

The Checklist of Review Criteria¹

Group 1: Problem Statement, Conceptual Framework, and Research Question

1. The introduction builds a logical case and provides context for the problem statement.
2. The problem statement is clear and well-articulated.
3. The conceptual framework is explicit and justified.
4. The research purpose and/or question (as well as the research hypothesis, where applicable)
 1. is clearly stated.
5. The constructs being investigated are clearly identified and presented.

Group 2: Reference to the Literature and Documentation

1. The literature review is comprehensive, relevant, and up-to-date.
6. The literature is analyzed and critically appraised; gaps in the literature are identified as a basis for the study.

Group 3: Relevance

1. The study is relevant to the mission of the journal or its audience.
2. The study addresses important problems or issues; the study is worth doing.
3. For quantitative studies: the study has generalizability because of the selection of
7. participants, setting, and educational intervention or materials.
4. For qualitative studies: the study offers concepts or theories that are generalizable or
8. transferable to other contexts, people, etc.

Group 4: Research Design

1. The research paradigm or approach is identified.
2. The design is appropriate for the research purpose or question. If a mixed-methods approach is used, the rationale is provided for the relationship between and sequencing of quantitative and qualitative aspects of the study
3. For quantitative studies: the design has internal validity, and potential confounding variables or biases are addressed
4. For quantitative studies: the design has external validity, including participants, settings, and conditions.
5. For qualitative studies: the study design incorporates techniques to ensure trustworthiness.
6. For studies with interventions: the intervention is described in sufficient detail (objectives,
7. activities, time allocation, training) to be able to assess the likelihood of the intervention
8. having the desired effect and/or to permit the study to be replicated.
9. The research methods are defined and clearly described, and they are sufficiently detailed to provide transparency or permit the study to be replicated.

Group 5: Instrumentation, Data Collection, and Quality Control

¹ Adapted from Review Criteria for Research Manuscripts 2nd Edition (AAMC)

1. The development and content of the instrument(s)—as well as the preparation of observers, interviewers, and raters, as appropriate—are sufficiently described or referenced and are sufficiently detailed to permit transparency and/or replication.
2. For qualitative studies: the characteristics of the researchers that may influence the research are described and accounted for during data collection.
3. The measurement instrument is appropriate given the study's variables; the scoring method is clearly defined.
4. The psychometric properties and procedures are clearly presented and appropriate.
5. The data set is sufficiently described or referenced.
6. Data quality control is described and is adequate.

Group 6: Population and Sample

1. For quantitative studies: the population is defined in sufficient detail to permit the study to be replicated.
2. The sampling procedures are described in sufficient detail to permit transparency, replication, or theory generation.
3. Samples are appropriate to the research purpose or question.
4. Selection bias is addressed.

Group 7: Data Analysis and Statistics

1. Data-analysis procedures are described in sufficient detail.
2. Data-analysis procedures conform to the research design, hypotheses, models, or theory
3. drives the data analyses.
4. Statistical tests are appropriate.
5. Topics such as effect size or functional significance, multiple tests, or comparisons, and
6. adjustment of significance level for chance outcomes were considered.
7. Power issues are considered in studies that make statistical inferences.
8. For qualitative analysis: how members of the research team contributed to coding,
9. identifying themes, and/or drawing inferences is described; methods used to ensure
10. trustworthiness of the analysis are also described.

Group 8: Presentation of Results

1. All results are presented. The results align with the methods and study questions.
2. The amount of data presented is sufficient, balanced, accurate, and supportive of inferences or themes.
3. Tables, graphs, or figures are used judiciously and agree with the text.
4. The statistics are reported correctly and appropriately.

Group 9: Discussion and Conclusion: Interpretation

1. The conclusions are clearly stated; key points stand out.

2. The conclusions follow from the design, methods, and results. The study limitations are discussed. Findings are placed in the context of relevant literature, and alternative interpretations are considered as needed.
3. Practical significance or theoretical implications are discussed; guidance for future studies is offered.

Group 10: Title, Authors, and Abstract

1. The title is clear, informative, and representative of the content.
2. The abstract contains essential details.
3. The conclusions in the abstract are justified by the information in the abstract and the text.
4. There are no inconsistencies in detail among the abstract, text, tables, and figures.
5. All the information in the abstract is present in the text.

Group 11: Presentation and Documentation

1. The text is well written and easy to follow.
2. The manuscript is well organized.

Group 12: Scientific Conduct

1. Ideas and materials of other authors are correctly attributed. (There are no instances of plagiarism).
2. Prior publication by the author(s) of substantial portions of the data or study is appropriately acknowledged.
3. Any apparent conflict of interest is appropriately disclosed.
4. There is an explicit statement of ethical review and approval (e.g., by an institutional review board [IRB]) for studies directly involving human subjects or data about them.