Authors' and editors' perspectives on peer review quality in three scholarly nursing journals

M.M. Shattell
P. Chinn
Sandra Thomas
University of Tennessee-Knoxville, sthomas@utk.edu
W.R. Cowling

Follow this and additional works at: https://trace.tennessee.edu/utk_nurspubs

Part of the Psychiatric and Mental Health Nursing Commons

Recommended Citation

This Article is brought to you for free and open access by the Nursing at TRACE: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Faculty Publications and Other Works -- Nursing by an authorized administrator of TRACE: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.
PROFESSION AND SOCIETY

Authors’ and Editors’ Perspectives on Peer Review Quality in Three Scholarly Nursing Journals

Mona M. Shattell, RN, PhD1, Peggy Chinn, RN, PhD, FAAN2, Sandra P. Thomas, RN, PhD, FAAN3, & W. Richard Cowling, III, RN, PhD, APRN-BC4

1 Associate Professor, University of North Carolina at Greensboro, School of Nursing, and Editor of Issues in Mental Health Nursing, Greensboro, NC, USA
2 Professor Emerita, University of Connecticut, and Editor of Advances in Nursing Science, Storrs, CT, USA
3 Professor and Director of the Doctoral Program, University of Tennessee at Knoxville, College of Nursing, and Editor of Issues in Mental Health Nursing, Knoxville, TN, USA
4 Professor and Director Doctoral Program, School of Nursing, University of North Carolina Greensboro, and Editor, Journal of Holistic Nursing, Greensboro, NC, USA

Key words
Peer review, publication, scientific writing

Abstract

Purpose: This study examined the quality of peer review in three scholarly nursing journals from the perspectives of authors and editors. Specifically, the study examined the extent to which manuscript reviews provided constructive guidance for authors to further develop their work for publication, and for editors to make informed and sound decisions on the disposition of manuscripts.

Methods: Corresponding authors who had submitted manuscripts to the study journals in 2005–2007 were invited via email to complete an online survey about the quality of the peer review process; 320 authors responded. In addition, one third of the reviews of manuscripts submitted in 2005–2007 (a total of 528) were selected for rating by journal editors on level of detail, bias, and constructive tone; usefulness to authors in revising/developing the manuscript; and usefulness to the editor in making a decision.

Results: A majority (73.8%) of authors agreed that peer reviews provided constructive guidance, and 75.6% agreed that reviews provided adequate rationale for editors’ decisions. New authors generally reported less satisfaction with reviews than more experienced authors. Ratings of reviews by the editors revealed some problem areas, including inconsistency, insufficient feedback to the author, reviewer bias, and disrespectful tone.

Conclusions: Given the inexperience of many nurse authors, it is incumbent upon editors and reviewers to provide guidance and support. Manuscript reviews could be improved by increasing the consistency of numeric ratings, narrative comments, and recommendations regarding disposition of the manuscripts. Nevertheless, the results of this study reaffirm the worth of the peer review approach.

Clinical Relevance: Publication of research and other forms of scholarly work is critical to the development of nursing knowledge that can be used in clinical practice. Authors with a variety of backgrounds, knowledge, and skills have important work to share that can serve healthcare providers and their clients. Thus, ensuring the quality of the peer review process is essential.
the past decade, such as the degree of openness of the review (double-blind, single-blind, open); author satisfaction with the peer review system; editors’ views of the peer review system; the value of training programs for reviewers; and reasons that reviewers agree to review (e.g., Callaham, Knopp, & Gallagher, 2002; Freda & Kearney, 2005a; Freda, Kearney, Bags, Broome, & Dougherty, 2009; Jefferson, Wager, & Davidoff, 2002; Kearney, Bags, Broome, Dougherty, & Freda, 2008; Kearney & Freda, 2005; Weber, Katz, Waeckerle, & Callaham, 2002). However, assessing this work, Jefferson, Rudin, Brodney Folse, and Davidoff (2007) concluded that good research on the peer review process is rare and the work to date has yielded few suggestions for interventions that could improve review quality.

In particular, the body of literature on review quality is quite small. This is problematic for clinical disciplines such as nursing and social work, whose practitioners rely on the best possible empirical evidence for interventions. Epstein, a professor of social work, has conducted several experiments that shed unfavorable light on review quality (cited in Glenn, 2004). For example, he created shoddy research papers and submitted them to 33 social work journals. In a “positive results” version sent to half the journals, the researcher reported that a fictitious family support program worked well; a “negative results” version sent to the remaining journals showed the opposite. Both versions omitted any mention of statistical testing and drew conclusions inappropriate to the data. The “positive results” version actually received some acceptances. Moreover, a panel of raters judged almost three quarters of the reviews of both versions inadequate (Glenn).

Callaham and Tercier (2007) examined 2,856 reviews prepared by 306 experienced reviewers for Annals of Emergency Medicine. They rated the reviews on a scale of 1 to 5, and then compared “unacceptable reviews” (those rated 1 or 2) to reviews rated 3, 4, or 5 to see what reviewer characteristics predicted higher-quality reviews. Characteristics such as higher academic rank, being principal investigator (PI) of a grant, or formal training in critical appraisal or statistics failed to predict higher-quality reviews. The only significant predictors were working in a university hospital and younger age; however, the predictive power of the model was poor. A survey of medical authors by Weber et al. (2002) found that author satisfaction with peer review quality was modest (M = 3 on a 5-point Likert scale), and authors of rejected manuscripts were significantly less satisfied than other authors.

In their survey of 88 nurse editors, Kearney and Freda (2005) found many weaknesses of reviews: (a) vagueness and failure to give authors clear, specific guidelines for revision; (b) reviewer focus on copyediting, word-
that you received from this journal” with the following response set: “I have not received reviews from any other journal,” “extremely poor,” “poor,” “about the same,” “better,” and “much better;” dichotomous questions, for example, “The reviewer understood the content of my manuscript” with a response set of “yes” or “no”; and rating questions, for example, “The review provided useful guidance in developing my work for publication” with a 5-point scale from “strongly agree” to “strongly disagree.” The open-ended question was a request for comments about the quality of the peer review process.

Editors selected one third of all reviews of manuscripts submitted in 2005–2007 for rating. That is, starting with the first manuscript received by each journal in 2005, the researchers and trained research assistants (RAs) rated every third review until they reached 33% of all the reviews for the time period. The researchers (editors) and RAs rated the manuscript reviews on several dimensions of quality-characteristics of the review (e.g., level of detail, bias, tone, etc.), the likely usefulness to authors in revising and developing the manuscript, and the usefulness to the editor in making an editorial decision about the manuscript. The Peer Review Rating Form included 16 closed-ended questions. The questions were forced choice, “How helpful is this review in guiding the editor in making a final editorial decision to accept, reject, or request a revision?” with a response set of “not at all helpful,” “somewhat helpful but lacking in significant aspects,” “neutral,” “generally helpful but could be improved,” and “extremely helpful”; multiple choice and select all that apply questions, for example, “How well is the recommendation of the reviewer supported by the reviewer’s comments?” with a response set of “not at all,” “comments contradict the recommendation,” “superficially; more rationale needed,” “superficially, but comments are adequate to support recommendation,” “comments are consistent and adequate,” and “comments are more extensive than is needed”; dichotomous questions, for example, “Were the reviewer comments demeaning and disrespectful?” with a response set of “yes” or “no”; and rating questions, for example, “Detail of commentary” with a 10-point scale from “highly adequate/best” (10) to “inadequate/worst” (1). To ensure interrater reliability, each rater rated several reviews independently, and then the researchers and RAs compared and discussed the ratings, and continued this process until they achieved at least 90% agreement on the ratings.

Both the online author survey and the review rating tool are available on the web at http://www.peggychinn.com/peer_review/peer_rev_intro.htm. The author survey was reviewed for face validity by the researchers and the advisory board members of ANS.

Findings

Authors

A total of 320 respondents completed the online author survey. The ANS editor (Chinn) invited 377 authors to participate in the author survey; 240 authors responded and 187 of their responses were complete (50% response rate). The IMHN editor (Thomas) invited 125 authors to participate; 89 authors responded and 82 of the responses were complete (66% response rate). The JHN editor (Cowling) invited 123 authors; 58 authors responded and 51 responses were complete (41% response rate). It was possible for authors to complete the survey for more than one journal if the author had submitted manuscripts to more than one of the journals in the study period.

Among the 320 author respondents, there were few differences between journals. Prior publishing experience was fairly limited. Only 18.2% reported having previously submitted more than 30 manuscripts to any professional journal; 28.1% reported having submitted between 11 and 30 manuscripts; 39.1% reported having submitted fewer than 10 manuscripts for publication; and 14.6% reported this had been their first journal submission.

Similarly, 26.6% of the respondents reported over 20 prior publications; 15.9% reported having between 11 and 20 prior publications; 21.3% reported having between 6 and 10 publications; 30.6% reported having fewer than 5 prior published articles; and 5.6% of the respondents reported having no prior published articles.

The author respondents were relatively advanced in their academic careers: 29.4% were tenured, 25% were pretenure or tenure-seeking, 7.5% were postdoctoral fellows, 17.5% were doctoral students, and 4.1% were undergraduate or master’s students. A small number (5%) of respondents reported being in roles other than academic roles, including staff nurses, advanced practice nurses, and administrators; 0.9% were retired and 10.6% reported their role as “other.”

Reviews

The researchers and trained research assistants rated 528 reviews. There were 292 during the study period from ANS, 110 reviews from IMHN, and 126 reviews from JHN.

Author Surveys

Responses to the author survey reflected predominantly positive perceptions of the quality of the review processes in these three journals: 13.4% of respondents rated the reviews as much better than reviews received...
from any other professional journal, 24.1% of respondents rated the reviews in these journals as better than reviews they had received from other journals, and 41.3% rated the reviews as about the same as those received from other journals. Only 7.2% rated the reviews as poorer than those received from other journals. Five percent of respondents had never received a review from another journal and 9% did not answer the question. Over three quarters (80.6%) of the authors said they strongly agreed or agreed that the reviews received from these journals provided constructive guidance in developing their work for publication.

Another dimension of review quality is the adequacy of the rationale provided for the editor's decision. In this survey, 73.7% of the respondents strongly agreed or agreed that the reviews they received from the study journals provided adequate rationales for the manuscript decisions (i.e., accept, reject, revise); 10.6% were neutral; 6.6% disagreed or strongly disagreed; and 9.1% did not answer the question.

Several significant associations were found when variables related to respondents' satisfaction with the review process were examined in relation to the number of manuscripts they had submitted and had been accepted in peer-reviewed journals. The number of manuscripts submitted was significantly related to the extent of agreement that the reviewer comments reflected an accurate understanding of the content of the manuscript, $\chi^2 (12, n = 291) = 28.28, p = .005$; reviewers offered constructive suggestions for revisions, $\chi^2 (12, n = 293) = 21.53, p = .05$; reviewer comments were sufficiently detailed to support their recommendation for the editor, $\chi^2 (12, n = 293) = 20.89, p = .05$; the review provided useful guidance in developing the work for publication, $\chi^2 (8, n = 291) = 15.55, p = .05$; and details provided by the review were helpful, $\chi^2 (16, n = 291) = 35.58, p = .005$. In part, these significant relationships reflect the fact that a large proportion of respondents who reported submitting only one manuscript for publication disagreed or strongly disagreed with these statements.

Respondents' satisfaction with the review process was also related to the number of articles they had published. Specifically, the number of articles published in peer-reviewed journals was significantly related to the extent of agreement that reviewers' criticisms were fair and unbiased, $\chi^2 (12, n = 293) = 23.84, p = .02$; reviewer comments reflected an accurate understanding of the content of the manuscript, $\chi^2 (12, n = 291) = 21.50, p = .05$; and the reviewer comments were sufficiently detailed to support their recommendation, $\chi^2 (12, n = 293) = 31.12, p = .01$. A larger proportion of respondents who had published 11 or more articles agreed or partially agreed with these statements.

Thus, new authors who had only submitted one article for peer review reported high levels of dissatisfaction with several aspects of the review process. They were less likely than other authors to believe that reviewers (a) fully understood the content of their manuscripts, (b) offered constructive suggestions to improve their manuscripts, (c) provided commentary that sufficiently supported their recommendations, (d) offered useful guidance for developing their work, and (e) provided enough detail in their commentary to be helpful to the author. Authors who had published 11 or more articles were more likely than other authors to believe that reviewers (a) provided fair and unbiased criticisms, (b) provided commentary that supported their recommendations, and (c) understood the content of their manuscripts.

The author survey concluded with an open-ended request to “provide any further comments or suggestions related to your experience of the review process.” Responses to this question were analyzed using content analysis with the assistance of the qualitative data management software package ATLAS.ti, Scientific Software Development GmbH, Berlin. Responses were read and re-read to immerse the researchers in the data. The researchers wrote notes (memos) in the data. Categories (nodes) were then developed from the data and the notes. These categories were reviewed and then discussed among the researchers to verify the final categories. The final four categories were the review process, editors, reviewers, and technical aspects of the review process.

**Review process.** Most authors' comments about the review process were positive. They reported that the process was clear, timely, helpful, unbiased, fair, detailed, constructive, and a positive experience that resulted in improved manuscripts. One author said, “I feel my manuscript will be stronger thanks to the review process.” Another commented, “We were delighted with the review process.” And still another author said, “Overall it was a very good experience. I have always learned from the review process.”

Some authors, however, made negative comments about the review process. Most of these were about the length of time from manuscript submission to the reviews, and from the time a paper was accepted for publication until the time it was published. One author said, “The [review] process took much longer than I was told it would.” Another said, “It took too long to get feedback-5 months!”

**Editors.** Most comments about the editors were positive. Authors described editors as prompt, helpful, encouraging, supportive, professional, approachable, and friendly. In addition, some authors commented positively about the feedback and suggestions they received from
editors. One said, “Comments were helpful and appreciated.” Another said, “The editor’s feedback to make a table regarding reviewer comments and our response was very helpful. I plan to do this with future publication efforts.” Still another said,

The direct and timely communications with the editor were supportive, encouraging, and effective in shaping the manuscript and successfully moving it to rapid acceptance (critical for tenure and promotion) and make me likely to target this journal for future dissemination of my work. Thank you for excellent stewardship in moving the science forward!

A few comments about the editors were negative. They included complaints that “the editor’s response could be more encouraging” and “the editor’s rejection letter was hurtful...although I have enjoyed reading this journal in the past, I have not read it since [rejection of my manuscript] nor do I plan to EVER submit another manuscript to this journal.”

**Reviewers.** Many authors were positive about reviewers, whom they described as helpful, kind, fair, respectful, specific, and detailed. One author said, “The reviewers treated me as a colleague with respect for my work but also [they gave] specific and helpful suggestions on how to make it better.” Another said, “Reviewers’ comments were, for the most part, well-founded, informative, and helped clarify pertinent points.” One author said that the reviewers’ comments “greatly strengthened my article.”

Some authors, however, said that reviewers’ comments were unhelpful, overly harsh, revealed a misunderstanding of the author’s research method, or were inconsistent. One author said, “The reviewers’ comments showed an amazing lack of knowledge regarding the study methodology, and comments in general were not helpful at all.” Another said, “I found the reviewers unfamiliar with theory. One didn’t know that phenomenology was a theoretical perspective and confused it with grounded theory as a method.” And another said, “I felt the reviewers did not really understand the type of interpretive research methodology dealt with in the article.” One author described one reviewer’s comments as “wrong. It was like a personal attack. I do not believe the reviewer understood the research. I was surprised the comments of the first reviewer were allowed to go through; there is enough horizontal violence in nursing.”

A final suggestion by authors was that reviewers need to be more consistent from the initial submission to the second (revised) submission. As one author stated, “Once revisions were made, there appeared to be a new set of criteria.”

**Technical aspects.** Technical aspects of the review process included authors’ comments about online submission systems (ScholarOne, and Editorial Manager); others suggested more detailed author guidelines, more specific information about formatting, a Web site that looks more professional, and a login tab that is easier to locate. Most authors liked the online systems because the “online submission process was much easier than submitting hard copies.” These authors thought the process was simple, streamlined, and easy to use, which was “more efficient than a hard copy method.” Some authors who were positive about the online manuscript submission systems had problems uploading documents and signing and sending publishers’ copyright agreement forms. Authors who were positive about online submission systems not only preferred submitting their manuscripts online, but also preferred to get their reviews electronically instead of via hard copy or mail.

Some authors preferred the hard copy method of submitting manuscripts and receiving reviews. One author was concerned that some international authors may not have Internet access and therefore would be prohibited from submitting manuscripts to these journals. One of the study journals (IMHN) did not use an online manuscript system at the time of this study. One author lamented about the possibility of IMHN adopting an online submission system and said, “I have submitted and reviewed many articles. I realize that there is a trend toward manuscript submission through an online system in general, but I urge you to consider this carefully. Some of these systems are extraordinarily arduous!”

**Reviews Rated by Editors**

Overall, the ratings of the reviews by editors were consistent with the results of the author survey, reflecting a positive profile of the review process. The ratings also suggested some areas of improvement for current reviewers and areas that should be included in an orientation for new reviewers.

**Characteristics of reviewers’ comments (narrative review of the manuscript).** The reviews were rated on several characteristics that the editors identified as important dimensions of quality, including the detail of the commentary provided to support the reviewer’s recommendation, attention to the journal’s review criteria, identification by the reviewer of flaws or shortcomings in the manuscript, indication that the reviewer understood the content of the manuscript, provision of suggestions for improvement, and use of a constructive tone. Each review was rated on a scale of 1 to 10, from completely inadequate (1) to highly adequate (10) for each of the traits. In summarizing the ratings, reviews that were given a rating of 6 through 10 were categorized as “adequate,” and ratings that were assigned a rating of 1 through 5 were
categorized as “inadequate.” While the ratings showed a strong trend in the positive direction, the proportions of ratings on the “inadequate” side of the scale suggest areas for improvement. The Figure gives ratings characteristics of reviewers’ comments into these two categories. Using the same 1–10 scale, to rate the overall quality of the reviews, 74.7% of the reviews were rated as “adequate” (scores between 6 and 10), and 24.5% were rated as “inadequate” (scores between 1 and 5).

Factors influencing reviewers’ recommendations. Table 1 shows the percentage of reviews that reflected each of the factors identified as influencing reviewers’ recommendations (reviews were rated on all that applied). Table 2 shows the rating of reviews by editors on a 5-point scale from “extremely helpful” to “not at all helpful.” Nearly a quarter of the reviews were perceived as “lacking in significant respects.”

Discussion and Implications

Both the author surveys and the editors’ ratings of reviews point to the strength of the peer review process in these three nursing journals, and they support the purposes of the peer review process, which are to provide constructive guidance for authors in developing their work for publication and to provide guidance to the editor in making decisions on the manuscript. The study findings also point to areas in the process that could improve.

Our finding that authors rated reviews as generally positive is consistent with Ware (2008), who also found that authors were generally positive about peer review. Some authors, however, said reviews sometimes were contradictory (one review was positive and another review for the same paper was negative), which is consistent with Starbuck’s (2003) findings that peer reviews are often inconsistent. Some authors also complained about the length of the review process, which is consistent with findings from Ellison (2002), who reported that the review process was longer in 2000 than it was in 1970. Finally, some authors reported that reviewers and editors were overly harsh, a finding consistent with Miner (2003), who was concerned about the consequences of this negativity.

Editors’ ratings of reviews were mostly positive. However, in the editors’ ratings, we found concerns about inconsistency between narrative reviews and numeric ratings, and complaints about reviews that were not sufficiently detailed either to give authors guidance on how to improve the manuscript or to give editors information upon which to make a decision, findings consistent with Kearney and Freda (2005), who reported reviews that were vague and that did not give authors clear guidelines for revision. Occasional evidence of reviewer bias or disrespectful tone was also reported.

To combat reviewer bias, one participant in Freda and Kearney’s (2005b) editor survey proposed that reviewers should sign a form indicating no conflict of interest. Our findings suggest several other areas for improvement in the review process. Editors should send manuscripts to reviewers who are knowledgeable about theory, methods, and content. They should ensure that the narrative review is consistent with the quantitative evaluation of the manuscript. Reviewers should use respectful tones, and they should submit their reviews in a timely manner.

Table 1. Factors Influencing Reviewers’ Recommendations

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of reviews identified (N = 528)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing/grammar</td>
<td>79.2</td>
</tr>
<tr>
<td>Professional/practice significance</td>
<td>50.5</td>
</tr>
<tr>
<td>Method/scholarly approach used (or misused)</td>
<td>35.4</td>
</tr>
<tr>
<td>Innovation/creative significance</td>
<td>16.6</td>
</tr>
<tr>
<td>Theoretical significance</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Table 2. Percentage of Reviews Rated by Editors as Helpful/Not Helpful in Determining Manuscript Status

<table>
<thead>
<tr>
<th>Rating</th>
<th>% of reviews (N = 528)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all helpful</td>
<td>6.4</td>
</tr>
<tr>
<td>Somewhat helpful, but lacking in significant respects</td>
<td>24.4</td>
</tr>
<tr>
<td>Neutral</td>
<td>4.8</td>
</tr>
<tr>
<td>Generally helpful, but could be improved</td>
<td>34.4</td>
</tr>
<tr>
<td>Extremely helpful</td>
<td>30.8</td>
</tr>
</tbody>
</table>
Editors should respond to authors respectfully. Decision letters regarding the disposition of manuscripts should be sent within the specified time frame.

Interestingly, we did not see some of the negative aspects of the review-revision process reported in other disciplines. Our data indicate that nurse authors perceive the process as mostly positive and they do not feel they need to sacrifice the essence of their work in order to get published. There was little evidence of the intellectual prostitution, gamesmanship, and compromise alleged to exist in other disciplines. Nurse authors who participated in the study did not echo the complaint of Roth (2002) about loss of part of the self due to changes mandated by reviewers and editors. Given the anonymity afforded by the online survey, authors could have voiced such complaints. However, since the study was limited to three journals, it is possible that the nature of these journals and the purposes they serve make them a more positive venue for the review process.

The nurse authors in our sample had published relatively few articles, which is surprising given their advanced positions (tenured or tenure-seeking academics). Inexperienced authors perceived reviews less favorably than experienced authors. The relative inexperience of nursing authors suggests that editors and reviewers should take a supportive, somewhat instructional stance toward fledgling nurse scholars.

One limitation of the study is that the author survey and editors’ rating tool were developed for this study. This study was limited to three journals in holistic nursing, nursing science, and mental health nursing. These journals may be sought as publication venues by authors who have specific publishing needs not representative of broader nursing concerns. It might be useful to replicate the study with a sample of more diverse journals. A new tool to evaluate the quality of reviews of nursing research manuscripts has recently been introduced by Henly and Dougherty (2009), and it appears especially well suited for scrutiny of research papers.

Conclusions
This study suggests that while there are many assumptions about the strengths and weaknesses of the peer review process among the nursing community, there is little evidence to support many of the assumptions. Our findings do not provide evidence to question the worth of the standard peer review approach. The study does, however, point to the need to consider ways to enhance the peer review process, and a need for better preparation of nurses to be reviewers as well as authors.

Acknowledgments
We thank Lippincott Williams & Wilkins for providing partial funding for the study, Kevin Swartout for his assistance with the qualitative data analysis software ATLAS.ti, Karen Ergott for her help in gathering data for the Journal of Holistic Nursing, and Ann Quinlan-Colwell, Renee Burk, and Kathy Jenkins for their assistance in rating reviews. Finally, we wish to thank the author participants who completed the online surveys and the manuscript reviewers, who are the cornerstones of the peer review process.

Clinical Resources
- An invaluable resource for prospective authors, reviewers and editors, regardless of experiential background, is the Nurse Author Editor Web site at http://www.nurseauthoreditor.com/. This resource includes a comprehensive listing of nursing journals, newsletters with helpful guidelines for writing and publishing, and much more.
- The International Academy of Nursing Editors (http://www.nursingeditors-inane.org/) conducts annual conferences that feature many presentations on contemporary issues in publishing. The Web site includes a comprehensive list of resources for editors.

References


