

Tips for Reading a Research Article

1. Read the Abstract. It consists of a brief summary of the research questions and methods. It may also state the findings. Because it is short and often written in dense jargon, you may need to read it a couple of times. Try to restate the abstract in your own nontechnical language.

2. Read the Introduction. This is the beginning of the article, appearing first after the Abstract. This contains information about the authors' interest in the research, why they chose the topic, their hypothesis, and methods. This part also sets out the operational definitions of variables.

3. Read the Discussion section. Skip over the Methods section for the time being. The Discussion section will explain the main findings in great detail and discuss any methodological problems or flaws that the researchers discovered.

4. Read the Methods section. Now that you know the results and what the researchers claim the results mean, you are prepared to read about the Methods. This section explains the type of research and the techniques and assessment instruments used.

5. Read the Results section. This is the most technically challenging part of a research report. But you already know the findings (from reading about them in the Discussion section). This section explains the statistical analyses that led the authors to their conclusions. It will test your knowledge of statistics, as well as research terms such as correlation coefficient, dependent and independent variables, subject variables, main effect, interaction, and interrater reliability, to name a few.

6. Read the Conclusion. The last section of the report summarizes the findings, but, more importantly it sets out what the researchers think is the value of their research for real-life application. This section often contains suggestions for future research, including issues that the researchers became aware of in the course of the study.

Guidelines for evaluating a research article

Is the article up to date? Old and irrelevant? Timeless?

Is the article original research? Supporting previous findings? A review of the literature?

Title

Does the title give you insight as to what the article is about?

Does the title tell you *what*, *whom* and *how*?

Does the title entice you to read further?

Abstract

Does the abstract contain a brief statement about the purpose, method, results, conclusion and clinical relevance?

After reading the abstract did you learn the essence of the article without the details?

Introduction

Is the problem clearly stated?

Is the literature complete, current and appropriate and is the review objective?

Are alternative views acknowledged?

Are statements appropriately supported?

Are there unsupported assumptions (especially contributing to the articles research question)?
Did the author identify a “gap”?
Is the purpose clearly stated?
Is there a hypothesis?

Method

Are subjects well-described?
How was the sample selected?
How large was the sample?
Was a control group used?
Is the instrumentation well-described? Calibrated?
Is the procedure laid out in detail?
Could someone replicate the study?
Is there internal validity?
Is the data analysis well-described? Appropriate?
What p-value was used? (or how were the stats presented?)

Results

Are the measured data summarised?
Are results statistically significant?
Are results clinically/practically significant?

Discussion

Was the hypothesis accepted? Rejected?
Does the author identify weakness/limitations of the experiment?
Are statements appropriately supported?
Is further literature cited to address the findings? Are alternative views acknowledged?
Are the results applied clinically/practically?
Are suggestions for further research indicated?

Conclusion

Are the results briefly restated?
Do conclusions follow from the results?

Formatting and clarity

Is the article clear? Is it formatted appropriately?
Are the main points arranged in logical sequence?
Do you have difficulty following the argument? Is the case made?

Referencing

Are all references precise and clear?

About the Author

Is the article (or authors work in general) well cited (cite lists of central articles are generally very important to your research, Google scholar has a good function for keeping up to date this way)?
Where is it published?
Is the author well established in the field?

Potential conflicts of interest

Are there Sponsors of the research (often a statement near the end of the article)?
Employer of the research team (e.g. Gatorade research)?
Publisher of the research (e.g. ASCM publishes MSSE, NSCA publishes J Strength Conditioning Research)?