

Original Article

Exploring the Art of Critique: A Narrative Review Approach to Dissecting Health care Literature

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ABSTRACT

Background: A research critique or review of an article is the critical analysis of the strengths and weaknesses of a research paper through evidence-based practice, emphasizing the distinction between critique and criticism which helping post graduate students to defended their thesis. The literature review explores the advantages and disadvantages of methodological and statistical balancing in articles.

Objective: This narrative review article aims to dissolve the challenges faced by healthcare professionals while critiquing a quantitative research paper, thesis, or dissertation for the purpose to qualify the defense committee of concerns board of institutions.

Methods: The narrative review article was conducted by a systematic search of electric data bases, primarily Pub Med, Google scholar, and Scopus while referenced through Medley Software. There was no chronological constraint, but the focus was on thorough, current knowledge and foundational works that were well-known and frequently cited in the academic world. Included instructions and textbooks with thorough methods for evaluating quantitative works. Excluded articles with just qualitative critiques and publications written in languages other than English. The main principles for the in-depth analysis were taken from the step-by-step manual that Frances Ryan, Patricia Cronin, and Michael Coughian released in March 2007 and served as the cornerstone for the establishment of an organized method for research critique.

Results: Overall, several review guidelines resulted in the critiquing of writing style, title, abstract, literature review, logical consistency, statement of the phenomenon of interest, theoretical framework, instrumentation, sampling, study design, data collection, data analysis, philosophical underpinning, ethical consideration, discussion, conclusion, and references.

Conclusion: The art of critique offers guidance and tactics about critique in various domains effectively and educates readers on the hints of providing feedback thoughtfully particularly in healthcare profession.

Keywords: research critique, article critique, review paper, criticism, critique art

INTRODUCTION

Research critique or review is a critical analysis of the strengths and weaknesses of an article through evidence-based practice (1-2). While criticism focuses solely on the limitations, critique involves a systematic evaluation of both the strengths and limitations (3). According to Webster's II College Dictionaries (1999), critique is defined as a critical review, specifically one dealing with a literary or artistic work (4). Various terms are associated with critique in literature, such as critical analysis, review, evaluation, and appraisal (5). The advantages and disadvantages of methodological and statistical balancing of an article are reviewed, considering how to assess the utilization of an article, particularly in quantitative studies (6).

Critique aims to help students develop skills in reviewing research, making them more sensitive to the authority of publication (Brink & Wood, 2001, p. 57). The purpose of a review article is to determine if the results are useful (2). In an article review, the reviewer reports the main ideas, claims, findings, and reasoning supporting these ideas while critiquing its contribution to the knowledge within the discipline (8). A scholarly review is a process of summarizing, assessing, and evaluating.

Historically, nursing research critiques generated in the 1940s and 1950s were considered less worthy and had low satisfaction scores (Burns & Glove, 2001). Nurses should critically evaluate research studies to determine their adequate application to practice, as suggested by Fain (1999). Melnyk and Fineout-Overhold (2005) emphasized the link between evidence-based practice and research. Burns and Grove classified critique into nine types, and Charter (2006) stated that a quantitative critique should present four fundamental areas: comprehension, comparison, analysis, and evaluation. Pajares (2005) noted that quantitative research should always include a conceptual or theoretical framework, rooted in the scientific inquiry branch of philosophy called logical positivism (9).

To critically analyze a research article, one must understand the scientific language, such as the difference between significant (important) and significance (a statistical measure of probability) (10). Keywords used in review articles include logical appeals, ethical appeals, emotional appeals, expert opinion, logical, representative, relevancy, opinion, statistical, reasonable, and evidence-based (11). Authentic articles can be found using databases like CINAHL, END, JISC, Athens, EMBase, BIDS, British Medical Journal, Cochrane Database, Metcrawler, Medline, and Psycline (12).

Several authors have provided guidelines for critiquing quantitative research, including Fos-binder and Loveridge (1996), Girard (1999), Schmelzer (2000), and Bassett (2003). Frameworks for assessing research for use in practice have been suggested by McCaught (1999) and Shreve and Evans (2000). Quantitative and qualitative critiques share some similarities (13).

Successful critique writing involves considering alternative viewpoints, distancing oneself from the reply, and answering preliminary questions such as the relevance, objectives, and target audience (14). When reviewing an article, it is essential to identify the target viewers, assess the paradigm, check the peer review process, and evaluate the article's impact on the field (15). Not all published work is trustworthy, and rigorous processes vary between publications.

Various structures are suggested for reviewing an article, but common elements include bibliographic information, writing style, title and author, abstract, research problem, significance, logical consistency, literature review, theoretical framework, research questions/hypotheses, ethical considerations, methodology, sampling, instrumentation, data collection, data analysis, statement of phenomenon of interest, selection bias, philosophical underpinning, discussion, conclusion, and references (3-16). Understanding, synthesizing, and critiquing are fundamental components of evidence-based practice in nursing curricula at both pre- and post-registration levels (17).

The objective of this review is to rationalize the process of critique, aiding in the development of robust skills for evaluating research literature effectively.

MATERIAL AND METHODS

The narrative review was conducted through a systematic search of electronic databases, primarily PubMed, Google Scholar, and Scopus. The aim was to identify publications for critiquing quantitative research papers, theses, or dissertations to support the defense committees of institutional boards. No date restrictions were placed; however, the emphasis was on comprehensive, updated knowledge and seminal works widely referenced and recognized in the academic community. Guidelines and textbooks detailing methodologies for critiquing quantitative works were included. Publications in non-English languages and articles focusing solely on qualitative critique were excluded.

The principal guidelines for in-depth analysis were adopted from a step-by-step guide published by Michael Coughlan, Patricia Cronin, and Frances Ryan in March 2007, which has established a structured approach to research critique. Information was extracted on various critiquing dimensions such as writing style, study design, data collection, analysis technique, and ethical consideration. The extracted data were synthesized to underscore common themes, discrepancies, and best practices for reviewing quantitative work.

The critique process was categorized into several core areas, including title evaluation, abstract analysis, literature review scrutiny, theoretical framework assessment, methodology evaluation, data analysis, discussion, conclusion, and ethical consideration. Each category was explored in detail, following the structured guidelines identified through the literature search. The quality of the selected articles, textbooks, and guidelines was assessed based on author credentials, publication source, and relevance. High priority was given to peer-reviewed articles and guidelines endorsed by professional bodies.

The review strictly adhered to ethical standards concerning citations and the use of published data, ensuring that all sources were appropriately acknowledged and no confidential or proprietary information was improperly utilized. The study involved secondary data analysis, examining existing literature and published articles without any intervention with human or animal subjects or the use of identifiable private information.

RESULTS OF THE REVIEW

1. Writing Style: The quantitative review guidelines of Polit and Beck (2006) emphasized clarity, logical consistency, accuracy, style, conciseness, precision, structure, visual aids, and conclusion as fundamental aspects required for a quantitative review writing style (3).

2. Title:

2.1 Purpose: The significance of the title should be clear and make the research topic evident. It should include an explanation of the study issue, question, or hypothesis under examination, and it should be interesting and thought-provoking (7).

2.2 Clarity: The title should be concise, precise, and unambiguous, using specific, easily comprehensible phrases. It should avoid jargon and technical expressions unfamiliar to the target audience (3).

2.3 Accuracy: The study's results or recommendations should be appropriately addressed, ensuring reliability and consistency with the subject matter (8).

2.4 Concision: According to Parahoo (2006), the title should be brief and to the point, effectively communicating the study's goals and scope without being too lengthy or too short (3).

2.5 Suitability: The wording of the title should be suitable for the target audience, relevant to the study's topic or design, and correctly composed within 10 to 15 words as suggested by Connell Meehan (1999) (3).

2.6 Innovation: The title should introduce any unique or innovative feature of the study and suggest fresh ideas for ongoing research (13).

3. Authors: Conkin Dale (2005) stated that authors should be qualified in the relevant field to ensure the study's rigor is maintained. The authors' qualifications and expertise in the topic under discussion were evaluated (7).

4. Abstract: An abstract should provide a clear outline of the study, including the background, method, result, conclusion, research problem, and recommendation (3).

4.1 Clarity and Accuracy: Parahoo (2006) emphasized that the abstract should be clear, concise, and capture the key points of the study, using simple and easy-to-understand language (3).

4.2 Structure: Conkin Dale (2005) noted that the abstract should be formatted with four subheadings in sequential form: background, methods, results, and conclusions (3).

4.3 Content: The abstract should provide the necessary information for readers to understand the study's significance, design, and key findings (17).

4.5 Wording: The language should be appropriate and free of jargon, with the word count ranging from 200 to 250 words (7).

5. Logical Consistency:

5.1 Thesis Statement: Ryan-Wenger (1992) pointed out that a thesis statement should serve as a roadmap for the study, being clear, concise, and specific. It should be logically consistent with the argument presented (3).

5.2 Logical Fallacies: The review checked for logical fallacies such as false dilemmas, circular reasoning, and straw man arguments (3).

5.3 Coherence of Argument: The argument should be structured so that one point supports the next, with evidence provided to ensure there are no gaps in the logic (15).

5.4 Use of Sources: The review assessed whether outside sources, quotes, and paraphrases were reliable and supported the argument (14).

5.5 Consistency in Terminology: All terms, terminologies, and definitions were evaluated for clarity and consistency (7).

5.6 Errors in Reasoning: The review checked for errors in reasoning that were not supported by evidence, such as faulty cause-and-effect associations or assumptions (3).

5.7 Strength of Conclusion: The conclusion should outline the key points of the paper and provide a logical and convincing argument for the thesis statement (16).

6. Purpose of Study: The research purpose should be well-defined, with the research question being significant to the field of study. The review addressed gaps in knowledge, the sampling technique, sample size, methods, and statistical analysis, emphasizing rigorous approaches and innovative methods. Generalizability, crucial for quantitative studies, was also assessed based on sample size and selection of a representative population (7, 9).

7. Literature Review:

7.1 Purpose and Scope: Burns and Grove (1997) suggested evaluating whether the purpose and scope of the literature review were suitable for the research question being addressed, primarily to create a research question and choose the appropriate data collection method (3).

7.2 Literature Selection: The review assessed whether the cited sources were relevant, current, and representative of the field, including theoretical frameworks and criteria for selecting the literature (7).

7.3 Synthesis and Organization: The literature review structure was evaluated for logical, coherent organization, with clear and concise synthesis of findings (8).

7.4 Bias and Objectivity: The review checked for bias and objectivity, ensuring that all viewpoints were presented or identifying any evidence of particular bias (9).

7.5 Methodological Quality: The review assessed whether the methodology conducted in the literature review was appropriate, clearly defined, rigorous, and whether the inclusion and exclusion criteria were suitable (2).

7.6 Critical Analysis: Burns and Grove (1997) emphasized evaluating the literature for critical analysis and evidence-based practice, identifying pros and cons, and drawing conclusions based on evidence (7).

7.7 Contribution to the Field: Cornwell (1997) highlighted the importance of assessing the literature review's contribution to the field, including identifying gaps in the literature and making recommendations for future research (7).

8. Theoretical Framework:

8.1 Background and Justification: The study should provide a satisfactory justification for the framework. The literature review should be up to date and systematic (3).

8.2 Theoretical Foundation: Robson (2002) formulated that the theoretical foundation should be clearly presented. The research question or hypotheses should be acceptable, and the framework should be facilitated by a well-known theory. Not all research studies have a theoretical framework (7).

8.3 Methodology: The chosen methodologies and procedures should be effective in creating the framework. The limitations of the methodology should be acknowledged. A sound framework includes many concepts and links among these concepts (8).

8.4 Data Analysis: The analysis should support the framework creation and be suitable for formulating the research question and framework (18).

8.5 Results: Burns and Grove (1999) underscored the importance of presenting findings in the theoretical framework. The results should assist in creating the framework, with any limitations and omissions discussed. The overall quality of the study should be coherent and well-written. The statements and arguments should be evidence-based, with ethical considerations accounted for. Experimental and quasi-experimental studies often have better theoretical frameworks than non-experimental studies (3).

9. Instrumentation:

9.1 Reliability and Validity: When critiquing an instrument quantitatively, it is important to consider statistical tests and measures such as Cronbach's alpha, factor analysis, and correlation coefficients (3).

9.2 Norms: The instrument's norms should be assessed to compare the reference group with the score obtained on the instrument (7).

9.3 Scoring: The scoring procedure should be reviewed, including how scores are calculated and interpreted. The validity and reliability of scoring instruments should be checked for evidence-based practice (16).

10. Selection Bias: The study population should be clearly defined. Random sampling should be used, an adequate sample size should be ensured, loss to follow-up should be minimized, and selection bias should be analyzed and reported (3).

11. Sampling Technique and Sample Size: According to the quantitative guidelines of Burns and Grove (1997), the sampling method should align with the study design and have an appropriate sample size. Probability sampling, diversity in sampling, sampling saturation, sampling strategy, representativeness of the sample, transparency, and reflexivity should be considered (3, 7, 16).

12. Ethical Consideration: Beauchamp and Childress (2001) recommended principles such as autonomy, non-maleficence, beneficence, justice, confidentiality, and anonymity, and respect for participants. Burns and Grove (1999) suggested considerations such as informed consent, ethical review board approval, risk assessment, debriefing, withdrawal, and cultural sensitivity. These guidelines ensure the research is conducted ethically, protecting participants' rights and well-being (3, 7, 19).

13. Study Design: The study design should be assessed by identifying the research question, evaluating the sample size and selection, considering study bias, evaluating the reliability and validity of measures, analyzing statistical methods, and considering the study's limitations. These guidelines help assess the quality and validity of a study design, determining the reliability and trustworthiness of its findings (3, 7).

14. Philosophical Underpinning:

14.1 Understanding the Philosophical Framework: It is crucial to understand the framework itself before critiquing it, including major concepts, theories, and arguments (3).

14.2 Analyzing the Arguments: Once the framework is understood, the arguments supporting it should be analyzed (7).

14.3 Considering Alternative Perspectives: Alternative perspectives should be considered, assessing how the framework compares to others and evaluating the strengths and weaknesses of each (16).

14.4 Identifying Biases: Biases and perspectives of the framework's creators should be identified, considering their influence on the arguments (6).

14.5 Evaluating Practical Implications: The practical implications of the framework should be assessed, considering its application in the real world and evaluating potential benefits and drawbacks (14).

15. Data Collection:

15.1 Instrument: Polit and Beck (2006) noted that questionnaires are the most common instruments used for data collection in quantitative studies (3).

15.2 Sampling Bias: The selected sample should represent the population, using random sampling techniques to avoid selection bias (7).

15.3 Measurement Bias: Standardized, validated, and reliable instruments should be used for data collection, ensuring measurement accuracy (16).

15.4 Social Desirability Bias: Participant responses should be considered for social acceptability (6).

15.5 Response Bias: Be aware of biases such as the recency effect, halo effect, and acquiescence bias (3).

15.6 Attrition Bias: Maintaining participant involvement is crucial to avoid dropout and imbalance (19).

16. Data Analysis:

16.1 Validity: Polit and Beck (2006) documented the need to ensure findings are effectively measured. Multiple measurements should be used to increase validity (3).

16.2 Reliability: Consistency and reliability should be ensured, considering tests such as test-retest reliability and inter-rater reliability (16).

16.3 Generalizability: The findings' generalizability is crucial. Appropriate sampling techniques and large sample sizes enhance generalizability (7).

16.4 Significance: Clegg (1990) acknowledged the importance of considering the statistical significance of findings, ensuring results are free from sampling error (6).

16.5 Interpretation: The results should be interpreted meaningfully and accurately. Quantitative studies usually recognize the lowest level of significance as $P \leq 0.05$ (P = probability) (Clegg, 1990). Data should be reported using tables and figures (7).

17. Discussion: Russell (2002) stated that the discussion should logically and effectively outline the study's findings (3). Polit and Beck (2006) emphasized addressing study limitations and effectively supporting hypotheses or research questions. The discussion should explain the relevance of the findings and their interpretation, combining them with previous research. Future directions for study, supported by results, should be provided (7).

18. Conclusion: The conclusion should assess hypotheses and research questions, selection and sample size, data collection and measurement tools, statistical methods and results, and limitations and recommendations for further research (7).

19. References:

19.1 Relevance: The listed sources should be relevant to the study or research question, significant, informative, and up-to-date, ideally within the last five years (7).

19.2 Quality: The quality of cited references should be inspected, ensuring they come from authentic scholarly books, peer-reviewed journals, or trustworthy websites (3).

19.3 Diversity: References should cover a variety of perspectives and opinions on the subject, reflecting many social and cultural settings, and matching the research study's approach (6).

19.4 Balance: References should be evenly distributed without unnecessary dependence on one author, method, or concept, fairly representing relevant literature on the subject. Content information should be accurately approved and certified (9).

CONCLUSION

The art of critique provides essential guidance and effective strategies for critiquing research across various domains, especially in healthcare. This narrative review equips readers with the skills needed to thoughtfully evaluate papers, theses, and dissertations, fostering a deeper understanding of methodological rigor and evidence-based practice. By highlighting the critical aspects of writing style, title, authorship, abstract, logical consistency, purpose, literature review, theoretical framework, and ethical considerations, this review enhances the ability of healthcare professionals to provide constructive feedback. Ultimately, it promotes the advancement of scholarly work within health care institutions, ensuring that research is not only rigorous but also relevant and impactful.

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