How the OHSU Medical School Class of 2018 Chose their Medical Specialties

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Introduction

Background: From matriculation to graduation approximately 50% of medical students change their choice of specialty during medical school. Currently there is some understanding of how modifiable factors influence specialty selection, however, the role of non-modifiable factors is not well understood1-4. Objectives: To understand how the OHSU Medical School Class of 2018 was influenced in choosing their specialty for residency. To conduct a comparative analysis of various modifiable and unmodifiable factors. Additionally to understand the influence of different factors compared between students who were initially unsure of their specialty choice at the start of medical school, students who remained in the same specialty throughout medical school, and students who changed specialties during medical school.

Methods

Design: A cross-sectional study conducted through an online survey.

Participants: OHSU medical students who applied for residency and plan to graduate in 2018.

Measurements: A novel survey containing Likert-type scales ranging from 1 to 5 was used for 14 separate factors to gauge level of influence on specialty choice. Modifiable influencing factors included Mentor or Role Model, Length of Residence, Workload flexibility and predictability (Life) (y), Step Score(s), Competitiveness, Future Research Opportunities, Teaching Opportunities, Intellectual Stimulation, Earning Potential, and Fellowship training options. Non-modifiable influencing factors included age and gender.1,5,6. Additionally, participants were asked to choose specialty(s) they were initially interested in when starting medical school and what specialty(s) they applied for residency. Finally, participants were asked to state additional factors that influenced their specialty choice.

Statistical Analysis: Applied non-parametric testing using Mann-Whitney U test. (p-value < 0.05)

Results

A total of 312 of 436 (76.7%) medical students, who applied to residency and plan to graduate in 2018, completed the survey. Of the 312 surveyed, 59 (52.7%) respondents reported their gender as male and 52 (46.4%) respondents identified as female. One (0.9%) respondent reported as non-conforming gender. Many of the students, 47 (42%) respondents did not change their choice in specialty through medical school. A proportional percentage of students, 46 (41%) respondents changed their specialty choice. The remaining 19 (17%) respondents were initially unsure of their specialty choice at the start of medical school. In comparing non-modifiable factors, both gender and age showed no statistically significant effect on specialty choice (p-value >0.05).

Discussion and Conclusions

Many students in Med 18 changed their interest between specialties during medical school but an equivalent percentage remained in their initially preferred specialty. There was no statistically significant difference in the degree to which the surveyed factors influenced these two groups in their final selection of specialty. Non-modifiable factors such as age and gender were found not to be statistically significant on residency selection. Length of residency and training was the most significant influencing factor for participants choosing Internal Medicine. The largest proportion of the class (20%) chose to specialize in Internal medicine with 7 of 22 (32%) of those being initially unsure of their specialty choice prior to medical school. Study limitations included sampling only 76.7% of Med 18 class. Results may have been confounded by participants' recall of their initial interests in specialties at the start of medical school. Retrospective bias could be avoided by obtaining results at the beginning of matriculation.

Table 1. How statistically significant each factor was in influencing specialty selection. Each specialty group is compared to all other specialties combined based on Z-score. Positive Z-scores (in blue) indicate that the factor is statistically more influential than the median of all other combined specialties. Statistical significance was determined by p-value < 0.05.

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Workload</th>
<th>Length of residency and training</th>
<th>Future Research Opportunities</th>
<th>Doctor-Patient Relationship</th>
<th>Earning Potential</th>
<th>Educational Debt</th>
<th>Fellowship training opportunities</th>
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</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>2.04516</td>
<td>0.27423</td>
<td>0.86756</td>
<td>-2.41798</td>
<td>1.76871</td>
<td>2.36877</td>
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<td>-2.61211</td>
<td>1.31116</td>
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<td>-1.9502</td>
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<td>Obstetrics &amp; Gynecology</td>
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<td>Radiology-Diagnostic</td>
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<td>0.10818</td>
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<td>-3.18352</td>
<td>1.6167</td>
<td>1.57103</td>
<td>-0.2404</td>
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<td>General Surgery</td>
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<td>0.32454</td>
<td>1.27413</td>
<td>-1.38032</td>
<td>-0.36395</td>
<td>0.99767</td>
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<td>Other surgical specialties</td>
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<td>0.32847</td>
<td>-0.58945</td>
<td>0.85134</td>
<td>-2.05628</td>
<td>-0.42229</td>
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</tbody>
</table>

References


Figure 1. How Pathology, Psychiatry, Radiology-Diagnostic, Radiology-Interventional, and Vascular Surgery gained student interest during medical school.

For students who were initially unsure of their specialty choice, Intellectual Stimulation/ Challenge (Z-score of 2.28, p-value <0.05) and Fellowship training options (Z-score of 2.05, p-value <0.05) were a more statistically significant influencing factor compared to those students who changed specialty during medical school. However, there was no statistical significance comparing this group to students who remained interested in the same specialty throughout medical school.

Of the 19 participants initially unsure of which specialty to select, 7 applied to Internal Medicine residency.

Table 1. shows that doctor-patient relationship was an important influence in participants who chose Family Medicine and Psychiatry whereas it had little influence on participants specializing in Anesthesiology, Emergency Medicine and Diagnostic Radiology.

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