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Letter to the Editor

In Regard to Wu et al: "The Declining Residency Applicant Pool: A Multi-Institutional Medical Student Survey to Identify Precipitating Factors"

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To the Editor:

We read with great interest the recently published article by Wu et al[1] describing results from a survey exploring the decline in the number of U.S. Doctor of Medicine applicants to radiation oncology (RO). We commend the authors on this laudable endeavor. Although limited by a response rate of 15% (n = 265), survey participants represented all specialties. As RO trainees, we were disheartened by the finding that studying physics was the greatest deterrent for pursuing a career in RO; as women, we were saddened that, of those deterred by physics, 70% (n = 81) were women.[1]

This finding is fascinating given that female underrepresentation does not exist at the level of medical school entry, in spite of premedical curriculum requirements including a year of physics, a year of calculus, and 2 years of chemistry. As of the 2020 to 2021 medical school application cycle, data from the American Association of Medical Colleges report that women represented 53.6% of matriculants.[2] With women now representing a majority, women have not previously viewed basic science coursework as a deterrent toward pursuing medicine, so why are these same women dissuaded by physics?

We feel that the explanation may lie in how women react to perceived barriers to success within the greater context of societal expectations. Existing psychosocial literature has demonstrated that women are more likely than men to decide against a career in medicine after receiving lower grades, suggesting adoption of a crystallized view of intelligence versus the fluid view held by their male counterparts.[3-5] Further, as women are increasingly encouraged to "break the glass ceiling," there is considerable pressure to avoid failure, which means eliminating any anticipated barriers from the outset. This could also explain female underrepresentation in surgical specialties, which do not require the study of physics.[6]

How do we inform prospective female applicants that if men can do it women can do it too? We show rather than tell. In addition to an increasing need for female leadership in RO and better incorporation of RO into medical school curricula,[7-9] it is time to additionally consider earlier exposure to radiation physics and rebranding of the discipline as a qualitative area of study encompassing much more than monitor unit calculations, to be relished even by those without an innate affinity for numbers. With our mantra of "first physicians, then oncologists, then radiation oncologists," our specialty needs intelligent, collaborative, empathetic individuals passionate about cancer care—especially women.

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