Assessment of Residents’ Loss of Interest in Academic Careers and Identification of Correctable Factors

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Objective: To quantify interest in an academic career at the dermatology resident and residency applicant level.

Design: Cross-sectional survey.

Participants: Dermatology residents attending a basic science course and residency applicants applying to a single residency program.

Main Outcome Measures: Self-reported level of interest in an academic dermatology career, reasons for losing interest in academics, and area of desired primary academic contribution.

Results: One hundred nine of 230 dermatology applicants and 130 of 190 dermatology residents completed the survey. Seventy-nine applicants (72.5%) and 48 residents (36.9%) were interested in an academic career. Thirty-three of 47 residents (70.2%) and 63 of 79 applicants (79.8%) interested in an academic career hoped to make their primary academic contribution as teacher-clinicians, while only 7 residents (14.9%) and 15 applicants (19.0%) planned to primarily contribute through basic or clinical research. Thirty-eight resident respondents (29.2%) reported losing interest in academics for the following primary reasons: bureaucracy, 24 (63.2%); salary differential/financial issues, 20 (52.6%); lack of effective mentorship, role model, or professional guidance, 19 (50.0%); and location or practice environment, 10 (26.3%).

Conclusions: Many residents report losing interest in pursuing a career in academic dermatology. Many reasons for this are not easy to correct. However, half of those residents primarily lose interest because of a lack of mentors, role models, and career guidance. Methods to improve this perception and experience should be sought. Strategies should also be developed to cultivate future teacher-clinicians, where most of the interest lies.

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A PERCEIVED AND PROBABLE real shortage of dermatologists exists in the United States.1,2 This shortage is amplified in academic dermatology, where longer wait times exist, a higher percentage of academic practices are recruiting (56% vs 33% nonacademic practices), and the longest work hours are reported.2,3 This shortage, coupled with a steady decline in residents pursuing academics, is disconcerting.2,4

See also pages 845, 911, and 930

Academic dermatology is essential to overcome the shortage, drive progress in research and clinical practice, and ensure competence in the next generation of dermatologists.3 Multiple organizations, committees, task forces, and departments are attempting to address this issue with focused resident retreats, academic leadership development seminars, selective interviewing, pharmaceutical industry-sponsored increases in resident positions, forum discussions, and generalized attempts at educating residents about careers in academic dermatology.4,6

The hypothesis of this project is that some dermatology residents interested in an academic career lose this interest during training. In an attempt to quantify this problem of loss of interest in academics at the resident level, distinguish preferred or anticipated academic roles, and perhaps illuminate solutions, a survey was developed for dermatology residency applicants and dermatology residents at all levels of training.

METHODS

A cross-sectional, voluntary, anonymous survey was given to first-year through third-year dermatology residents attending the 2004 Introduction to Cutaneous Biology course at Indiana University Medical Center, Indianapo-
One hundred thirty (68.4%) of 190 dermatology resident surveys and 109 (47.4%) of 230 dermatology applicant surveys were completed and included in the study. Of the 130 residents, 58 (44.6%) were in their first year of training, 39 (30.0%) were in their second year, and 33 (25.4%) were in their third year. Fifty residents (39.1%) were men and 78 (60.9%) were women; 2 respondents did not report their gender. Eighty-seven residents (67.4%) were from the Midwest, 23 (17.8%) were from the South or Southeast, 16 (12.4%) were from the Northeast, and 3 (2.3%) were from the West. One respondent did not report the geographic region. Of the 109 dermatology applicants, 44 (40.4%) were men and 65 (59.6%) were women. Thirty-nine applicants (35.8%) were from the Midwest, 31 (28.4%) were from the South or Southeast, 20 (18.4%) were from the Northeast, 16 (14.7%) were from the West, and 3 (2.8%) were from countries other than the United States.

Seventy-nine (72.5%) of 109 applicants, as opposed to only 48 (36.9%) of 130 residents, reported that they were probably or definitely not interested in an academic career (P < .001; Figure 1). Fifty-three residents (40.8%) reported that they were probably not or definitely not interested in an academic career.

Thirty-eight residents (29.0%) stated that they had once been interested but were no longer interested in academic dermatology. Reasons for this loss of academic interest included bureaucracy (63.2%); salary differential/financial issues (52.6%); lack of effective mentor, role model, or professional guidance (50.0%); and location or practice environment (26.3%; Figure 2). Third-year residents, compared with first-year and second-year residents, were less likely to identify salary (27.3%) and more likely to identify bureaucracy (72.7%) as reasons for no longer pursuing academics (63.0% and 59.3%, respectively), but this difference did not reach statistical significance. Only 5 (35.7%) of 14 first-year residents compared with 19 (50.0%) of 38 third-year residents reported lack of career guidance as a reason for no longer pursuing an academic career (P = .36). Female residents were less likely to recognize salary (36.0% vs 91.7%; P = .002) and slightly more likely to identify lack of role model or career guidance (52.0% vs 33.3%; P = .32) as a key factor in altering their career goals.

Most applicants (79.8% [63/79]) and residents (70.2% [33/47]) interested in academia hoped to make their primary academic contribution as teacher-clinicians, while 15 applicants (19.0%) and 7 residents (14.9%) anticipated contributing primarily through basic science or clinical research careers (Figure 3). An additional 2 residents (4.3%) and no applicants hoped to combine research and teaching.

A significant percentage of dermatology residents (29.0%) report losing interest in pursuing academic careers, which is consistent with previous surveys. This represents a...
more valid assessment of loss of interest than only comparing reported applicant interest with resident interest. High applicant academic career interest reported during the interview season may represent a purposeful overestimation or temporary self-conviction based on a candidate's perception that rank order preferences are given to those interested in academics. Assessing applicant honesty is beyond the scope of this project and remains a limitation.

Previous surveys have identified major reasons for not choosing academic careers, including location, long hours, bureaucracy, publishing requirements, and income. Most of these factors, especially location, are difficult to correct or are beyond the influence of residency. Bureaucracy encompasses politics, formalities impeding accomplishment, autonomy, self-control over resources and schedules, the nature of tenure, and much more. Bureaucracy was identified as a reason for losing interest by nearly two thirds of our resident sample but is probably not preventable or quickly correctable. Salaries are also difficult to change, although we should ensure that residents' perceptions are accurate.

Half of those who lost interest in pursuing academics identify a lack of effective mentors, role models, or professional guidance. A survey of Canadian dermatology residents also identified a large discrepancy between resident-perceived importance and satisfaction with the "availability of faculty mentors and career counseling." Effective mentoring has been identified previously as the most influential reason to pursue academic dermatology in the United States. Mentors are needed to provide information about academic career paths, point out the value of academics, and show the benefits and opportunities that exist within academia. Mentorship should start in home programs, but may require academic community-wide efforts. The value of an outside mentor includes fresh perspectives, different geographic and systems exposure, targeted subspecialty career counseling, and expanded networking. While the residents were not asked to identify at what point they lost interest in academics, most exposure to mentors and career guidance should occur during residency.

While some methods to heighten academic interest are research focused, most (70.2%) residents interested in pursuing academics hope to primarily contribute as teacher-clinicians. While both researchers and teacher-clinicians are necessary, examining various development strategies for future teacher-clinicians may help maximize those pursuing academic dermatology.

There are several limitations to this study. The applicant pool surveyed included only those applying to a Midwest dermatology program, or 11.5% of dermatology applicants in the United States. Applicants choosing to respond to the survey may not represent future dermatologists, inasmuch as nearly two thirds of applicants to dermatology residency programs do not match. Despite efforts to reassure candidates of survey anonymity, applicants may have falsely elevated their reported academic interest.

Residents completing the survey underrepresented residents from non-Midwest training regions of the United States and constitute only 12% of all dermatology residents in the United States and may include as many as 7 Canadian dermatology residents. Residents given the surveys were from 35.7% (40/112) of all dermatology residency programs in the United States and 1 Canadian program. Because the survey was administered at a basic science course for residents, the nature of residents and commitment to careers in academic dermatology may not be representative of dermatology residents in general. Finally, this project has a cross-sectional design and does not follow resident attitudes over time.

**CONCLUSION**

There is a significant loss in academic career interest by dermatology residents. Reasons for this loss of interest are many, and efforts should be directed to those factors that are easiest to correct. These include improving residents' perceptions and experiences with effective mentors, role models, and career guidance. While both researchers and teacher-clinicians are necessary, strategies should be created for teacher-clinician development, where most of the interest lies.

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REFERENCES


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