and conclusions of the study are clearly stated?		
Does the final abstract meet your target journal’s guidelines and requirements?		

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