



Letter to the editor: Beyond publication rates: improving the quality and impact of radiology residency research

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Dear Editor,

I congratulate Salbas and Koc on their pioneering analysis of Turkish radiology residency theses.¹ It demonstrates improved thesis publication rates but also highlights several ongoing challenges in the academic training ecosystem.

Although 37.1% of theses have been published, only around 20.8% of all theses yielded a Science Citation Index Expanded (SCIE)-indexed article, with just 6.2% in a top-quartile (Q1/Q2) journal.¹ In short, much of the residency research fails to reach high-impact journals.

Another notable finding is the paucity of high-level evidence studies. In total, 86.7% of theses were retrospective, with only 13% prospective.¹ Prospective (especially multicenter) projects are harder to conduct during residency, yet such studies achieve higher publication rates and tend to appear in better journals. This dominance of retrospective work suggests systemic barriers (time, resources, mentorship) limiting more ambitious prospective research.

The study also found disparities by institution and authorship. University hospital theses received significantly more citations than those from training hospitals, indicating an academic resource gap.¹ Moreover, although residents were first authors on 76.4% of papers, these papers took longer to publish and garnered fewer citations, whereas papers with advisors as the first author more often appeared in SCIE journals and were published faster.¹ This finding underscores the critical role of active senior mentorship and guidance throughout the publication process, as demonstrated in prior research.²

Important subspecialties are underrepresented: only 1.6% of theses focused on imaging physics and radiation safety and just 1.6% on obstetric radiology.¹ Limited resident exposure and reliance on other departments for certain services (e.g., obstetric ultrasound) likely contribute to this gap. However, this is concerning, as physics and radiation safety are fundamental for imaging quality, and inadequate obstetric imaging training can affect patient care.³⁻⁵ These niche but critical fields deserve greater attention in thesis research.

I propose several remedies: 1) implement national mentorship and writing workshops for residents to strengthen research design and manuscript skills—experienced supervision is associated with higher thesis publication success;⁶ 2) incentivize prospective and multicenter thesis projects (via funding, protected time, or academic credit), as rigorous studies are more likely to yield high-impact publications; 3) establish a national thesis registry or standards to ensure methodological quality, avoid duplication, and foster multicenter collaborations. These steps would help elevate the scholarly output and impact of residency research.

In conclusion, this timely analysis by Salbas and Koc¹ illuminates the progress and challenges in radiology residency research in Türkiye. By strengthening mentorship, promoting prospective multi-institution studies, and instituting national quality standards, we can enhance the academic output of future radiologists and their contributions to the literature. Future studies could also explore additional individual-level factors, such as thesis length, residents' prior publication experience, time since medical school graduation, and residents' age, which may further influence thesis-to-publication conversion and scientific impact. Un-

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derstanding these factors may help tailor mentorship strategies and optimize research training during residency.

Conflict of interest disclosure

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