



A survey assessing the satisfaction of dermatology residents in the United States: How can we make dermatology residency training better? ☆☆☆

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Introduction and methods

Resident satisfaction is an important metric when evaluating residency curriculum because satisfied residents are most likely to pursue fellowships and academic careers (Akhavan et al., 2015; Freeman et al., 2008; Lee et al., 2011; Vashi and Latkowski, 2012; Webb et al., 1996). Nevertheless, no study to date has attempted to identify modifiable curricular factors that impact resident satisfaction. Therefore, a 161-question survey assessing modifiable factors affecting dermatology resident satisfaction was administered to 108 residents nationwide. The survey covered the following 10 topics: 1) Resident demographics, 2) program characteristics, 3) didactics, 4) dermatopathology, 5) pediatric dermatology, 6) dermatologic surgery, 7) inpatient dermatology, 8) pharmacology, 9) research, and 10) dermatoehtics. All questions excluding those assessing resident demographics utilized a five-point Likert scale. (See Table 1).

Residents were contacted via email through the Association of Dermatology Programs. All residency programs were invited to participate; however, how many of the approximately 1350 dermatol-

ogy residents in America received the survey is unknown because the survey was distributed at the program director's discretion. No incentive for participation was provided.

The study was exempted by the University of Connecticut Health Center institutional review board. A χ^2 analysis was performed on data that were distributed into two subgroups: 1) Very dissatisfied, somewhat dissatisfied, and neutral; and 2) somewhat satisfied and very satisfied. Nonresponses were excluded from the statistical analysis.

Results and discussion

Factors associated with overall satisfaction

Of the residents, 88.8% (96 of 108 residents) are very satisfied or somewhat satisfied with their training. The most important determinants of resident satisfaction are: 1) Satisfaction with treatment by faculty ($p < .001$; odds ratio [OR]: 190.000; 95% confidence interval [CI], 18.916–1908.487), 2) satisfaction with the program director ($p < .001$; OR: 70.231; 95% CI, 8.355–590.357), and 3) satisfaction with program responsiveness to resident feedback ($p < .001$; OR: 64.429; 95% CI, 7.702–538.984). In addition to fostering faculty involvement, providing residents with resources to complete scholarly activities, such as offering protected

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Table 1
Survey respondent demographics

Question asked	Answer choice options	Answer choice frequency
Sex	Female	Female: 66.7% (72 of 108)
	Male	Male: 30.6% (33 of 108)
	Prefer not to say	Prefer not to say: 2.7% (3 of 108)
Age	Age entered by respondent, post hoc analysis divided into subgroups of age ≤30 and ≥31 years	Age ≤30 years: 62% (67 of 108) Age ≥ 1 years: 24% (26 of 108)
		Prefer not to say: 14% (15 of 108)
Year in training	First-year dermatology resident	First-year: 34% (36 of 107)
	Second-year dermatology resident	Second-year: 29% (31 of 107)
	Third-year dermatology resident	Third-year: 37% (40 of 107)
Where is your program located?	West	West: 9% (10 of 107)
	Southwest	Southwest: 3% (3 of 107)
	South	South: 18% (21 of 107)
	Northeast	Northeast: 40% (43 of 107)
How many residents does your program have in each class?	Midwest	Midwest: 28% (30 of 107)
	1	1: None
	2	2: 8% (8 of 105)
	3	3: 23% (24 of 105)
	4	4: 25% (26 of 105)
	5	5: 10% (11 of 105)
	6	6: 10% (11 of 105)
	7	7: 19% (20 of 105)
8	8: 5% (5 of 105)	

academic time ($p < .001$; OR: 11.6; 95% CI, 2.9–45.5) and protected research time ($p < .001$; OR: 6.58; 95% CI, 2.64–16.39), promotes fulfillment.

Factors not associated with overall satisfaction

There is no statistically significant association between any demographic characteristic and overall resident satisfaction, including program distance from a resident's hometown ($p = .666$), the amount of student loan debt a resident has ($p = .061$), and whether the resident rotated at the program as a medical student ($p = .902$). Program size ($p = .143$), satisfaction with the program location ($p = .475$), and satisfaction with co-residents were also not associated with overall approval ($p = .238$).

Didactic satisfaction

Residents at programs where faculty didactic involvement is poor were the least satisfied of all residents who were surveyed ($p < .001$; OR: 81.067; 95% CI, 9.979–658.572). Importantly, only an hour of faculty lecturing per week is needed to create satisfaction equivalent to that of programs where only faculty lecture. Additionally, resident perception of the board relevance of didactics was more important to resident satisfaction regarding didactics than the

amount of time dedicated to didactics ($p < .001$; OR: 28.800; 95% CI, 7.870–105.388) versus ($p < .001$; OR: 13.339; 95% CI, 3.916–45.436).

Subspecialty training satisfaction

Having at least one subspecialist for each subspecialty and having fellowship programs promote subspecialty satisfaction. Additionally, each subspecialty has unique curricular requirements. For pediatric dermatology, having a dedicated pediatrics rotation ($p = .002$; OR: 4.55; 95% CI, 1.70–12.04) and rotating at a children's hospital ($p < .001$; OR: 5.65; 95% CI, 2.10–15.15) are integral to resident contentedness.

For dermatologic surgery, residents who are satisfied with their hands-on surgical exposure are more than 400 times more likely to be satisfied with their surgical training than those who are not ($p < .001$; OR: 420.000; 95% CI, 55.731–3165.206). For dermatopathology, didactics resulted in the most impact on satisfaction ($p < .001$; OR: 66.111; 95% CI, 14.799–295.333).

Other findings

Other surprising findings include the following: 1) The only unmodifiable factor predisposing to resident satisfaction was the resident ranking the program below three on the rank list ($p = .005913$; OR: 5.1250; 95% CI, 1.4654–17.9237); 2) although >95% of residents (102 of 108 residents) published prior to residency, 49.1% do not enjoy performing dermatology research (53 of 108 residents); 3) resident comfort initiating/monitoring biologics/nonbiologic immunosuppressants is solely determined by the number of times a resident has initiated/monitored biologics/nonbiologic immunosuppressants; 4) approximately one-third of residents report witnessing unethical behavior by attendings (30 of 108 residents) and residents (40 of 108 residents).

Conclusions

This study has identified a number of potentially modifiable determinants of dermatology resident satisfaction. This information provides faculty with actionable data that can drive positive curricular change. Resident satisfaction with curricula may be an effective surrogate for quality of education because it correlates with resident willingness to continue postgraduate training in the form of a fellowship.

Given the study limitations, further investigation is needed to identify the best means to achieve this change.

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