

Critiquing a quantitative study

Before deciding the overall merits of a study, you should probably review the various sections that we have looked at. The following checklist may be helpful in this regard.

Checklist for critiquing a statistical study

- I. *Abstract* (optional heading). Has the author correctly summarized the article? Are the following items included?
 - a. Statement of the topic and purpose
 - b. Description of the participants and materials and procedures
 - c. Explanation of the statistical analyses
 - d. Summary of results and implications

- II. *Introduction* (optional heading). Is the framework for the study clear?
 - a. Literature Review (optional heading). Can you tell where the study fits in?
 - i. Is the background or rationale provided?
 - ii. Is the relationship to previous research clear?
 - b. Statement of Purpose (optional heading). Can you tell where the study is heading? Are any of the following included?
 - i. Purpose
 - ii. Research questions
 - iii. Research hypotheses

- III. *Method*. Is the study replicable?
 - a. Subjects
 - i. Is the description of participants adequate?
 - ii. Is the method of selection clear?
 - b. Materials
 - i. Is there a description of tests, questionnaires, rating scales, and so forth?
 - ii. Do the variables represent reasonable operational definitions of the underlying constructs or characteristics involved?
 - iii. Is there a description of any equipment (when applicable)?
 - c. Procedures
 - i. Is there a description of the preparation of materials, administration, scoring, and so on?
 - ii. Is there a description of the conditions during the study?
 - d. Analyses
 - i. Is there a description of the arrangement and grouping of the data?
 - ii. Are the statistical tests listed in order of use?

IV. *Results*

- a. Are all the statistical tests previously listed represented as results?
- b. Is there a prose explanation (optional)?

V. *Discussion/Conclusion*

- a. Is the original research question, or questions, answered?
- b. Is there an explanation of why the results were as they were?
 - i. If the conclusion is based on previous research, is it well supported and reasoned?
 - ii. If the conclusion is speculative, is it qualified as such and well reasoned?
- c. Are suggestions for further research provided?

VI. *References, Notes, or Footnotes*

- a. Are all the references cited in the text included?
- b. Are any pertinent references missing?

VII. *Appendixes*

- a. Are they necessary?
- b. Are they complete?

Brown, J. D. (1988). *Understanding research in second language learning: A teacher's guide to statistics and research design*. Cambridge, UK & New York: Cambridge University Press. Pages 59-61.