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Factors Influencing Immediate Post-Residency Career Decisions for Graduating Anesthesiology Residents

Nafisseh S. Warner, MD
Matthew A. Warner, MD
Jason S. Eldrige, MD
Resham Datta, MD
Susan M. Moeschler, MD
Timothy R. Long, MD

Introduction

Residency training programs are designed to prepare physicians for future success in a variety of settings, including advanced fellowship training and careers in private practice or academic medicine. Recruitment of residents who facilitate program aims is in the best interest of all academic departments. For example, the Mayo Clinic anesthesiology residency program in Rochester, Minnesota, trains leaders in the field with the majority pursuing fellowship training or academic positions. Similar objectives likely exist for many anesthesiology training programs at major academic centers. Unfortunately, it is difficult to objectively assess career aspirations of residency applicants during recruitment, as many do not yet have a grasp of their own career ambitions. Additionally, the number of residency slots available in the United States has not grown at the same pace as the annual number of graduating medical students, which brings added pressure to residency program directors to select applicants most suitable for achievement of program and departmental aims.[1,2] The purpose of this study was to assess the relationship among several demographic variables of anesthesiology residency applicants and first post-residency career or training position.

Materials and Methods

Following approval of the Institutional Review Board (IRB) at the Mayo Clinic in Rochester, Minnesota, the authors conducted a retrospective review of academic files for graduating anesthesiology residents at a single institution between 2000 and 2014. Written informed consent was waived by the IRB for this minimal risk study protocol. Demographic variables present at the time of residency enrollment were extracted from education files of the Mayo Clinic School of Graduate Medical Education (MCSGME; Table 1). Additionally, several academic characteristics were obtained, including results from the United States Medical Licensing Examination (USMLE) Step 1, Step 2 Clinical Knowledge (CK), and Step 3 Examinations. The numbers of peer-reviewed publications at the start of residency and prior to residency graduation were extracted by searching the resident's name in PubMed and verifying the authenticity of each article to the resident. A publication was counted regardless of authorship order. Of note, during the study period, the residency program maintained a requirement for scholarly activity, that is, residents were expected to have at least one presentation at a national meeting during residency.

Immediate post-residency position of graduating residents—which could include an academic position, private practice employment, or fellowship appointment in the first year following completion of anesthesiology residency—was determined by review of graduation worksheets completed at the end of residency and confirmed by review of the forwarding addresses left with MCSGME regarding each resident's post-graduation occupation or fellowship training position. Residents were excluded if there was no information regarding their follow-up.

Pearson's chi-square analyses and Fisher exact tests (when observed variables in any column were less than 5) were used to assess correlation of demographic variables with residents' initial career or advanced training position. Multinomial logistic regression, including all variables with significant univariate associations with the outcome, was utilized to adjust for confounding. Changing continuous variables (eg, USMLE scores) into categorical variables did not have any significant effect on study results and was maintained for simpler data representation. To assess for changes in results over time, subgroup analyses were performed by dividing anesthesiology residents into three unique five-year increments based upon the year of graduation (2000–2004, 2005–2009, 2010–2014).

Results

Over the 15-year study period, 273 residents graduated from the Mayo Clinic anesthesiology residency program in Rochester, MN. There were two program directors during the study period, with a leadership change in 2007. In total, 263 residents (96%) had complete post-residency career or training choice information available. The mean (standard deviation [SD]) age at the time of residency enrollment was 29.7 (3.5) years, with a minimum age of 24 and a maximum age of 45 years. One hundred ninety-six residents (74.5%) were males, and the majority of residents were white (85.9%) followed by Asian (6.8%), Hispanic (3.0%), and African-American (2.3%) heritage. Most residents obtained an MD degree prior to the start of residency (92.0%), with the overwhelming majority being

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US medical school graduates. In addition, more than 60% of residents were married at the time of residency initiation. The mean (SD) USMLE scores for step 1, step 2 CK, and step 3 were 227 (17), 235 (21), and 223 (15), respectively.

Of the 263 residents included in the study, 120 (45.6%) pursued fellowship training after the completion of residency, 110 (41.8%) entered private practice, and 33 (12.5%) went directly into academic positions following residency graduation. Univariate relationships between baseline demographic and academic variables and first post-residency position are shown in Table 2. With regards to demographic features, there was a significant relationship between gender and choice of first post-residency position. Specifically, males were more likely to enter directly into private practice jobs while females were more likely to pursue advanced fellowship training. Non-US citizens were also more likely to pursue fellowship opportunities (14/21, 66.6% versus US citizens 106/242, 43.8%) or enter directly into academic positions (5/21, 23.8% versus US citizens 28/242, 11.6%). Similarly, the location of medical school (US versus other) was significantly associated with first post-residency position, with those graduating from US medical schools more inclined to pursue careers in private practice; those from non-US medical schools were most inclined to pursue fellowship training or enter into academia. In addition, age was related with first post-residency career choice: Residents younger than 30 years of age at the time of residency initiation were more likely to pursue fellowship training and less likely to purse academic positions than did those 35 years or older at the time of residency initiation. Marital status and race were not significantly associated with post-residency positions.

The number of peer-reviewed publications at the time of residency initiation and residency completion were related to post-residency career choice, with a greater proportion of residents entering directly into academic practice having peer-reviewed publications compared to residents not entering into academic positions. Of those residents entering directly into academic positions, nearly half (15/33; 45.5%) had at least one peer-reviewed publication at the start of residency, and greater than 90% (30/33) had at least one peer-reviewed publication at the completion of residency. This is compared to publication rates of 10% (11/110) and 26% (29/110), respectively, for residents entering directly into private practice. Additionally, residents with PhD degrees at the time of residency initiation were more likely to enter directly into academic practice (8/14, 57.1%) than were their counterparts. There was no significant relationship between USMLE scores and choice of first post-residency position.

In a multinomial logistic regression model adjusting for all covariates with significant univariate associations with post-residency career choice, several factors remained associated with post-residency career decisions, including gender ($p = 0.014$), age ($p = 0.020$), number of publications at time of residency initiation ($p = 0.003$), and number of publications at the time of residency graduation ($p < 0.001$). Other factors including country of citizenship, country of medical school, and the presence of a PhD or an MD degree were no longer significant predictors of the primary outcome. To assess for changes in relationships over time, subgroup analyses were performed based upon year of residency graduation (Table 3). There was an observed temporal difference in private practice job acquisition based upon race: Graduates who are white were more likely to obtain private practice jobs directly out of residency in 2010–2014 than in prior years. Additionally, the number of publications at residency initiation for graduates pursuing fellowship training differed over time. Finally, increases in USMLE scores were observed from the start of the study period to the end. Otherwise, no significant temporal differences were noted.

Discussion

This study examined the factors associated with first post-residency position obtained by anesthesiology residency graduates over a 15-year period. Multiple demographic and academic factors were identified as playing a significant role. These included gender, age, country of citizenship, country of medical school, type of medical degree, the presence of a PhD degree, and the number of publications at the time of residency initiation and completion. In multivariable analyses, gender, age, and number of publications were the primary predictors of post-residency career decisions.

The majority of trainees in our residency program pursued fellowship training (46%) or began private practice positions (42%) following the completion of residency, with very few entering directly into academic medicine. The low incidence of academic positions is likely related to the fact that many academic positions (particularly those at our institution) require fellowship training, although it must also be recognized that many private practice anesthesiology positions also require advanced training. Regarding factors related to post-residency career decisions, the numbers of peer-reviewed publications at the start and end of residency were predictors of a resident's decision to directly enter into an academic position, with 55% of these residents having at least one publication at the time of residency initiation and 91% having at least one publication at residency completion. These remained significant predictors for post-residency career choice in multivariable analyses, suggesting that residents inclined to engage (and achieve success) in peer-reviewed publication are more likely to pursue careers in academic medicine. Importantly, this can be identified prior to residency initiation. While these findings should not be particularly surprising, they are in stark contrast to the 74% of residents obtaining private practice positions with no peer-reviewed publications at residency graduation.

Quite striking in this investigation was the finding that males were much more likely to directly enter into private practice positions than were their female counterparts: Nearly 50% of males took private practice jobs out of residency compared to only 25% of female graduates. At a superficial level, one could question if private practice groups are preferentially selecting males rather than their female counterparts. However, there are plausible alternative explanations. It is well recognized that many academic departments are actively engaged in increasing gender diversity, which could result in greater recruitment of females to academic appointments and fellowship training programs.[3] Whether private practice groups have similarly moved to increase gender

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and racial diversity remains unknown. Additionally, it has previously been shown in gastroenterology fellows that females are more likely to consider family-related concerns (eg, parental leave) and the presence of female faculty representation when selecting a post-residency training program.[4] The same may be applicable for female anesthesiology graduates when selecting their immediate post-training career path, with academic appointments or fellowship opportunities conceivably providing greater established female representation or improved opportunities for parental leave. Admittedly, these assessments are purely speculative.

Interestingly, a greater percentage of non-US citizens and non-US medical school graduates have entered directly into academic positions compared with US citizens and US medical school graduates. While the reasons for this are unclear, it may be that non-US citizens or non-US medical graduates have a greater amount of research or clinical experience either preceding residency initiation or during residency. In fact, international medical graduates that are ranked highly during our residency selection process typically have unique skillsets that set them apart from other applicants (eg, significant research experience). These unique features may make them particularly well-suited for careers in academic medicine. Regarding discrepancies in private practice employment based upon country of citizenship, 45% of US citizens entered into private practice compared to 10% of non-US citizens. While this may also hint at bias in private practice hiring, there are other explanations. Most notably, some non-US citizens may not be able to directly enter into private practice positions secondary to the absence of work visas, choosing instead to extend their training in fellowship positions. Completion of a subspecialty fellowship program may make an international medical graduate more competitive with both future employers and the visa waiver program. Additionally, as is the case with gender, many academic departments are actively engaged in increasing ethnic diversity, which could result in greater recruitment of non-US citizens or international medical graduates. Despite these differences, it should also be noted that country of citizenship and country of medical school matriculation were not significant predictors of post-residency career choice in multivariable analyses. Additionally, there were no racial differences in post-residency position when examining the cohort as a whole. However, when assessed in 5-year increments, a higher proportion of white graduates obtained private practice jobs in 2010–2014 compared to previous years. Whether or not this reflects an actual trend in private practice recruitment remains uncertain, but any inference should be made with caution given the limited sample size.

Furthermore, there were no associations between academic performance as assessed by USMLE scores or marital status and post-residency career decisions. However, age was a strong predictor of post-residency career decisions in multivariable analyses, with approximately 90% of residents less than 30 years of age pursuing fellowship training or obtaining a job in private practice and less than 10% pursuing academic medicine. Comparatively, nearly one-third of residents ≥35 years of age obtained a job in academic medicine. Additionally, the rate of fellowship training was approximately 15% lower in this demographic. While the reasons for these findings are not entirely clear, it is possible that older residents have either already established themselves in academic endeavors (ie, scholarly activity) or prefer to avoid extension of their training any further, given advanced age at the time of graduation.

There are limitations to the present investigation, including most notably the fact that there are many demographic, socioeconomic, and academic factors that could not be extracted but are nonetheless likely to affect practice choice, such as the amount of medical school debt, spousal employment, household income, number of children, personal health, private practice salary, variations in job market, and additional family matters, including the geographic location of immediate or extended family members. Further, individual resident performance evaluation forms and annual in-training examination scores were not available for analysis but certainly may play a role in career choice. In addition, we analyzed factors that influenced first post-residency position. However, this outcome may not be reflective of long-term career placement, as some residents move in the first few years following residency graduation. Unfortunately, our alumni survey data did not include data on longer-term career choices. The study is also limited by the retrospective study design, such that observed relationships are in no way implicative of causation. As such, suggestions made in the discussion are largely speculative in nature. There were also two program directors during the study period. While the program director change in 2007 was associated with increased emphasis on peer-reviewed publication during residency, there were no formal policy changes. As mentioned previously, it is unclear what career choices were ultimately made by residents who pursued fellowship training. Did a disproportionate number of fellowship graduates enter into academic positions rather than private practice?

Finally, the results of this study are reflective of a single, moderate-to-large anesthesiology residency program in the geographic Midwest with a demographic profile that was relatively racially homogenous (85.5% white) and predominantly male (74.5%). When compared to national demographic characteristics of anesthesiology residents, our program had more white residents (85.5% versus 62.3% nationally in 2003) but a similar rate of women residents (25.5% versus 28.0% nationally in 2003).[5] Result generalizability, particularly outside the institution's geographic region, would require a large multicenter investigation with a diverse pool of anesthesiology residency graduates.

In summary, we sought to identify demographic and academic features that would be associated with post-residency career choice in graduating anesthesiology residents. While the overall goal was to better understand factors that could facilitate recruitment to academic departments, similar analyses would also likely be beneficial for facilitating recruitment to non-academic practice settings in the greater community. In this study, we have identified several demographic and academic features, including gender, race, age, country of citizenship, medical school location, presence of an MD or PhD degree, and number of publications as significant factors for

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post-residency career decisions. In multivariable analyses, age, gender, and number of publications were the primary predictors of career decisions; females, older residents, and those with more publications generally were more inclined to pursue academia or fellowship training. While these efforts represent a first step in obtaining a broader understanding of the aspirations and career potential for our anesthesiology residency applicants, there are likely many additional contributing factors. Future multicenter investigations will be necessary to more fully define these relationships.

Abbreviations

IRB: Institutional Review Board

MCSGME: Mayo Clinic School of Graduate Medical Education

USMLE: United States Medical Licensing Examination

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Nafisseh S. Warner, Jason S. Eldrige, and Susan M. Moeschler are Assistant Professors, Division of Pain Medicine, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine and Science, Rochester, MN; Resham Datta is an Instructor, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine and Science; Matthew A. Warner is an Assistant Professor, Division of Critical Care Medicine, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine and Science; Timothy R. Long is an Associate Professor, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine and Science.
Corresponding author: Timothy R. Long, MD, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine, 200 1st St SW, Rochester, Minnesota, 55902; Telephone: (507) 255-3298, Fax (507) 255-6463. Email address: Timothy R. Long, long.timothy14@mayo.edu

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Abstract

Background: Little is known regarding the factors that influence post-residency career decisions following anesthesiology residency training. The objective of this study was to assess the relationship between demographic and academic variables and immediate post-residency positions.

Methods: The authors conducted a retrospective review of anesthesiology resident files from 2000 to 2014 at Mayo Clinic (Rochester, MN). Univariate and multivariable analyses were used to assess relationships between demographic and academic factors and post-residency positions.

Results: Of the 263 anesthesiologists included, 120 (45.6%) pursued fellowship training, 110 (41.8%) entered private practice, and 33 (12.5%) entered directly into academic positions. Factors associated with career choice in univariate analyses included age, gender, country of citizenship, country of medical school, type of medical degree, and the number of peer-reviewed publications. In multivariable analyses, age, gender, and number of publications were significant predictors of post-residency career choice. Specifically, older residents were less likely to pursue fellowship training and more likely to directly enter academic positions. Males were more likely to obtain private practice positions compared to females, who were more likely to pursue advanced fellowship training. Nearly all residents entering into academic positions had at least one peer-reviewed publication.

Conclusions: In this 15-year analysis of anesthesiology resident career decisions, age, gender, and number of publications were the primary predictors of career decisions. Future studies are needed to determine generalizability and to evaluate additional socioeconomic factors with the ultimate goal of optimizing residency recruitment and training initiatives in congruence with resident career interests and departmental goals.

Tables

Table 1: Demographic and academic variables of interest in determining anesthesiology graduates initial career choice.

Pre-Residency Demographics	Academic Features	Outcomes of Interest
Gender Race Age Country of citizenship Country of medical school Medical degree credentials Presence of PhD degree Marital status	Number of peer-reviewed publications at the time of residency initiation and graduation USMLE step 1 score USMLE step 2 CK score USMLE step 3 score	First post-residency position • Academics • Private practice • Fellowship

PhD – doctor of philosophy; USMLE – United States Medical License Examination; CK – clinical knowledge

Tables *continued*

Table 2: First occupation or advanced training position of graduating anesthesiology residents by demographic and academic characteristics (n=263).

	Academic	Private Practice	Fellowship	
	33 (12.5%)	110 (41.8%)	120 (45.6%)	**P-Value**
Gender				
Male	22 (11.2%)	92 (46.9%)	82 (41.8%)	0.0135*
Female	11 (16.4%)	18 (26.9%)	38 (56.7%)	
Race				
White	28 (12.4%)	98 (43.6%)	99 (44.0%)	0.3551
Other	5 (13.2%)	12 (31.6%)	21 (55.3%)	
Age				
< 30 years	13 (8.3%)	67 (42.7%)	77 (49.0%)	0.0407*
30 to 34 years	12 (15.4%)	33 (42.3%)	33 (42.3%)	
≥ 35 years	8 (28.6%)	10 (41.8%)	10 (35.7%)	
Citizenship				
USA	28 (11.6%)	108(44.6%)	106(43.8%)	0.0026*
Other	5 (23.8%)	2 (9.5%)	14 (66.6%)	
Medical School				
USA	28 (11.7%)	106(44.2%)	106(44.2%)	0.0284*
Other	5 (21.7%)	4 (17.4%)	14 (60.9%)	
Credentials				
MD~	33 (13.6%)	97 (40.1%)	112(46.3%)	0.0210*
Non-MD^	0	13 (61.9%)	8 (38.1%)	
PhD Degree				
Yes	8 (57.1%)	1 (7.1%)	5 (35.7%)	<0.0001*
No	25 (10.0%)	109(43.8%)	115(46.2%)	
Marital Status				
Yes	20 (12.35%)	75 (46.3%)	67 (41.4%)	0.0842
No	12 (12.37%)	32 (33.0%)	53 (54.6%)	
Publications at Residency Start				
0	18 (8.3%)	99 (45.8%)	99 (45.8%)	<0.0001*
1-5	11 (26.2%)	11 (26.2%)	20 (47.6%)	
6-10	2 (100%)	0 (0%)	0 (0%)	
>10	2 (66.7%)	0 (0%)	1 (33.3%)	
Publications at Residency End				
0	3 (2.2%)	81 (59.1%)	53 (38.7%)	<0.0001*
1-5	23 (20.5%)	28 (25%)	61 (54.5%)	
6-10	3 (37.5%)	1 (12.5%)	4 (50.0%)	
>10	4 (66.7%)	0 (0%)	2 (33.3%)	
Step 1 Score#				
< 200	3 (21.4%)	6 (42.9%)	5 (35.7%)	0.7138
200-225	12 (11.3%)	46 (43.4%)	48 (45.3%)	
226-250	12 (11.3%)	39 (36.8%)	55 (51.9%)	
>250	3 (15.0%)	10 (50.0%)	7 (35.0%)	
Step 2 Score#				
< 200	3 (30.0%)	5 (50.0%)	2 (20.0%)	0.1209
200-225	1 (3.7%)	15 (55.6%)	11 (40.7%)	
226-250	7 (12.5%)	21 (37.5%)	28 (50.0%)	
>250	1 (3.2%)	14 (45.2%)	16 (51.6%)	
Step 3 Score#				
< 200	1 (7.1%)	6 (42.9%)	7 (50.0%)	0.2791
200-225	11 (14.5%)	30 (39.5%)	35 (46.1%)	
226-250	3 (4.1%)	30 (41.1%)	40 (54.8%)	
>250	0	1 (20.0%)	4 (80.0%)	

*Significant at P < 0.05. ~MD includes MD and dual MD-PhD degrees. ^Non-MD includes MBBCh, MBBS, and DO degrees. #Step Scores refer to USMLE Step 1, 2CK, and 3 Examination Scores. Step 1 Scores were available for 247 (93.4%), Step 2 Scores for 124 (47.1%), and Step 3 Scores for 168 (63.9%) residents.

Tables *continued*

Table 3. Relationships between demographic and academic characteristics and post-residency positions of graduating anesthesiology residents based upon graduation year

	Academic				Private Practice				Fellowship			
Graduation Year	*2000-2004*	*2005-2009*	*2010-2014*	*P-Value*	*2000-2004*	*2005-2009*	*2010-2014*	*P-Value*	*2000-2004*	*2005-2009*	*2010-2014*	*P-Value*
Gender												
Male	10 (76.9)	9 (75.0)	3 (37.5)	0.132	32 (82.1)	26 (86.7)	34 (82.9)	0.866	20 (76.9)	34 (68.0)	28 (63.6)	0.512
Female	3 (23.1)	3 (25.0)	5 (62.5)		7 (18.0)	4 (13.3)	7 (17.1)		6 (23.1)	16 (32.0)	16 (36.4)	
Race												
White	11 (84.6)	10 (83.3)	7 (87.5)	0.968	29 (74.4)	28 (93.3)	41 (100)	<0.001*	23 (88.5)	41 (82.0)	35 (79.6)	0.633
Other	2 (15.4)	2 (16.7)	1 (12.5)		10 (25.6)	2 (6.7)	0 (0.0)		3 (11.5)	9 (18.0)	9 (20.5)	
Age												
< 30	8 (61.4)	3 (25.0)	2 (25.0)	0.327	23 (59.0)	16 (53.3)	28 (68.3)	0.194	20 (76.9)	27 (54.0)	30 (68.1)	0.075
30 to 34	3 (23.1)	5 (41.7)	4 (50.0)		10 (25.6)	13 (43.3)	10 (24.4)		5 (19.2)	15 (30.0)	13 (29.6)	
≥ 35 years	2 (15.4)	4 (33.3)	2 (25.0)		6 (15.4)	1 (3.3)	3 (7.3)		1 (3.9)	8 (16.0)	1 (2.3)	
Citizenship												
USA	9 (68.2)	12 (100)	7 (87.5)	0.098	37 (94.9)	30 (100)	41 (100)	0.157	22 (84.6)	45 (90.0)	39 (88.6)	0.784
Other	4 (30.8)	0 (0.0)	1 (12.5)		2 (5.1)	0 (0.0)	0 (0.0)		4 (15.4)	5 (10.0)	5 (11.4)	
Medical School												
USA	9 (69.2)	12 (100)	7 (87.5)	0.098	37 (94.9)	29 (96.7)	40 (97.6)	0.809	22 (84.6)	44 (88.0)	40 (90.9)	0.727
Other	4 (30.8)	0 (0.0)	1 (12.5)		2 (5.1)	1 (3.3)	1 (2.4)		4 (15.4)	6 (12.0)	4 (9.1)	
Credentials												
MD~	13 (100)	12 (100)	8 (100)	-	33 (84.6)	28 (93.3)	36 (87.8)	0.537	26 (100)	46 (92.0)	40 (90.9)	0.299
Non-MD^	-	-	-		6 (15.4)	2 (6.7)	5 (12.2)		0 (0.0)	4 (8.0)	4 (9.1)	
PhD Degree												
Yes	3 (23.1)	4 (33.3)	1 (12.5)	0.563	1 (2.6)	0 (0.0)	0 (0.0)	0.399	0 (0.0)	3 (6.0)	2 (4.6)	0.457
No	10 (76.9)	8 (66.7)	7 (87.5)		38 (97.4)	30 (100)	41 (100)		26 (100)	47 (94.0)	42 (95.5)	
Married												
Yes	10 (76.9)	6 (54.5)	4 (50.0)	0.371	26 (70.3)	18 (62.1)	31 (75.6)	0.476	13 (50.0)	32 (64.0)	22 (50.0)	0.314
No	3 (23.1)	5 (45.5)	4 (50.0)		11 (29.7)	11 (37.9)	10 (24.4)		13 (50.0)	18 (36.0)	22 (50.0)	
Publications at Residency Start												
0	7 (53.9)	6 (50.0)	5 (62.5)	0.834	35 (89.7)	28 (93.3)	36 (87.8)	0.856	26 (100)	40 (80.0)	33 (75.0)	0.015*
1-5	3 (23.1)	5 (41.7)	3 (37.5)		4 (10.3)	2 (6.7)	5 (12.2)		0 (0)	10 (20.0)	10 (22.7)	
6-10	2 (15.4)	0 (0)	0 (0)		0 (0)	0 (0)	0 (0)		0 (0)	0 (0)	0 (0)	
>10	1 (7.7)	1 (8.3)	0 (0)		0 (0)	0 (0)	0 (0)		0 (0)	0 (0)	1 (2.3)	
Publications at Residency End												
0	0 (0.0)	2 (16.7)	1 (12.5)	0.593	27 (69.2)	21 (70.0)	33 (80.5)	0.419	16 (61.5)	21 (42.0)	16 (36.4)	0.237
1-5	9 (69.2)	8 (66.7)	6 (75.0)		12 (30.8)	9 (30.0)	7 (17.1)		10 (38.5)	27 (54.0)	24 (54.6)	
6-10	1 (7.7)	1 (8.3)	1 (12.5)		0 (0.0)	0 (0.0)	1 (2.4)		0 (0.0)	2 (4.0)	2 (4.6)	
>10	3 (23.1)	1 (8.3)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	2 (4.6)	
Step 1 Score#	219 (205,224)	235 (217,253)	239 (230,244)	0.007*	214 (204,223)	231 (221,247)	230 (219,246)	<0.001*	212 (201,219)	228(219,238)	237 (225,245)	<0.001*
Step 2 Score#	192 (192,233)	-	230 (226,248)	0.088	208 (198,219)	242 (205,253)	241 (229,254)	<0.001*	210 (199,219)	230 (219,244)	245 (238,259)	<0.001*
Step 3 Score#	200 (192,208)	218 (210,224)	224 (213,232)	0.093	207 (197,227)	223 (218,230)	227 (220,234)	0.027*	208 (196,222)	224 (212,234)	230 (222,237)	0.002*

*Significant at P < 0.05. ~MD includes MD and dual MD-PhD degrees. ^Non-MD includes MBBCh, MBBS, and DO degrees. #Step Scores presented as median (IQR) and refer to USMLE Step 1, 2CK, and 3 Examination Scores. Step 1 Scores were available for 247 (93.4%), Step 2 Scores for 124 (47.1%), and Step 3 Scores for 168 (63.9%) residents.