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?