

Factors Medical Students Use to Select Orthopedic Surgery Residency Positions

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Abstract

This study reviewed all applications to our residency program and all interviewees completed a standardized questionnaire. Data was collected on applicants' educational background, knowledge of the residency program, and geographical considerations.

All rotating applicants (21/46) knew the correct name of the chairman and program director, and knew the program size, compared with non-rotating applicants (25/46). Applicants applied to the programs within our city limits more often (80%) than to programs furthest from the city limits (63%).

These data suggest that factors including size, rotations, research, and operative experience, may be less important than geographical considerations for medical students choosing an orthopedic surgery residency.

Selection of a residency program is one of the most important considerations a medical student makes and requires considerable thought from both the applicant and program. Numerous studies have evaluated the criteria used by residency programs to select applicants and subsequently, residents to train.¹⁻⁵ These studies focused on criteria such as analysis of United States Licensing Medical Examination (USMLE) scores,¹ residency program director surveys,^{2,3} and resident selection committee criteria.^{4,5}

To our knowledge, only 1 publication exists that has focused criteria important to applicants. Sanfilippo and colleagues⁶ published a study in 2006 to assess criteria used by medical students to rank orthopedic surgery residency programs when choosing a residency program. They used a survey of post-graduate year-1 and 2 residents to rank 10 categories based on importance during residency program selection. The conclusions from this survey were that early surgical/clinical experience was the most important factor, followed by geography. They also found that research opportunities and program size were the least important factors.

The purpose of the current study was to perform an objective assessment of potential factors used by medical students when choosing an orthopedic surgery residency program.

Materials and Methods

All applications to our Orthopedic Surgery Residency Program at Drexel University College of Medicine, Philadelphia, PA, for the July 2008 positions were reviewed. This study received Institutional Review Board exemption. The applications were evaluated to determine the location of the applicants' undergraduate training, graduate training, and medical school training. Mapquest was used to determine the distance from these locations to the main teaching hospital for our residency program. Foreign institutions were excluded from the analysis.

All interviewed applicants anonymously filled out a non-validated standardized questionnaire when they arrived for the interview, prior to speaking with any resident or faculty member. One of the departmental staff, who was not involved in the resident selection process, distributed and received all of the questionnaires prior to the applicant registering for the day with the residency program coordinator. Upon receipt of all questionnaires, the questionnaires were immediately placed in a sealed envelope and no evaluations were performed until after the resident ranking process had concluded.

Specific questions determined if the student had rotated through our department and for those students who interviewed on the second day, if they had attended the social event on the prior evening. This survey was divided into 3 sections. The first section asked direct questions to evaluate the applicants' knowledge of our residency program. Specifically, the applicant was asked to name the chairman and program director as well as to provide the number of residents accepted in the program per year. The second section asked whether or not the applicants had applied to the 11 surrounding orthopedic residency programs based on mileage. The third section asked for the zip code of their parents and their significant other, if they had one. The distances from these responses to our main teaching hospital were determined using Mapquest.

Statistical analysis including percentages, means, standard deviations, and chi-squares were calculated using Predictive Analytics Software 18.0 (IBM, SPSS, Chicago, IL, USA). In addition, Fisher's exact test was used to compare

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the proportion of those who were interviewed to those who were not, based on whether they attended medical school within 100 miles of the main teaching hospital. Proportions were also compared to assess applicants who rotated through the orthopedic department versus applicants who did not by their awareness of the chairperson/program director's name and their knowledge of the total number of resident positions available per year. A *P* value of less than .05 was considered statistically significant.

Results

Overall, 427 medical graduates applied to the Orthopedic Surgery Residency Program for July 2008 positions; 69 were foreign medical graduates. Forty-six people had interviews, of which 21 rotated through the department and 25 did not. Fifty-four percent of applicants who had interviews attended a medical school within 100 miles of the main teaching hospital, compared with 17% of those who did not have an interview (*P*<.05). In addition, 26% of those who interviewed completed their undergraduate studies within 100 miles of our main teaching hospital, compared with 9% of those who did not interview (*P*<.05).

All interviewees who rotated through the program knew the name of the chairman and program director, compared with interviewees who did not rotate through the program, 28% (*P*<.001) and 32% (*P*<.001), respectively. With regard to size of the program, 95% of people who rotated through the department knew that there were 4 residents per year, compared with 76% of people who did not rotate through the department (*P* = .078).

Eighty-percent of the applicants also applied to 4 other, surrounding orthopedic medical residencies located within city limits, while 63% of the applicants applied to programs more than 100 miles away from our main teaching hospital. An average of 69% of applicants applied to the 4 programs located outside the city limits of our institution but less than 100 miles away.

Fifty-nine percent of applicants had a significant other who lived within 100 miles of our main teaching hospital and 26% of their parents lived within 100 miles.

Discussion

To our knowledge, factors that contribute to a medical student's decision to choose a residency program have not been studied objectively. This study evaluated applications to 1 orthopedic surgery residency program.

Our results suggest that applicants who did not rotate through the department did not know specific details about the residency program, including the size of the program, the names of the chairman, or program director. This raises the possibility that specific factors about the residency program such as size, specific rotations, research activity, and early operative experience are less important than other factors including location. This hypothesis is further supported by the fact that most medical graduates who applied to other programs, were programs located within the city limits of our main teaching hospital, and less applicants applied to programs that were furthest away. The

large number of applicants who have a tie to the surrounding area, such as a significant other, or the medical school they attended, also demonstrates the importance of location.

Our findings show some correlation with the Sanfilippo study, which found that geography was the second most important factor to applicants. However unlike this study, we did not find that early operative/clinical experience was the most important factor for applicants. One might assume that if the applicant had and understanding about timing of the operative/clinical experience of a specific residency program, they would at least know the name of the program director and chairman.

We acknowledge that selection bias of the applicants to interview is a limitation in this study, however, the other components of the study support the hypothesis that geography is a major factor for medical students to consider when applying to an orthopedic surgery residency. Another limitation of this study is that it was only performed at one residency program and for 1 year of applicants, thus the sample size is limited. In addition, this study was performed in an urban environment and these conclusions may not be applicable to orthopedic surgery residency programs in a different environment. A larger multi-institution study would give more insight to this extremely important topic.

In conclusion, this study provides objective information regarding which factors are most important to medical students when choosing an orthopedic surgery residency, with geography being a major determinant.

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