Common Peer Reviewer Criticisms of Manuscripts

Peer review is a key step on the path to scientific publication, and authors often inquire about reviewers’ criteria for evaluating manuscripts. The fundamental concerns of peer reviewers and editors center on three themes: (a) Does the manuscript deal with an important scientific problem and offer novel results? (b) Are the methods valid to answer the research question? (c) Do the results and interpretation contribute to future research or practice? To aid authors as they write and revise papers, I compiled the following list of issues peer reviewers commonly identify when they assess manuscripts.

- **Title:**
  - Title reflects the content of the paper (vs. those that are vague or suggest a study that was not conducted)

- **Abstract:**
  - Abstract provides meaningful information without reading the entire paper
  - Abstract includes key details about methods and results (vs. excessive background or vague conclusions)
  - Abstract is consistent with the research findings (vs. text that is inconsistent or over generalizes results)

- **Significance:**
  - Topic is important
  - Key previous studies are considered (vs. only citing studies that support the project)
  - Extant research critically analyzed and synthesized
  - Background/literature review focuses on study variables (vs. vague general content)
  - Study addresses a knowledge gap (vs. an unnecessary replication, such as a study with a slightly different population)
  - Work is original (vs. including results previously reported)
  - Study contributes valuable new knowledge that justifies publication

- **Methods:**
  - Methods consistent with the purpose/questions/hypotheses
  - Paper contains methods descriptions adequate for meaningful interpretation of findings
  - Paper presents compelling rationale for unusual methodological decisions (vs. using criterion scores on specific instruments that are inconsistent with extant literature, using measures with weak validity, etc.)

- **Sampling:**
  - Inclusion criteria match the study purpose
  - Sample well described
  - Sample size adequate to address purpose
  - Appropriate analysis of sample variations (vs. including heterogeneous subjects without attending to sample variations known to be linked to outcome variables)
  - Sample characteristics suggest that findings could be generalizable

- **Measures:**
  - Measures conceptually consistent with key constructs
  - State-of-the-science measures
  - Evidence that measures have validity and reliability in the population (vs. using measures developed and tested in populations with significantly different attributes)

- **Interventions:**
  - Intervention described in detail (content, dose, interventionist, etc.)
Correct intervention tested to move knowledge forward
Control condition adequately described
Best control condition used (e.g., true control, attention control, standard care)

Procedures:
- Procedures reasonable to address purpose
- Procedures maintain study fidelity

Risks of bias:
- Study design and procedures control for risks of bias
- Study design’s risks of bias reasonable for this area of science
- Potential sources of confounding addressed in the design and/or discussion
- Study findings interpreted in the context of any risks of bias

Analyses:
- Analyses directly and explicitly address the research questions/hypotheses
- Analyses of named study variables (vs. analyses of variables not previously mentioned in the manuscript)
- Adequate analyses (vs. additional/alternative/simpler/more sophisticated analyses could improve the research report)
- Data manipulations reasonable
- Analyses did not violate important assumptions
- In qualitative studies, data management and analyses address trustworthiness

Results:
- Reported results directly address the questions/hypotheses
- Adequate details provided about results (e.g., test statistics, n for individual tests if n varies across analyses, exact p values)
- Results well organized
- Number of statistical tests reasonable (vs. excessive tests conducted without correction)
- Tables/figures clearly present findings
- Tables/figures understandable without reading the text
- Manuscript text supplementary to the graphics (vs. redundant graphics or graphics redundant with text)
- In qualitative studies, selected quotes from participants illustrate themes
- In qualitative studies, data appear adequately analyzed (vs. presenting so many categories reviewers question whether analyses are complete)

Discussion:
- Moves beyond restating the findings
- Interpretation locates the findings in the context of extant research
- Inconsistencies with extant research explained
- Content consistent with study findings (vs. content about what the author expected to find but did not)
- Strength of recommendations match the magnitude of study findings (vs. author makes unjustified claims or generalizations)
- Addresses both strengths and limitations of the study
- Alternative explanations of results explored
- Describes research studies that would directly build on completed study (vs. general content about the topic’s importance)
- If appropriate, addresses practice/policy implications

Scientific conduct:
- Human subjects protected
- Paper composed of original ideas (vs. concerns about plagiarism)
- Paper contains original data (vs. reporting results substantially previously reported without new scientific impact)

References:
- Key references included

Overall report issues:
- Paper uses relevant reporting guidelines (CONSORT, PRISMA, etc.)
- Manuscript well organized
- Paper vocabulary, grammar, and sentence/paragraph structure appropriate
- Concise manuscript (vs. excessive literature reviews and tables)
- Manuscript follows journal style standards

The list is intended to be useful as authors draft manuscripts and as they carefully revise their papers prior to journal submission.

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