The Value of Dedicated Research Time In Medical School: Are We Training Future Academic Faculty?

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BACKGROUND

• Dedicated research time in medical school is becoming more popular
• Institutions want to create well-rounded students for careers in academic medicine
• Students driven by competitive residency programs to have a strong research background when applying to residency

Retrospective observational study of Duke University School of Medicine graduation class of 2014 (n=100)

• Categorized by number of years spent dedicated to research while a medical student:
  • 1 Year
  • >1 Year
  • MD/PhD

• Metrics:
  • Number of Meetings/Abstracts and Publications – Scopus and WebOfScience
  • H-index – Scopus
  • Academic faculty status

OBJECTIVE

Quantify the impact of dedicated research time in medical school on research productivity and academic faculty status

Hypothesis: increased research years during medical school leads to enhanced productivity and higher likelihood of becoming faculty in an academic institution

METHODS

RESULTS

Table 1. Demographics. Complete data for 78 alumni from Duke University School of Medicine class of 2014.

<table>
<thead>
<tr>
<th>Level of Training</th>
<th>1 Year</th>
<th>&gt;1 Year</th>
<th>MD/PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>5</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Fellow</td>
<td>22</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Attending</td>
<td>23</td>
<td>4</td>
<td>3</td>
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<tr>
<td>Research</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
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<td>0</td>
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</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>17</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 1. Productivity Differences Between Alumni Groups at Different Time Points. Data collected from 78 alumni. Number of Meetings/Abstracts (A) and Publications (B) published during a specific time point (Dedicated Research Time, 4th Year Medical School, and Residency) divided by the number of years spent in that time point of training.

Figure 2. H-Index. The mean H-index for 1 year was 3.5, >1 year was 5.8, and MD/PhD was 9.4. There was no significance between 1 Year and >1 Year (p=0.09) and between >1 year and MD/PhD (p=0.2804). There was significance between 1 Year and MD/PhD (p=0.002).

Figure 3. Academic Faculty Status of Alumni. A total of 30 alumni finished graduate medical education (38%). Of those who took 1 year of research, 11 (48%) are in academic medicine, compared to 2 (75%) who took >1 year, and 3 (100%) in the MD/PhD program.

Figure 4. Academic Productivity of Alumni. A total of 30 alumni finished graduate medical education (38%). Of those who took 1 year of research, 11 (48%) are in academic medicine, compared to 2 (75%) who took >1 year, and 3 (100%) in the MD/PhD program.

Figure 5. Academic Faculty Status of Alumni. A total of 30 alumni finished graduate medical education (38%). Of those who took 1 year of research, 11 (48%) are in academic medicine, compared to 2 (75%) who took >1 year, and 3 (100%) in the MD/PhD program.

CONCLUSIONS

Study Population (N=78)

• Alumni Groups:
  • 1 Year: 54 (64%)
  • >1 Year: 17 (22%)
  • MD/PhD: 7 (9%)

• Level of Training:
  • Residents: 13 (17%)
  • Fellows: 29 (37%)
  • Attendings: 30 (38%)

Number of Meetings/Abstracts and Publications

• Meetings/Abstracts: no significance among alumni groups

• Publications:
  • Dedicated research time ≠ no significant difference
  • 4th year of medical school = MD/PhD and 1 Year (p<0.05) and MD/PhD and >1 Year (p<0.05)
  • Residency = MD/PhD and 1 Year (p<0.05) and MD/PhD and >1 Year (p<0.05)

H-Index

• Means:
  • 1 Year = 3.5
  • >1 Year = 5.8
  • MD/PhD = 9.4

• Significance between MD/PhD and 1 Year (p<0.05)

Academic Faculty Status

• 1 Year = 11 (48%)
• >1 Year = 3 (75%)
• MD/PhD = 3 (100%)

• Productivity:
  • 1 Year vs. >1 Year = no significant difference
  • MD/PhD vs. 1 Year = significant difference in number of publications and H-index
  • MD/PhD vs. >1 Year = significant difference in number of publications

• Academic Faculty Status: More years of research = ↑ likelihood of academic faculty

• Future: analysis with more alumni with expansion to other graduating classes