



Scholarly Research Productivity Among Otolaryngology Residency Graduates and Its Relationship to Future Academic Achievement



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Introduction

The Accreditation Council for Graduate Medical Education (ACGME) requires that all residencies participate in research.¹ This growing emphasis on research during residency has made it increasingly important for medical students to gain familiarity with the basic principles of research before beginning residency training. Thus, our goal is to determine if an association exists between publication rates before, during, or after otolaryngology residency training and whether publication efforts may predict future academic achievement. If such an association exists, perhaps otolaryngology residency program directors and education policy makers could use it as a predictive tool to screen future applicants.

Methods

In this cross-sectional analysis, we selected a random sample of 50 otolaryngology residency programs listed on Doximity. From these programs, we assembled a list of graduating residents from 2013, 2014, and 2015. Using SCOPUS, PubMed, and Google Scholar, a list of publications for each graduate was compiled and data were extracted in an independent, double-blinded fashion by two investigators.

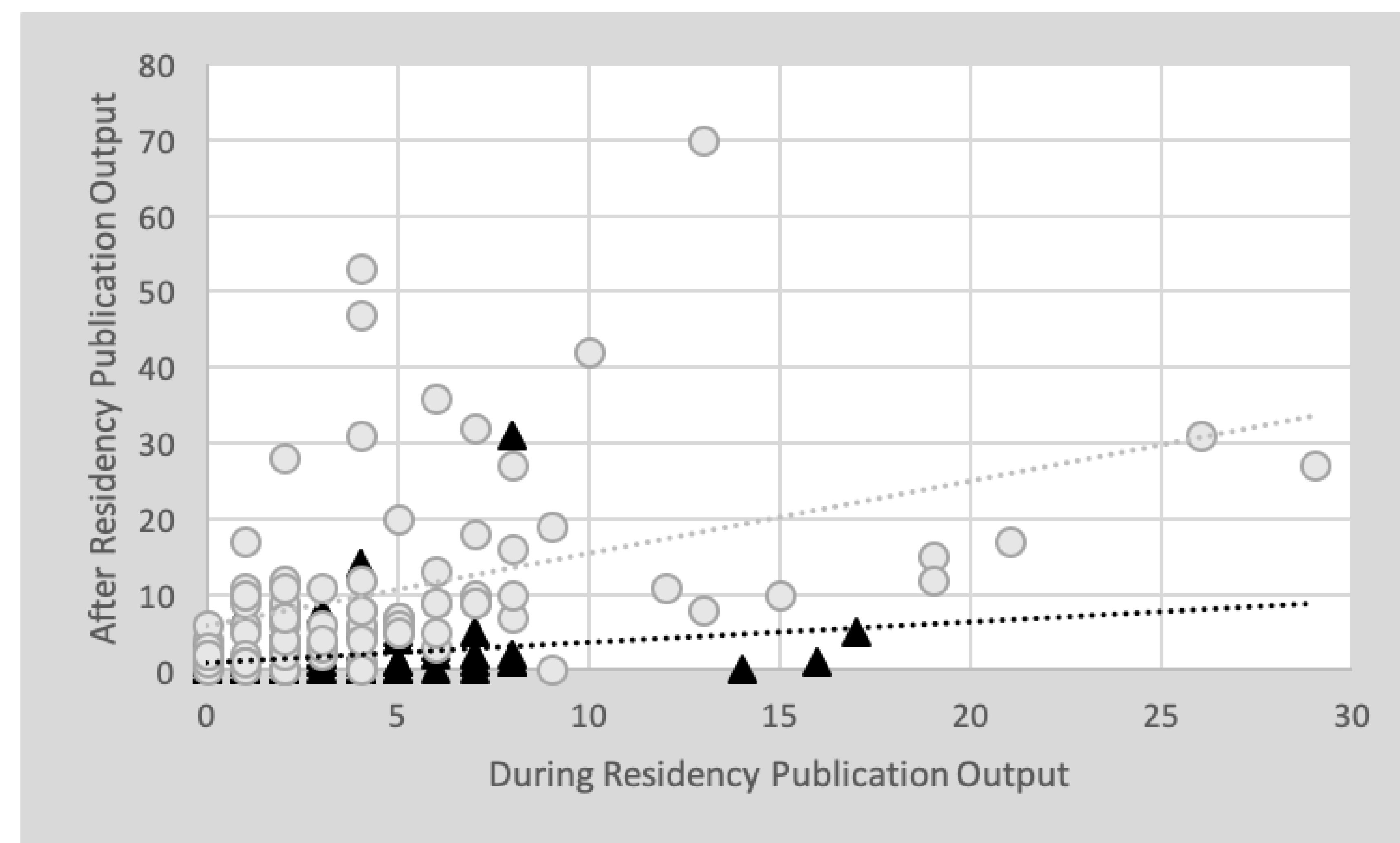


Figure 1. Publication output during vs after residency. Circles represent those that pursued academic medicine and triangles represent those who entered private practice.

	Mean Total Publications (SD)	t value, p Value	Mean Total First Author Publications (SD)	t value, p Value	Mean h-index (SD)	t value, p Value
Table 1. Graduate research first author, h-index, or total publications by fellowship status, career path, and gender						
Sample (n=207)						
Overall	10.2 (13.4)	–	4.2 (5.4)	–	3.6 (3.7)	–
Fellowship (n=207)						
Yes	14.0 (15.7)	t = -5.3 p < 0.001*	5.6 (6.1)	t = -4.8 p < 0.001*	4.4 (4.3)	t = -4.6 p < 0.001*
No	4.5 (5.0)		2.1 (3.1)		2.2 (2.1)	
Career Path (n=207)						
Academic Medicine	17.3 (17.4)	t = -7.2 p < 0.001*	7 (6.7)	t = -7.0 p < 0.001*	5.1 (4.5)	t = -5.4 p < 0.001*
Private Practice	5.1 (5.8)		2.2 (2.9)		2.4 (2.6)	
Gender (n=207)						
Male	10.6 (14.8)	t = -0.6 p = 0.550	4.1 (5.7)	t = 0.5 p = 0.631	3.7 (4.0)	t = -0.7 p = 0.479
Female	9.3 (9.2)		4.5 (4.6)		3.3 (2.9)	

Table 2. Characteristics of otolaryngology residency graduates.

Characteristics of graduates	No. (%)
Graduation year (n=207)	
2013	63 (30.4)
2014	71 (34.3)
2015	73 (35.3)
Degree (n=207)	
MD	191 (92.3)
DO	16 (7.7)
Gender (n=207)	
Mal	148 (71.5)
Female	59 (28.5)
Fellowship † (n=230)	
Pediatric otolaryngology	28 (12.2)
Facial plastics and reconstructive	31 (13.5)
Head and neck oncology surgery	22 (9.6)
Skull-base surgery	15 (6.5)
Rhinology	18 (7.8)
Otology	8 (3.5)
Neurotology	8 (3.5)
Laryngology	15 (6.5)
Microvascular Surgery	2 (0.9)
Sleep Surgery	1 (0.4)
No Fellowship Pursued	82 (35.7)
Post-residency Position	
Academic Medicine	86 (41.5)
Private Practice	122 (58.9)

† Some graduates were trained in multiple fellowships

Results

Of the 50 randomly selected otolaryngology residency programs included in this analysis, 27 (54%) programs representing 207 residents were included. Before residency, graduates published a mean of 1.3 (SD=2.7) articles. During residency, graduates published a mean of 3.5 (SD=4.5) articles. After residency, graduates published a mean of 5.4 (SD= 9.6) articles. Residents who pursued a fellowship had more publications ($t_{205}=-5.3$, $p < .001$) and more first author publications ($t_{205}=-4.8$, $p < .001$) than residents who did not pursue fellowship training. Graduates who chose a career in academic medicine had a higher number of mean total publications ($t_{205}=-7.2$, $p < .001$) and first author publications ($t_{205}=-7.0$, $p < .001$) than those in private practice.

Conclusion

Research productivity significantly correlated with future fellowship training, the pursuit of an academic career, and overall h-index. Our results indicate that promoting greater physician involvement in the research process may strengthen confidence in the interpretation and application of research findings and ultimately lead to future academic success.

References

1. Accreditation Council for Graduate Medical Education. Specialty-specific references for DIOs: resident/fellow scholarly activity. 2018. https://www.acgme.org/Portals/0/PDFs/Specialty-specific%20Requirement%20Topics/DIO-Scholarly_Activity_Resident-Fellow.pdf. Published Updated June 2018. Accessed November 22, 2019.