Surgical études: Applying the experience of artistic training to surgical training

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The authors have nothing to disclose
Background

- Resident duty hours have been cut
- Residents gain the trust of attending surgeons through shared cases
- Surgical residents are anecdotally believed to be creative with an arts background
- Creative arts require learning-by-doing
Objectives

- Determine the opinions of residents regarding
  - Struggle as a teaching method
  - Attending involvement
  - Role of artistic training in their residency
- Determine artistic interests of residents
Materials & Methods

- IRB approval obtained
- Questionnaire created using Qualtrics Survey Software
- Sent to residents of Case Western Reserve University via email twice fall 2013
Materials & Methods

- Residents were grouped into three cohorts: Surgery, Medicine, and Mixed (some surgery, some medicine)
- Data analysis completed using Chi Square and Odds Ratio with Confidence Interval (Surgery vs Medicine) in SPSS Version 13.0
Results – Response

- 691 Residents emailed survey
- 193 Residents opened survey
- 152 Residents began survey
- 134 Residents completed survey
## Results – Response

<table>
<thead>
<tr>
<th>Resident cohort</th>
<th>Respondents (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>22.4% (34)</td>
</tr>
<tr>
<td>Mixed</td>
<td>26.3% (40)</td>
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<tr>
<td>Medicine</td>
<td>51.3 (78)</td>
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</tbody>
</table>
Is struggle an effective teaching method? p<0.0001, OR 11.2 (CI 3.5-35.4)
Is struggle an effective teaching method?

$p = 0.0021$, OR 11.3 (CI 2.2-56.0)
I prefer being allowed to struggle through a difficult procedure. 

p = 0.0039, OR 6.9 (CI 2.1-22.1)
I prefer being allowed to struggle through a difficult procedure

p=0.0004, OR 11.5 (CI 2.4-55.4)
How often do attendings perform difficult procedures? (p=0.0013)

Surgery Residents

- 45% Too often
- 45% Just right
- 10% Not enough
- 0% Depends on attending
Results – Arts (p>0.05)

- Surgery residents who are artistic (61.3%)
- Surgery residents who are musical
- Surgery residents who are interested in visual arts
- Artistic surgery residents who feel their artistic training probably or definitely helps in residency
- Artistic surgery residents who feel their artistic training may help in residency
Conclusions

- Surgery residents are significantly more likely to prefer struggle and find it to be an effective learning method.
- Almost half of surgery residents report attendings perform procedures too often.
- More than half of surgery residents are artistic, but not significantly more so.
Significance

- Surgery residents believe they learn well through struggle
- Teaching may be more efficient long-term by allowing a resident to struggle short-term
- Surgery residents are familiar with struggle as teaching and most apply their artistic training to surgical training