Medical school ranking and dermatology match results: an analysis of the 2018 match data

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Abstract

Dermatology is a specialty with fewer residency positions each year than total applicants, leading to increased competition in the match. Applicants tend to have substantial research experience and high national board scores. This study sought to explore whether there is a difference in the percentage of graduates matching into dermatology residencies based on the rank of the medical school. Publicly available match lists from highly ranked medical schools were compared to match lists from other allopathic schools to determine the proportion of graduates matching into dermatology. The data was analyzed using a chi square test and a significant difference was found between the percentage of students matching into dermatology from top schools (5.19%) compared to control schools (1.92%), ($P<0.0001$).

Keywords: medical education, National Residency Matching Program, dermatology match, specialty, interest

Introduction

Dermatology is a highly sought-after specialty among medical students applying for residency with significantly more applicants than available spots. Successful dermatology applicants tend to score highly on national board examinations and have research experience. This study sought to determine whether highly ranked U.S. medical schools match a higher proportion of their class into dermatology residencies compared to other allopathic medical schools.

Methods

Publicly available official 2018 match lists from the top 10 allopathic medical schools were compiled in order to calculate the proportion of the graduating class that matched into dermatology. The rankings used were from the *U.S. News & World Report 2019 Best Medical School Rankings*, which determine school ranking based on a combination of research activity, assessments by medical school deans and program directors, student selectivity and admissions, and faculty resources. The top ten ranked schools included Harvard University, Johns Hopkins University, New York University, Stanford University, University of California-San Francisco, Mayo Clinic School of Medicine, University of Pennsylvania, University of California-Los Angeles, Washington University in St. Louis, and Duke University [1]. Two of the top 10 schools, Stanford and Johns Hopkins, were excluded owing to absence of available match lists at the time of data analysis, August 2018, leaving 8 total match lists. A 2:1 control group was compiled that included 16 public match lists from schools at the end of the same rank list. Of the 144 allopathic medical schools surveyed by U.S. News Report, only 93 submitted the necessary materials for ranking. Starting with rank #93, match lists for each school were searched and schools without a publicly available match list were passed over until 16 control lists were obtained, which occurred at rank #70. All transitional or preliminary years were excluded to avoid counting applicants more than once. The 8 match lists from highly ranked schools were compared to the 16 match lists from

other allopathic schools and the proportion of students entering dermatology residencies were compared using a chi square test in Microsoft Excel 2016 and verified in SAS 9.4.

Results

In 2018, dermatology residencies made up 1.64% (472/28,795) of all positions offered in the match excluding preliminary years [2, 3]. At the top ranked medical schools 5.19% of their graduating students matched into dermatology compared to 1.92% of students at control schools (P<0.0001), **Table 1**. This proportion of graduates entering dermatology from highly ranked medical schools is 2.7 times greater than other allopathic schools.

Discussion

Previous research found that from 2002-2007 students from top 10 schools matched disproportionately into "higher-income controllable lifestyle" specialties. Dermatology was one of the 5 specialties in this category, with 3.0% of students from top 10 schools entering the field [4]. Our study shows that the specialty of dermatology has become increasingly popular with students from top schools with the proportion increasing over time to 5.2%. These match trends can be explained by factors that either contribute to increased interest in dermatology among the student body or lead to favorable match rates for dermatology applicants from these schools.

The presence of large home dermatology departments and increased research opportunities could be one factor leading to increased interest from applicants at top schools. Top schools may also have higher average board scores, placing more students in a position to apply for competitive specialties. There may be some level of selection bias if preferences of students at highly ranked schools leads to increased interest in the smaller more competitive specialties.

There is also evidence that students from schools with higher research funding fare better in the match. Data from the 2018 match shows that allopathic seniors from the 40 schools with the highest NIH funding had a match rate of 90% compared to 77% for seniors from other allopathic schools [3]. This discrepancy has the potential to be even greater when just looking at the 10 schools with the highest NIH funding. Medical school reputation, strength of students from top schools, and letters of recommendation from prominent faculty could be factors that contribute to a higher match rate for dermatology applicants.

Conclusion

Ultimately, increased interest from students at top schools and the desirability of these students by residency programs both likely play a role in the relationship between medical school ranking and dermatology matches. Despite the discrepancy by ranking, students at other allopathic schools still have opportunities to match in dermatology residencies and do so with a frequency at what may be expected based on the available positions. Further research could explore how the factors proposed are contributing to this pattern and whether this trend in match data is consistent among other highly sought-after specialties.

Table 1. *Analysis of 2018 match data showing proportion of applicants matching into dermatology residencies.*

2018 Match Data	Top Ranked Schools (n = 8)	Control Allopathic Schools (n = 16)	Positions Offered in the Match
Dermatology Matches	54	43	472
Total Matches	1,041	2,235	28,795
% Dermatology Matches	**5.19%**	**1.92%**	1.64%
Range	3.0% - 9.8%	0.0% - 6.5%	

*All data excludes transitional and preliminary year positions.

Potential conflicts of interest

The authors declare no conflicts of interests.

References

1. U.S. News & World Report, *2019 Best Medical Schools: Research*. U.S. News & World Report. https://www.usnews.com/best-graduate-schools/top-medical-schools/research-rankings, (2018). Accessed on July 14, 2018.
2. National Resident Matching Program, *Results and Data: 2018 Main Residency Match*. National Resident Matching Program, Washington, DC, (2018).
3. National Resident Matching Program, *Charting Outcomes in the Match, 2018: US Allopathic Seniors*. National Resident Matching Program, Washington, DC. (2018).
4. Patel MS, Katz JT, Volpp KG. Match rates into higher-income, controllable lifestyle specialties for students from highly ranked, research-based medical schools compared with other applicants. *J Grad Med Educ*. 2010 Sept; 2 (3): 360-5. [PMID: 2197608