



Editor's Comment on "Pressure to Publish: a Student's Perspective on the Role of Research in Residency Applications"

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The well-known saying “Publish or Perish” illustrates the pressure to publish, which has gradually spread into all corners of higher education and academia. Publishing’s rewards could be multiple. The efforts to publish, however, may not always be fruitful for everybody and may be questionable, if not counterproductive, at times.

Jenkins [1] describes her medical student experience conducting research and attempting to publish the results with the aim to improve her psychiatry residency applications. She conducted a small study under faculty mentorship and submitted a manuscript to several journals, which rejected it. Finally, she gave up on resubmitting. Later, she wondered if she had enough research experience to be competitive in the Match and why research and publications seemed important. Jenkins [1] notes the average number of presentations, abstracts, and publications per applicant was 6.2 in 2022, an increase from 4.8 in 2018. Citing a 2021 program director survey, Jenkins adds that program directors value “involvement and interest in research,” putting it on par with volunteer experience and close to the score given to letters of recommendation within the specialty. These interesting facts raise several questions and should give training directors some pause to reconsider the goals of recruiting residents and whether the travails of publishing are a valuable experience for medical students.

Recruitment starts with reviewing residency applications, a complex and time-consuming process. Agapoff et al. [2] estimated that if a program received 500 applications from US medical students and spent 10 min reviewing each application, it takes about 10, 8-h days to review them, which is optimistic. Many programs receive more applications and spend more time reviewing. Willett [3] provided a probably

more accurate example: “Programs directors who receive 1,000 applications and spend 30 min reviewing each one require 500 h just for application reviews. If they work a 40-h work week and do nothing else during work hours, they will need 12.5 weeks – approximately 3 months – to review applications” (p. 2388). This time includes only reviewing and not necessarily checking facts. One would think if programs value publications and presentations so much, they should also check their quality and accuracy. Some application materials are based on self-report, and a small but significant number of applicants to psychiatry residency training (9%) misinterpreted their publications, with international medical graduates being more likely to do so than US graduates [4]. These findings address only the misrepresentation of publications, not quality. Publications could be of different quality and characteristics (e.g., original observation, review, case report) and published in journals of different stature. In my experience, many applicants list publications and presentations unrelated to psychiatry. How do program directors look at those? Do all publications by applicants get evaluated regarding their content, the journal, and other aspects? I have my doubts. It would require an additional, enormous amount of time, as well as expertise from the reviewer, mostly the program director, which seems counterproductive when briefer, standardized, and easier-to-review parts of the residency application are desired (e.g., Medical Student Performance Evaluation).

Besides these issues, do programs desire having applicants who have done research and published? Probably, for a variety of reasons, such as prestige in having residents who publish and the accreditation requirement of scholarly activity. Nevertheless, research and publications do not seem to be high on programs’ list of factors playing an important role in candidate selection. According to Katsurakis et al. [5], those factors include performance during medical school; United States Medical Licensing Examination Step 1 score (no longer applicable in the pass/fail era); Alpha Omega Alpha Honor Medical Society and Gold

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Humanism Honor Society membership; medical school class rank; interview performance; letters of recommendation; extracurricular activities and leadership roles; and personal statements.

Having research and writing experience during medical school could present different benefits for students. It could attract and introduce them to a research career pathway they may decide to pursue later. It may, as Jenkins [1] hoped, improve the chance to match with the residency program of their choice. Only a small portion of medical students end up pursuing a research career, however, mostly in M.D./Ph.D. programs. Research is not for everybody. The reality is that medical schools and residency programs are expected to produce competent physicians to take care of patients. I usually tell residents, “Research is not a requirement but icing on the cake, and not all cakes require the icing.” As Jenkins [1] writes, one consequence of prioritizing applicants by research accomplishments could inadvertently cultivate psychiatrists who value academic productivity over patient-centered care. Paradoxically, the quest to research and publish may also turn medical students away from research, as they may be given boring tasks by faculty who see them more as cheap labor than students who need to be taught and excited about research.

The issue of publishing and doing research during medical school also brings the question of equity. The USA has almost 200 hundred allopathic and osteopathic medical schools, and these schools certainly do not offer the same research and publishing opportunities, nor should they be expected to. Nevertheless, should the application from an excellent student from a small midwestern medical school be rejected in favor of one from a student at a large, prestigious medical school where research is part of its culture? It should not happen, but it seems, by the number of publications and presentations per applicant, that students think it may be the case.

Involvement in research and publishing may also take away time from interesting and valuable clinical experiences. Some students may opt for research instead of clinical electives that may actually help them clarify their career choice.

In conclusion, while the question of whether medical students should be expected to be involved in research and publishing is complex, students should not “perish without

publishing.” Research involvement and publishing may be expected for those applying to research-oriented programs. It could clearly help them. Kashkoush et al. [6] found that publishing and h-index were powerful predictors of matching into neurosurgical *research* institutions. Thus, those applying to such institutions may be expected to publish during medical school. Medical students interested in being good clinicians, however, should not be expected to publish simply to improve their residency applications. We should also question whether the seemingly enormous production of medical student projects and publications has good enough educational and other values. Having students involved more in patient care and teaching them research and publishing literacy, instead of conducting research and publishing, may ultimately be more valuable for most. Medical schools and residency programs should de-emphasize the role of conducting research and publishing during medical school for most and educate medical students that they will not perish without publishing.

Declarations

Disclosures The author states that there is no conflict of interest.

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