

Guest Editorial

Our Research Output is Up, but is the Quality?



Michael Velec, PhD, MRT(T)*

Radiation Medicine Program, Princess Margaret Cancer Centre and Techna Institute, University Health Network, Toronto, Canada

Our profession is relatively novice as far as research skill, capacity, and evidence-based practice is concerned. At least, that was a common narrative I heard when first entering the Radiation Therapy profession nearly 10 years ago. The situation would appear to have unquestionably progressed since then. As can be seen in the variety of articles published in the *Journal of Medical Imaging and Radiation Sciences (JMIRS)*, Medical Radiation Technologists (MRTs) are conducting original research that covers a wide spectrum of topics from clinical practice issues relating to technology and patient care, education, and professional practice research.

There is a unique value in each of the types of journal publications. Review articles, opinions, letters, editorials, and case studies each serve a specific purpose and opportunity to learn about our practice. But original research written in traditional scientific articles is what continues to be the primary evidence that advances the status quo forward. Scientific articles can inform best practice guidelines, which are constructed from many pieces of the “best available evidence.”

Given their importance as evidence, it stands then that scientific articles should be of the highest achievable quality. By my own definition, “high quality” indicates that a study has novelty, is driven by a logical hypothesis and conducted in a rigorous manner appropriate for the subject matter, and is written in a way that is understandable by the audience. Potential significance and impact of the work may also be a mark of a high-quality study, though these are not guaranteed.

Very early in my research career I had proclaimed to a physicist at my institution that my inexperienced-self loathed trying to get my first paper out to a journal. The writing was a struggle. My colleague informed me rather flatly that if I thought my work was valuable and I did not intend to write

papers, I had no business conducting research. The comment stung at the time, but I now feel the same way. We as researchers have a scientific and moral obligation to seek publication of our results.

The good news is that *JMIRS* manuscript submissions and publications have been increasing for the past three years. The actual number of annually published articles has been increasing since 2013, for a record of 60 in 2015. Simultaneously, the number of manuscripts that have been submitted for review has also been climbing steadily upward. This suggests that the journal is not simply just accepting more manuscripts for publication, and the overall acceptance rate remains somewhat consistent. A minority of papers are ultimately rejected, though the rejection rate is thought to be lower compared to most journals. So quantity, by some metrics, is measurably “up.” It would appear, however, that not everyone is publishing extensively.

A recent study suggests that most publications in medical radiation science journals come from a relatively small number of highly productive institutions and authors [1]. The statistics in that study are intriguing in that they hint that most papers come from institutions with established researchers, and there is some attempt to define the relative impact of the authors. Although impact factors are commonly used to quantify the citation rate of journals, and they are therefore metrics for overall journal quality, they offer little insight on specific articles [2]. Furthermore, it takes time for newly published works to become cited by subsequent authors. Then how would a *JMIRS* reader know if a specific paper is of a high-quality study if they may not have particular expertise in the subject matter?

This is a main reason that we have a peer-review mechanism. As an Associate Editor for the *JMIRS*, I have the responsibility of overseeing the review process when new manuscripts are received by the editorial office. Manuscripts are read to ensure their appropriateness for the journal and peer-reviewers are recruited. Once the reviewers' comments are received the Associate Editors must consider the comments as a whole and make a recommendation with respect to publication. In the vast majority of cases, the outcome from the journal's perspective is a positive one: the

* Corresponding author: Michael Velec, PhD, MRT(T), Radiation Medicine Program, Princess Margaret Cancer Centre, Techna Institute, University Health Network, 610 University Avenue, Toronto, Ontario, Canada M5G 2M9.

E-mail address: Michael.Velec@rmp.uhn.on.ca

good papers are accepted, the ones that need some work have been returned to authors with constructive comments, and the unsuitable ones for the journal are declined.

I can say from experience as an Associate Editor that I often struggle to find suitable reviewers that a) know the subject matter sufficiently and b) have the experience to understand what a constitutes a proper scientific article. Writing and reviewing are learned skills that in reality we must learn as we trod alone. Generating comprehensive, fair, and helpful reviews comes from experience and I tend to find that the best reviewers are published authors. A much-needed, thorough guide was recently published in the *JMIRS* to aid the less experienced reviewer in this regard [3].

For authors who have submitted manuscripts to the *JMIRS* and received an extensive list of comments from the reviewers—do not be disheartened. The reviewers are trying to help you better convey your research, or else they would have recommended rejection! Full disclosure here: as an author I have had my own share of harsh rejections and unreasonably lengthy comment lists. Persistence has paid off, and those papers were fixed based on reviewer comments, resubmitted right back to those journals, and ultimately accepted.

Occasionally, a manuscript I am overseeing that describes a potentially very interesting study is sent back to authors and, for unknown reasons, the authors choose not to resubmit a revision. It is frustrating to see the potential in a high-quality study, with some interesting data that really just needs more effort on the writing side, not make it to publication. Perhaps the authors were offended by the tone of reviewer's comments. This is highly unlikely, because the vast majority of comments are quite collegial and even friendly, and the Associate Editor should edit anything overly emotional and unprofessional. More likely, I suspect, is that the authors just do not see eye to eye with the reviewers and do not wish to majorly revise the sometimes lengthy and deep list of reviewer comments. I also occasionally see authors come back and in their response to reviewers indicate that they disagree with comments, but do not back it up with a substantiated rebuttal. As before, this situation is frustrating because the editorial board and reviewers are really trying to help the author publish their work with due diligence.

Some are of the belief that almost any manuscript, “good” or “bad,” is potentially publishable, and even the bad ones have a role in contributing to the evidence base of our profession. Supposedly, journal readers are then left to themselves to critically appraise the work and decide if it is of high quality and of value. While they are capable of this, I personally believe this view is flawed. Publication legitimizes the research and, once citable by others, I tend to think that fewer readers actually appraise those references. Furthermore, if the quality appraisal has eluded the initial author and slipped past the reviewers, it may very well happen to readers as well.

Consider the variety of manuscripts submitted to the editorial office that require a decision on publication (Figure 1). Most manuscripts that come across my screen

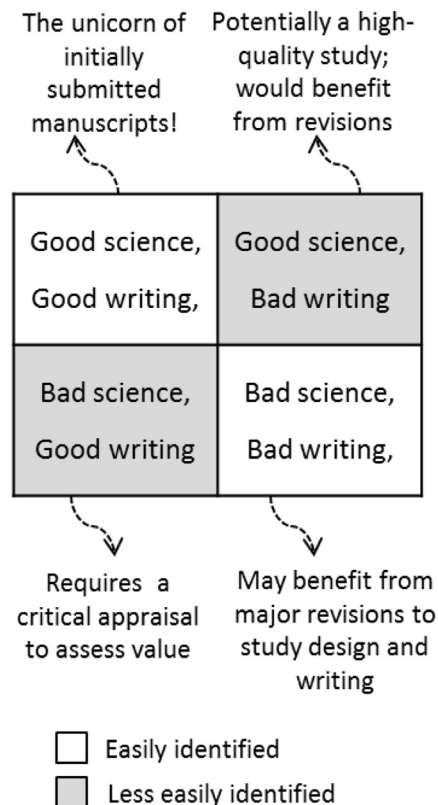


Figure 1. Quality facets of a manuscript.

fall into the right-hand gray zone in Figure 1 and require the most scrutiny. In an effort to improve the work and potentially result in eventual publication, these are most likely given a “Major Revision” decision after the first round of peer review. The goal of the reviewers and editors is to give authors the opportunity to demonstrate and/or improve the quality of the work such that good science is presented with good writing. Opinions can and do vary considerably and that is the very reason for having multiple reviewers. The most difficult situation is when I receive opposing comments along the lines of:

Reviewer 1: “This is a well written paper that has the potential to impact clinical practice.”

Reviewer 2: “This paper is confusing and the study does not appear to be rigorously conducted.”

This is a common scenario and part of the responsibility of the editorial team is to then interpret these summaries along with the more comprehensive comments (hopefully reviewers provided those) to come up with a recommendation. By the way, for a split decision such as in the example above I would personally take the more cautious approach and allow the authors the opportunity to satisfy both reviewers in a revision. The conflicting review comments stem in part from personal differences and opinions, but they also hint at another inconsistency. Just as there are variable skills and experience in conducting research and writing manuscripts, the same inconsistencies also manifest in differences in peer-review recommendations.

Download English Version:

<https://daneshyari.com/en/article/2735233>

Download Persian Version:

<https://daneshyari.com/article/2735233>

[Daneshyari.com](https://daneshyari.com)