



Training Future Nurse Scientists to Become Peer Reviewers

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CASE STUDIES



ABSTRACT

Peer reviewers offer expertise to journal editors, who provide feedback with authors for critical review and consideration. This process establishes scientific dialog, which increases the quality and scientific rigor of publications. Training in the peer review process is often lacking in doctoral education and in the nursing profession generally. This article describes a literature review of peer review training for doctoral students and the implementation of peer review training in a nursing PhD program.

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INTRODUCTION

Peer review in science can be traced back to the seventeenth century when the first scientific journal was started (Hooper, 2019). About 300 years ago, peer review became a formal part of scientific communication (Kelly et al., 2014). Originally, peer review was an informal process where researchers asked for feedback from colleagues before publishing their work, but the process has evolved over time (Elsevier, 2023). During the mid-20th century, journals adopted a more structured approach to ensure quality and validity of published research (Daou et al., 2021). That approach evolved into today's standard of double-blind peer review, where the reviewers and the author's names are anonymous to minimize bias and allow for a more objective and fair evaluation (Daou et al., 2021). The peer review process requires an assessment of an individual's scholarly work by other experts in the field to determine the written work's validity and quality (Elsevier, 2023; Kelly et al., 2014).

According to Ulrich's Web, a clearinghouse of over 300,000 periodicals, there are 321 active peer-reviewed nursing journals in the United States alone. Like other scientific disciplines, nursing also incorporates the double-blind peer review process, and publication in a peer-reviewed journal is the primary way for an individual's work to be accepted by the nursing and larger academic community (Dondio et al., 2019; Kelly et al., 2014). The peer review process plays a significant role in scholarly publishing, grant funding, and academia (Ramasamy, 2021). Peer reviewers offer their expertise to journal editors and funding agencies, who then share their feedback with authors for critical review and consideration. This process establishes scientific dialog, which increases the quality publications (Ramasamy, 2021). The peer reviewers' careful examination of manuscripts and proposals encourages authors to provide quality research to advance their field of interest (Kelly et al., 2014).

TRAINING FUTURE NURSE SCIENTISTS

As Marion Broome stated in her 2010 editorial, peer reviewers are “stewards of the discipline” (Broome, 2010). As an expected skillset of the Ph.D. prepared nurse, the peer review process helps improve scholarship by developing scholarly discourse and improving writing and communication skills, especially among students who are new to academic writing or writing for an audience beyond their native language (Trotter, 2021). However, training in the peer review process is often lacking in formal doctoral education and in the nursing profession generally (Dondio et al., 2019; Freda et al., 2009; Sethares & Morris, 2016; Trotter, 2021; Xu et al., 2016). In this article, I (C.F.) describe the experience of integrating peer review into the curriculum of a research practicum course of five doctoral students (three of whom, A.B., H.G., and P.H., participated in this paper) in an accredited United States nursing PhD program.

In collaboration with a reference librarian, we searched for literature on how to integrate the review process into the classroom and found a dearth of information. Three articles were identified that addressed the methodological approaches to incorporating the peer-review process into PhD curriculum (Sethares & Morris, 2016; Tyndall & Powell, 2023; Xu et al., 2016). These articles identified the need to incorporate peer-review training and education into the PhD curriculum. One article collected both quantitative and qualitative data to assess how 22 second-year PhD students responded to having peer review assignments as part of their curriculum and found that 82% felt the process was beneficial (Sethares & Morris, 2016).

Like many programs, my doctoral education did not provide formal training of the peer review process; however, thanks to my chair, I gained exposure. She was asked to review a manuscript in my area of interest and signed me up to do it. I had not even defended my dissertation proposal! The panic set in, but even though I was a novice, my training to date had provided me many of the skills necessary to perform a thorough and thoughtful peer review—and it took almost two full days! Those initial and subsequent reviews continue to provide me with a greater understanding of research methodology, the importance of rigor, and clear and concise writing. As a professor of emerging nurse scientists, I wanted to share this experience with them. In our program, each

doctoral student is required to complete a research practicum, where the students work with senior scientists to witness the practical implementation of nursing science (pun intended). Since I am the faculty for the research practicum course, I thought this would be a great opportunity to introduce the peer review process to students.

COLLABORATION WITH PINS

As an editorial board member of this journal, I had a unique opportunity to have a journal collaborator on this mission. The first PINS submission of the new year in 2023 was reviewed by my new class of practicum students. First, each student independently read and critiqued the article, followed by an in-class review of the article, section by section. Through their collective and individual reviews, they were able to provide thorough and valuable feedback. Later in the semester, when the paper's authors submitted a revised manuscript, the class embarked on the process of considering their revisions and responses, ultimately arriving at the collective recommendation to approve for publication once the authors made additional minor clarifications. From this experience, the class learned how to critique an article for research, rigor, and quality. In addition, it provided a framework for students to have confidence in learning how to communicate in a manner that is collegial, supportive, and non-judgmental. To capture the student experience, we nominated Angela write up a vignette of her experience:

“As a rising nurse scientist, the peer review process was motivating. Reviewing articles in their draft form, and eliciting feedback that required new iterations, was an encouragement to me that I also could publish an article. While reviewing, I found myself echoing my professors as my writing was being reviewed, “this needs a citation,” “not clear clarity needed,” or “nice transition.” I learned the peer review process requires you to draw on your clinical experience and expertise. Sifting through writing that in some sections can give too many details while other sections offer too few details, I found myself trying to find the balance and cohesiveness in the writing. We were given instructions to review the article individually and then discuss the article as a group. This was helpful because as a new reviewer, I experienced doubt as to whether my feedback was correct, so being able to discuss the article as a group affirmed my new ability as a reviewer. In some ways, the process was also empowering to know that I was involved with what is deemed relevant in nursing research. This was an excellent learning experience that I’m looking forward to continuing.”

CONCLUSION

Whereas there were no formal metrics collected for the peer review assignment, the sentiment of Angela's vignette, which was echoed and confirmed by the other authors on this paper, illustrated how much they learned from the experience. This collaboration continues this year with a new cohort, who are currently reviewing two manuscripts for PINS. Having a relationship with the editorial board was essential to having the opportunity to successfully execute the experience. Let this be a call for other professors and editors to collaborate to create opportunities to train the next generation of nurse scientists about the peer-review process.

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COMPETING INTERESTS

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15

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