TITLE: 1562: FACTORS IN RESIDENCY DECISION MAKING FOR FEMALE NEUROSURGERY APPLICANTS

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INTRODUCTION

Although females now comprise over 50% of current medical school graduates in the United States, neurosurgery continues to hold one of largest gender gaps amongst specialties. As such, women represent only 12% of neurosurgeons in the United States and Canada. This translates into a strong desire for neurosurgery residency programs to recruit the most qualified future female physicians. However, in order to best achieve this, programs must understand the factors that contribute to the applicant’s program rank list.

While there have been studies in other specialties on the most important factors when choosing a residency program for female students, none of these studies have looked at why females may select one neurosurgical program over others. Given that prior studies in other specialties have shown female applicants may value certain program characteristics differently than their male counterparts, data reporting the most important factors for female applicants to neurosurgery programs would be highly valuable for programs looking to increase their gender diversity.
METHODS

The names and emails of all current female neurosurgery residents in the United States were collected from residency program websites and American Association of Neurological Surgeons (AANS) member registry. An email with the survey link was sent to all female residents and residency program coordinators.

The survey consisted of two parts: First, to were given a list of 17 factors and asked to rate the importance of each for their choice of neurosurgery residency program using a scale 1-5. The second part asked the respondent to choose and rank the top five factors that influenced their choice of residency program from the same list of 17 factors.

Additionally, we utilized institution and residency websites to calculate the percentage of female residents in each program as of 2019 post-graduation and including the 2019 matriculating interns.
RESULTS

The top five most important factors rated highest were: variety and number of cases (4.5±0.8[mean ± standard deviation]), camaraderie among current residents (4.3±0.7), happiness of current residents (4.2±0.7), early surgical/clinical experience (4.2±1.0), and academic reputation (4.0±1.0). (Figure 2)

The five least important factors rated lowest by the current female neurosurgical residents were: attitudes towards maternity leave (2.0±1.2), number of female attendings (2.4±1.1), the number of female residents (2.6±1.3), geographic location near spouse (2.7±1.7), and gender diversity of faculty and residents (2.7±1.2). (Table 1)
Figure 1: Average scores for each characteristic
When asked to select the top five factors that influenced their decision of residency programs, the top five factors were, in order: camaraderie among current residents, happiness of current residents, variety and number of cases, early clinical/surgical experience, and academic reputation. The least important factor was attitude towards maternity leave, followed by number of concurrent fellows, then number of female attendings (Figure 2).
RESULTS

Each program’s percentage of female residents were calculated and subsequently stratified into cohorts as shown in Table 1. The median percentage of female residents was 17%. 11% of programs did not have any female residents, while only 11% had greater than 30% female faculty within their department.

<table>
<thead>
<tr>
<th>Percent Female of Total Residents</th>
<th>Number of Programs</th>
<th>Percentage of Residency Programs</th>
<th>Mean</th>
<th>Median</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>13</td>
<td>11%</td>
<td>18.2%</td>
<td>17%</td>
<td>0 - 77%</td>
</tr>
<tr>
<td>1 - 10%</td>
<td>13</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11 - 20%</td>
<td>43</td>
<td>37%</td>
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<td></td>
<td></td>
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<tr>
<td>21 - 30%</td>
<td>28</td>
<td>24%</td>
<td></td>
<td></td>
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<tr>
<td>31 - 40%</td>
<td>10</td>
<td>9%</td>
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<tr>
<td>&gt;40%</td>
<td>3</td>
<td>3%</td>
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</tbody>
</table>

Table 1: Number of neurosurgery residency programs and percentage of total residency programs stratified by percentage of female residents. Mean, median, and range of percent female residents in neurosurgery training programs.
The results of this survey can be used by neurosurgery residency program coordinators and directors when creating recruitment tactics to prospective applicants. For example, showcasing their resident’s camaraderie and happiness on their websites, which we found were the top two most influential factors when choosing a residency. Suggestions include a “Residency Wellness” page with photos supplied by the residents showing their outside activities and hobbies, team gatherings, or dinners that foster interpersonal relationships and wellness. We suggest more coordinated outside activities for visiting rotating students or interviewees to allow for resident-applicant interaction.

Additionally, ensuring the websites are up to date and accurate regarding the number and variety of cases the residents will be seeing is critical, as we determined this the highest ranked factor in our survey. Evidence has shown that the primary data source for residency program information gathering is through residency program website. The spread of program information through an up-to-date website is effective but under-utilized.
In deciding which residency programs to rank highest, prospective female neurosurgery residents have many factors to consider. Foremost among these factors are 1) variety and number of cases, 2) camaraderie among current residents, 3) happiness of current residents, 4) early surgical/clinical experience, and 5) academic reputation.

These factors can be influenced by the residency program coordinators to increase the efficacy of matching excellent female candidates. Interestingly, we found that the least important factors are 1) attitudes towards maternity leave, 2) number of female attendings, 3) number of female residents, 4) geographic location near spouse, and 5) gender diversity of faculty and residents.

Ultimately, we recommend increasing perceived camaraderie and resident happiness by updating program websites, increased resident-interviewee interaction, and an increased emphasis during interviews on the outside activities the residents can participate in.