Relationship Between Postinterview Correspondence From Residency Program Applicants and Subsequent Applicant Match Outcomes

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Abstract

Background Studies show postinterview communication from applicants may affect their placement on the program's National Resident Matching Program (NRMP) rank order list.

Objective To determine whether postinterview correspondence from applicants to a residency program is associated with the applicant's subsequent position on the program's rank list.

Methods During 2 recruitment seasons, we collected postinterview correspondence from applicants to 1 residency program. Applicant characteristics and the content and timing of correspondence were compared with the applicant's position on the program's rank list. Data were analyzed using the Pearson χ^2 test.

Results Of 470 applicants interviewed, 290 (61.7%) sent unsolicited correspondence to the program after interviewing. Ten percent (29 of 290) stated they planned to rank the program first, 11.7% (34 of 290) that they planned to rank it highly, and 78.3% (227 of 290) gave no indication of ranking intentions. Applicants who corresponded were no more likely to be ranked in the top 2 quartiles on the rank list than those who did not ($P = .32$) nor were applicants who communicated plans to rank the program "first" or "highly" ranked higher than other corresponding applicants ($P = .34$). Of the 16 applicants who planned to rank the program "first" *and* who were ranked in the program's match range, 5 did not match with the program, suggesting they may have misled the program.

Conclusions Postinterview correspondence by applicants was not associated with position on the rank order list. Correspondence does not benefit the applicant and can lead to misleading statements, which may violate the NRMP participation agreement.

Introduction

Communication between residency programs and applicants after interviews is common during the residency match process. In separate surveys, 86% of applicants reported being contacted by residency programs after their interview,[1] and 54% to 97% of applicants sent correspondence to programs after interviews.[2–4] In the context of increasing competition for residency positions, it is important to understand the effect of communication on applicants and programs.

The influence of correspondence on applicants has been assessed in several surveys. In a recent multicenter survey of 564 students who participated in the 2010 Match, most reported that postinterview communication was stressful but that it also helped with their ranking decisions.[1] Surveys of students applying to pediatrics, surgery, emergency medicine, and internal medicine programs have consistently demonstrated that communication from programs has led applicants to modify their rank order lists.[2,5–7]

Data on the effects of postinterview correspondence on residency programs is limited and conflicting. In 1 study, 57% of applicants responded that programs encouraged them to stay in touch if they were interested in matching with the program,[5] suggesting program directors may be influenced by postinterview communication. However, in surveys administered by the National Resident Matching Program (NRMP), program directors indicated that

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postinterview contact from candidates had limited importance in determining rank order when compared with applicant characteristics.[8,9] To resolve the conflict and to expand the findings beyond subjective surveys, we tested the hypothesis that written postinterview correspondence from applicants to a residency program improved the applicant's position on the residency program's rank order list.

What was known

Studies show postinterview communication from applicants may affect their placement on the program's National Resident Matching Program (NRMP) rank order list.

What is new

Study finds that postinterview correspondence by applicants was not associated with position on the rank order list.

Limitations

Single-program, single-specialty study limits generalizability.

Bottom line

Correspondence does not benefit the applicant and can lead to misleading statements.

Methods

Kaiser Permanente's Oakland Internal Medicine Residency is a university-affiliated, community-based program with 40 residents. The program receives more than 1000 applications per year. Interview offers are extended to applicants based on review of their Electronic Residency Application Service file. During the 2009–2010 and 2010–2011 recruitment seasons, we analyzed applicant characteristics and collected all written correspondence (e-mails or letters) from applicants to the program after their interview.

Applicant Characteristics

The following applicant data were included in this study: program type applied to (preliminary or categorical internal medicine); sex; past or current residency in Northern California (as an indicator of interest in the program for geographic reasons); type of graduating medical school (allopathic, osteopathic, or international); medical school rank in the *U.S. News & World Report* for the Match year[10]; Alpha Omega Alpha (AOA) honor society membership; United States Medical Licensing Examination (USMLE) Step 1 score (dichotomized as < 220 and ≥ 220); and core internal medicine clerkship grade. Applicants were also categorized based on whether they completed a prior rotation at the program, returned for a second look during the interview season, or participated in the couples match.

Postinterview Correspondence Characteristics

The frequency and content of correspondence, as well as the timing of the last correspondence before applicant rank list submission deadline, were ascertained from unsolicited, postinterview, written correspondence to the program director or faculty. Content was categorized based on whether the applicant specified that they planned to rank the program "first" or "number one," versus general positive statements about regard for the program (eg, "I plan to rank the program highly") versus no statement regarding ranking (eg, "thank you for an informative interview day").

Our study was considered exempt by the Kaiser Division of Research Institutional Review Board and did not require written consent of participants.

Outcomes

The primary outcome was applicant position on the program's rank order list submitted to the NRMP for the corresponding year (dichotomized into rank within the top 2 quartiles on the rank order list versus ranked below that). The influence of applicant correspondence on residency programs was assessed in 3 ways. First, rank order list position was compared between applicants who sent correspondence and those who did not. Second, rank positions were compared between the categories of correspondence content ("I plan to rank you first" or "I plan to rank you highly" versus no indication of ranking preference). Third, rank position was compared based on the timing of last applicant correspondence (within 30 days versus more than 30 days from the rank order list submission deadline).

Secondary analyses were conducted to assess the influence of correspondence on rank position relative to the effect of other applicant characteristics we collected as likely associated with rank list position, such as AOA status and USMLE Step 1 score.

All comparisons were made using the Pearson χ^2 test at the $P < .05$ level of significance.

Results

Applicant Characteristics

A total of 470 applicants (354 categorical and 116 preliminary) interviewed at the program during the 2009–2010 and 2010–2011 recruitment seasons. Characteristics of the group included the following: 56.6% women; 8.5% AOA members; 32.7% attended medical schools ranked in the top 20 by *U.S. News & World* Report[11]; 20% received honors or equivalent grade in the core internal medicine clerkship; 52.3% had USMLE Step 1 score ≥ 220; and 42.6% had lived in Northern California. There were no

TABLE 1 **Probability of Applicant Sending Correspondence Based on Applicant Characteristics**

Applicant Characteristic	Applicants, No.	Applicants Who Sent Postinterview Correspondence, No. (%)	*P* Value
Sex			.98
Men	205	126 (61.4)	
Women	265	164 (61.9)	
Type of Medical School			.92
US allopathic	425	261 (61.4)	
Nonallopathic	45	28 (62.2)	
Medical School Ranking[a]			.73
Rank ≤ 20	154	93 (60.4)	
Rank > 20 or none	316	196 (62.0)	
USMLE Step 1 Score			.12
< 220	224	146 (65.2)	
≥ 220	246	143 (58.1)	
Honors/High Honors Grade in Internal Medicine?			.48
Yes	94	61 (64.9)	
No	376	229 (60.9)	
AOA Member?			.41
Yes	40	27 (67.5)	
No	430	262 (60.9)	
Second Look?			.20
Yes	20	15 (75.0)	
No	450	274 (60.9)	
Did Rotation?			.58
Yes	46	30 (65.2)	
No	424	259 (61.1)	
Past or Current Residence in Northern California?			.99
Yes	200	123 (61.5)	
No	270	166 (61.5)	

[a] Based on the *U.S. News & World Report* for Match year.[10]
Abbreviations: USMLE, United States Medical Licensing Examination; AOA, Alpha Omega Alpha honor society.

significant demographic differences between applicants who sent postinterview correspondence and those who did not (TABLE 1).

Two-hundred and ninety applicants (61.7%) sent unsolicited letters or e-mails to the program after interviewing. There were no significant differences in the proportion who corresponded between applicants for categorical and preliminary year positions (59.6% versus 68.1%, respectively; $P = .10$).

Relationship of Applicant Correspondence and Rank Order List Position

The applicants who corresponded with the program were no more likely to be ranked in the top 2 quartiles on the rank order list than those who did not correspond ($P = .32$). Applicants who stated they planned to rank the program "first" (10%, 29 of 290) or "highly" (11.7%, 34 of 290) were no more likely to be ranked in the top 2 quartiles than were other applicants who corresponded

TABLE 2 **Relationship Between Applicant Correspondence and Residency Program's Rank Position**

Characteristic of Correspondence	All Applicants, No.	Applicants Ranked in Top 2 Quartiles, No. (%)	*P* Value
Sent Correspondence?			.32
Yes	290	121 (41.7)	
No	180	84 (46.7)	
Timing of Last Correspondence Before Rank Order List Submission,[a] d			.69
< 30	90	36 (40.0)	
> 30	200	85 (42.5)	
Content of Correspondence[a]			.32
"You're #1"	29	13 (44.8)	
"You're one of my top choices"	34	10 (29.4)	
Did not state ranking intention	227	98 (43.2)	
Handwritten Correspondence?[a]			.11
Yes	135	63 (46.7)	
No	155	58 (37.4)	

[a] Data from the 290 corresponding applicants.

with the program ($P = .32$). Applicants who corresponded indicating that they would rank the program first were no more likely to be ranked in the top 2 quartiles than were applicants who did not correspond at all ($P = .85$). Of the 29 applicants who explicitly stated they would rank the program first, 16 were ranked to match, but only 11 matched with the program, indicating 5 of 16 (31%) may have misled the program (TABLE 2).

Timing of correspondence with the program was not associated with rank position. Applicants who sent correspondence more than 30 days before the rank order list submission deadline were no more likely to be ranked in the top half of the program's rank list than were applicants who corresponded within 30 days of the date (42.5% versus 40%, respectively; $P = .69$).

Applicants who stated they planned to rank the program "first" or "highly" were significantly more likely to have returned for a "second look" visit ($P < .05$), but did not differ from other corresponding applicants for the remaining characteristics studied.

Interestingly, in the subgroup of categorical applicants, 2 features were associated with being ranked in the program's bottom 2 quartiles: sending any postinterview correspondence regardless of content ($P = .04$) and sending correspondence that expressed the intention to rank the program "first" or "highly" ($P = .03$). These findings did not hold true for preliminary applicants.

Other Predictors of Rank Order List Position

Several applicant characteristics were significantly associated with rank in the top 2 quartiles of the residency program's rank list: graduation from a US medical school; graduation from a top 20 medical school; USMLE Step 1 score ≥ 220; honors/high honors grade in the internal medicine clerkship; AOA membership; sex (female); and past or current residence in Northern California ($P < .05$ for each of these characteristics; TABLE 3). The number of applicants who participated in the couples match, who rotated as students at our medical center, or who conducted "second look" interviews was too small to allow any analysis.

Discussion

This analysis of 2 years of a single internal medicine residency illuminates the prevalence of unsolicited applicant correspondence to the program and the lack of effect that has on the applicant's position on the residency rank order list. To our knowledge, this is the first study to look beyond subjective responses of program faculty to investigate the effect of applicant communication on rank list position. Our finding that 61.7% of applicants sent an e-mail or letter is consistent with prior studies, which reported a range from 54.1% to 97%.[2–4] We found no association between written communication from applicants and being ranked in the top half of the program's rank list, even for applicants who indicated that they would be ranking the program first or highly or for those who

TABLE 3 **Relationship Between Applicant Characteristics and Residency Program's Rank Position**

Applicant Characteristics	All Applicants, No.	Applicants Ranked in Top 2 Quartiles, No. (%)	*P* Value
Sex			< .001
Men	204	67 (32.8)	
Women	265	138 (52.1)	
Type of Medical School			< .001
US allopathic	425	203 (47.8)	
Nonallopathic	45	2 (4.4)	
Medical School Rank[a]			< .001
Rank ≤ 20	154	92 (59.7)	
Rank > 20 or none	246	113 (45.9)	
USMLE Step 1 Score			< .001
< 220	224	72 (32.1)	
≥ 220	246	133 (54.1)	
Honors/High Honors Grade in Internal Medicine?			< .001
Yes	94	58 (61.7)	
No	376	147 (39.1)	
AOA Status?			.01
Yes	40	25 (62.5)	
No	430	180 (41.9)	
Second Look?			.13
Yes	20	12 (60.0)	
No	450	193 (42.9)	
Did Rotation?			.11
Yes	46	15 (32.6)	
No	424	190 (44.8)	
Past or Current Residence in Northern California?			< .001
Yes	200	103 (51.5)	
No	270	102 (37.8)	

[a] Based on the *U.S. News & World Report* for Match year.[10]
Abbreviations: USMLE, United States Medical Licensing Examination; AOA, Alpha Omega Alpha honor society.

communicated close to the end of the interview season. Although small sample size may have led to the inability to detect some statistically significant associations between applicant correspondence and ranking by the program, the finding that other markers of applicant quality (core clerkship grades, USMLE scores) were associated with rank list position suggests the study had adequate power to identify statistically significant predictors.

We found that the subgroup of categorical applicants who indicated in their postinterview correspondence that they would rank the program first or highly more often were found in the *bottom* half of the rank order list. This suggests that weaker applicants may be more likely to communicate postinterview and may feel more compelled to make explicit statements of interest.

Like previous investigations, our study found that communication between applicants and programs can be misleading. Not all misleading statements are violations of the NRMP's Match Participation Agreement (MPA). Applicants indicating intent to rank a program first are not

in violation of the MPA. Similarly, a well-intentioned student who changes his or her rank list after communicating a preference (based on new information or life circumstances) is not violating the MPA. On the other hand, solicitation of rank list order by either applicants or programs is forbidden. Whether or not correspondence constitutes a violation of the MPA, research has shown that applicants and programs initiate misleading communication, with 33% to 67% of applicants reporting they felt programs "lied" to them during the interview process,[3,5] and 94% of family medicine program directors reporting the Match puts them in a position of having to be dishonest with applicants to obtain their top choices.[11] Some percentage of applicants admit to having told programs they would rank them first when this was not their intent,[1,3] and most faculty believe they are being lied to at least some of the time.[3,12] Applicants who are dishonest with programs report feeling ethically torn, but justify it as being part of "the game."[3,5]

Our study has several limitations. It was conducted at a single residency within 1 specialty, and it is not clear whether our results are generalizable to other specialties or to residencies of different size and setting. The number of applicants who participated in the couples match, who rotated as students at our medical center, or who conducted "second look" interviews was too small to allow meaningful analysis. Also, the number of applicants who stated their intention to rank the program first was too small for separate analysis, and we combined it with the "rank highly" group.

Conclusion

Most internal medicine applicants corresponded with the residency program after their interview. Postinterview correspondence was not associated with higher ranking by the program. As in previous studies, we found that correspondence occasionally included misleading statements, which may violate the spirit of the NRMP's MPA.

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