

Academic Pressure and Research Ethics at the Crossroads

Marilyn J. Hammer, PhD, DC, RN

Hammer is an assistant professor in the College of Nursing at New York University in New York.

No financial relationships to disclose.

Hammer can be reached at marilyn.hammer@nyu.edu, with copy to editor at ONFEditor@ons.org.

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Healthcare professionals become research scientists to improve the health and well-being of humankind. Often stemming from clinical observations (Moody, Vera, Blanks, & Visscher, 1989), the process of writing a proposal to investigate the problem, obtaining funding, conducting the study, and disseminating findings takes considerably longer than the expectations of productivity in grant funding and publishing manuscripts for faculty on a tenure track in academia. Application back into practice, which is the goal of research, and evaluation of improving patient care and outcomes take even longer.

Academics in Research

The specific requirements for promotion and tenure vary by institution and are often vague. In general, the expectation is to publish three to five manuscripts per year (preferably data-based and as first author) and to obtain continuous grant funding. The gold standard is federal funding and, in particular, being awarded the coveted R01-level grant. Then, researchers must repeat this process in addition to teaching, committee responsibilities, and service. Often, the trajectory for meeting these goals is slower than the expectations. Getting a manuscript through the most frequent sce-

nario of submission, review, revision, resubmission, acceptance, and publication can take as long as a year and sometimes longer. Similarly, with grant applications, the months roll by from initial submission to funding to actually conducting the study. By the time study data are collected and analyzed, submitting the study results for publication can be several years from the start of the initial grant application.

For those not meeting the annual goals, however, is there a point where reaching the bar overshadows the nascent goal of improving health and well-being? For some, it does; in extreme cases, ethics are breached. Scientific misconduct is defined as fabrication, falsification, and plagiarism (Gross, 2015). Spanning more than 2,000 years in recorded history, scientific misconduct is not unique to current research practices (Gross, 2015). Academic pressure may play a factor, but how much it contributes is unknown.

At times, the big picture may seem daunting. However, many roads lead to academic success. Figure 1 is a schematic that can help guide those who are feeling less successful. Note the emphasis on mentorship. Having strong mentors who have succeeded before and peer mentors can keep researchers focused as they succeed.

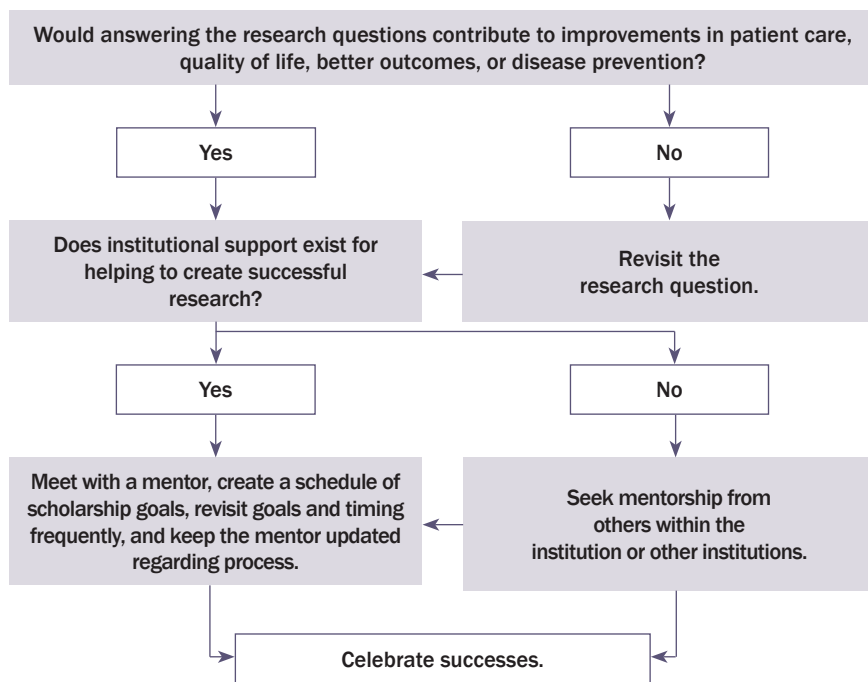


FIGURE 1. Algorithm for Assessing Research Success

Think Big

Big data or data science refers to large, exponentially growing datasets, sometimes linked to other datasets, that have countless possibilities for analyses with the potential for answering robust research questions faster (Shaw, 2014). With the vastly growing field of genetics and genomics, among others, data science is cutting-edge science. Nurse scientists are fully engaged. A prime example is in symptom science and the use of common data elements (CDEs) (Redeker et al., 2015). In alignment with the National Institutes of Health and National Institutes of Nursing Research Symptom Science Model (Cashion & Grady, 2015), the publication by Redeker et al. (2015) details the use of CDEs in symptom science, which is a perfect guideline for how to approach data science for a program of research.

Some of these large datasets stem from longitudinal studies that have amassed large amounts of data over time from specific populations.

Examples include the Framingham Heart Study (www.framinghamheartstudy.org), which was established in 1949, the Nurses' Health Study (www.channing.harvard.edu/nhs), which was established in 1976, and the Women's Health Initiative (www.nhlbi.nih.gov/whi), which was established in 1991. Other resources include Medicare data (<https://data.medicare.gov>) and Surveillance, Epidemiology, and End Results Cancer Statistics (<http://seer.cancer.gov/statistics/summaries.html>). Most have levels of access from publicly available to via proposal request with or without fees.

Analyzing the Literature

While collecting the valuable data for future manuscripts, keep up with publication requirements through conducting comprehensive integrative reviews or meta-analyses on current studies in the literature. This can help to identify new, novel gaps needing investigation. In analyzing the literature, some things should be avoided. Avoid squeezing

too many articles out of a single study with limited variables and small sample sizes. Slightly changing a manuscript and submitting it to multiple journals should not be done. Finally, do not compromise the science and integrity of a study to finish sooner.

Other roads to success include collaborating with colleagues within or outside of one's institution, becoming involved in special interest groups within organizations, and general networking at various research meetings. Use academic pressure as a motivator, and stay true to the research. Humankind is counting on it.

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Authorship Opportunity

Research Ethics addresses issues of ethics in writing for academic purposes. The column strives to address common problems found in research. Materials or inquiries should be directed to Associate Editor Marilyn J. Hammer, PhD, DC, RN, at marilyn.hammer@nyu.edu.