

A Brief Guide To Reviewing Research Articles

A review of a “research article” (i.e., a published report of a research study) has two parts: a summary and a critique. In fact, this type of review is often called a “summary and critique.” The summary is generally much shorter than the critique.

Summary:

Give a concise and accurate summary of the study purpose, design, findings, and conclusions:

1. Type of study (e.g., randomized clinical trial, quasi-experimental)
2. Purpose of study (e.g., to test the hypothesis that....)
3. Materials and methods:
 - subject population (numbers, sex, ages, demographics, characteristics, etc.)
 - variables/measures/indicators, and the methods of observation
 - numbers of trials, length of time intervals, etc.
 - statistical analyses (or lack thereof) in the study design
4. Results:
 - actual results (e.g., means and variance, distribution)
 - statistics derived from the data; significance (or lack thereof) of statistics
5. Discussion/Conclusions:
 - how did the authors interpret the results or their significance and answer their research question?

Critique:

Discuss the strengths and weaknesses of the study:

1. Introduction: clarity and rationale of background and stated purpose/questions
2. Methods:
 - are they valid for studying this problem?
 - could the study be duplicated from the information given?
 - are there flaws in the methods (e.g., inadequate sample selection, inappropriate experimental design?)
3. Results: accuracy and reliability of observations
 - are the data presented in tables and illustrations organized for ready comparison and interpretation?
 - are there discrepancies between text and tables?
 - do the results reveal what the researcher[s] intended?
4. Discussion:
 - does the interpretation arise logically from the data, or is it too far-fetched?
 - is the interpretation at odds or in line with other researchers' thinking?
 - have all key studies been considered?
 - have the authors discussed the strengths and limitations of their own research?
 - do they suggest further work?

Be sure to consider the following, too:

1. Bias:
 - is the study biased in any way?
 2. Disclosure:
 - do the authors share their results?
 3. Logical reasoning: validity of design and conclusions
 - internal (did they answer the research question?) AND
 - external (is the study generalizable to another population or a currently held theory?)
 4. Clarity of presentation:
 - does the title precisely state the subject of the paper?
 - does the abstract accurately summarize the article?
 - is all material organized under the appropriate headings?
 - are sections subdivided logically?
 - reflect on the writer's thinking and writing style: is it clear, concise, and precise?
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Sources

Kuyper, B.J. (April, 1991), "Bringing up scientists in the art of critiquing research," *BioScience*, 4 (4): 248-250.

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