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The residency interview is still paramount: results of a retrospective cohort study on concordance of dermatology residency applicant evaluators and influence of the applicant interview

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Abstract

Application to dermatology residency is a highly competitive process. Although factors associated with successfully matching have been studied, less is known regarding the ability of admissions committees to screen applicants in a uniform manner or the importance of the interview in ranking applicants. Our goal was to retrospectively measure our admission committee evaluators' concordance regarding residency application credentials and interview performance, and ultimately the effects on final applicant ranking.

Keywords: applicant; application assessment; dermatology; match; national resident matching program; residency; resident; selection; evaluator concordance

Introduction

Application to dermatology residency is a highly competitive process [1]. Although factors associated with successfully matching have been studied [2], less is known regarding the ability of admissions committees to screen applicants in a uniform manner or the importance of the interview in ranking applicants.

Our goal was to retrospectively measure our admission committee evaluators' concordance regarding residency application credentials and interview performance, and ultimately the effects of

the interviews on final applicant ranking. Our cohort included residency applicants selected to interview at the University of California, Davis, Department of Dermatology for the 2011-2012 and 2012- 2013 application cycles. The candidate application was evaluated based upon two assessments– one based on application score (0-weakest to 10-strongest), (**Figure 1**) and the other based on the overall impression of the interview (10-point scale).

The application score was based upon the evaluator overall assessment of the documents submitted by candidates through the electronic residency application service (ERAS). These primarily included USMLE scores, medical school performance evaluations, personal statements, publications, and reports of community service.

The interview score was based upon the evaluator's impression of candidate responses and interactions during a 20-minute conversation with each evaluator. Statistical analysis was performed to assess the degree of concordance among individual evaluators, as well as overall inter-rater agreement. The Spearman rank correlation was used to compare the agreement in application and interview scores among the evaluators. The intra-class correlation coefficient varies between $0 - 1$, and higher values indicate a higher degree of agreement on the scores given to each applicant by the evaluators. The computations were performed with SAS® statistical software (SAS Institute, Inc., Cary, North Carolina).

A p-value of < 0.5 was considered significant.

Thirty-eight and 40 applicants were interviewed in the 2011-2012 and 2012-2013 application cycles, respectively. The intra-class correlation coefficient was calculated to assess the overall agreement of the scores given to each applicant by the evaluators as the primary outcome measure of the study (**Table 1**). The intra-class correlations for application and interview scores were 0.15 and 0.14, respectively, for the 2011-2012 cycle and 0.10 and 0.16, respectively, for the 2012-2013 cycle. This indicates poor agreement among evaluators in assigning application and interview scores.

In summary, the results of both application cycles showed low inter-rater agreement for application and interview scores. The lack of concordance in evaluator inter-rater credential assessment and interview performance suggests that faculty may value the various aspects of applicant credentials and personality attributes differently.

The final rank list submitted to the NRMP had a stronger correlation with interview scores than with application scores (P-value<0.0001), which signify the importance of applicant performance during the interview.

Acknowledgements

Figure 1. *Candidate Assessment Tool.*

Table 1. Spearman correlation among the application score, interview score, combined score, preliminary rank and final rank submitted to the NRMP for the 2011-2012 and 2012-2013 application cycles. Correlation coeficients that are closer to 1 indicate higher agreement and correlation coeficents closer to 0 indicate lower agreement.

	Application score (P value)	Interview score (P value)	Combined score (P value)	Preliminary rank (P value)	Final Rank (P value)
2011-2012 Cycle					
Application score	-	0.75353 (<0.0001)	0.91888 (<0.0001)	0.63078 (<0.0001)	0.66544 (<0.0001)
Interview score	0.75353 (<0.0001)	-	0.93500 (<0.0001)	0.87030 (<0.0001)	0.75203 (<0.0001)
Combined score	0.91888 (<0.0001)	0.93500 (<0.0001)	-	0.80992 (<0.0001)	0.75698 (<0.0001)
Preliminary rank	0.63078 (<0.0001)	0.87030 (<0.0001)	0.80992 (<0.0001)	-	0.85174 (<0.0001)
Final Rank	0.66544 (<0.0001)	0.75203 (<0.0001)	0.75698 (<0.0001)	0.85174 (<0.0001)	-
2012-2013 Cycle					
Application score	-	0.20800 (0.1978)	0.67812 (<0.0001)	0.30630 (0.0546)	0.21549 (0.1817)
Interview score	0.20800 (0.1978)	-	0.79220 (<0.0001)	0.90500 (<0.0001)	0.84412 (<0.0001)
Combined score	0.67812 (<0.0001)	0.79220 (<0.0001)	-	0.80314 (<0.0001)	0.65152 (<0.0001)
Preliminary rank	0.30630 (0.0546)	0.90500 (<0.0001)	0.80314 (<0.0001)	-	0.93196 (<0.0001)
Final Rank	0.21549 (0.1817)	0.84412 (<0.0001)	0.65152 (<0.0001)	0.93196 (<0.0001)	-

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