Lower Reflection Scores are Associated with Professionalism Lapses in Undergraduate Medical Education

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Conflicts of Interest

• The authors of this study have no conflicts of interest to disclose.

Background

• Professionalism is the most common reason for disciplinary action against practicing physicians.

Reflection

Experience

New Insights

Better Understanding of the Self & Situation

Analysis & Interpretation

reflection

Experience

New Insights

Better Understanding of the Self & Situation

Analysis & Interpretation

Reflection in Medical Education

• As of 2008, 35% of IM clerkship directors required a reflective writing assignment.
• Another 16% indicated that they planned to implement one within 2 years.
• Reflection is perceived to enhance students’ learning of professionalism.
Reflection in Medical Education

Do you require students to engage in reflective writing during the IM clerkship?

- Yes: 35%
- No: 48%
- No, but plan to within 2 years: 17%

Methods

- Retrospective Case-Control Study
  - Case Group: Students who have been cited for professionalism deficiencies
    - N = 70
  - Control Group: Random sample of students who have not had professionalism deficiencies
    - N = 229
- Independent Variables:
  - Gender
  - Students’ age at matriculation
  - Reflective Ability

Research Questions

- Does reflective ability differ between students in the case group and students in the control group?
- What influence does reflective ability have on the likelihood that a student had been disciplined for professionalism deficiencies during medical school?

Student Sample

<table>
<thead>
<tr>
<th></th>
<th>Case Group</th>
<th>Control Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>23 (30%)</td>
<td>98 (43%)</td>
<td>121</td>
</tr>
<tr>
<td>Male</td>
<td>49 (70%)</td>
<td>131 (57%)</td>
<td>180</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>229</td>
<td>299</td>
</tr>
</tbody>
</table>

- Students selected from IUSM Classes of 2006 – 2013
- Chi-square analysis found no association between gender and professionalism deficiencies (p > 0.05).

Mean Reflection Scores

Students in the case group had significantly lower reflection scores than students in the control group (p < 0.05).
Logistic Regression

<table>
<thead>
<tr>
<th>B</th>
<th>Wald</th>
<th>OR</th>
<th>95% CI for OR</th>
</tr>
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<tbody>
<tr>
<td>Gender</td>
<td>0.310</td>
<td>1.098</td>
<td>0.75 – 2.48</td>
</tr>
<tr>
<td>Age</td>
<td>0.113</td>
<td>5.625*</td>
<td>1.12 – 1.23</td>
</tr>
<tr>
<td>Reflection Score</td>
<td>-0.383</td>
<td>6.930**</td>
<td>0.68 – 0.95</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.197</td>
<td>7.035</td>
<td>0.04 – 0.20</td>
</tr>
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Higher reflection scores are associated with a decreased likelihood that a student had been disciplined for professionalism deficiencies during medical school.

Implications

- Reflective writing has the potential to be used as a tool to assess students’ risk for professionalism lapses.
- Students with low reflection scores may need additional mentoring to ensure they develop appropriate professional attitudes and values.
- Assessments of reflective writing are best used to provide formative feedback, not as a summative evaluation.

Implications

- Reflection should be explicitly taught and students should be given ample opportunity to reflect on their experiences.
- Students report that reflection enhances their capacity for empathy, compassion, and patient-centeredness, and is important for their professional development.

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- T. Robert Vu, MD

References


Thank you!

Questions?
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### Reflective Ability Rubric

<table>
<thead>
<tr>
<th>Score</th>
<th>Scoring Guidelines</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>Does not respond to assignment</td>
</tr>
<tr>
<td>1</td>
<td>Describes without reflecting</td>
</tr>
<tr>
<td>2</td>
<td>Does not justify lessons learned</td>
</tr>
<tr>
<td>3</td>
<td>Provides personal assessment of lessons learned</td>
</tr>
<tr>
<td>4</td>
<td>Includes external evidence of lessons learned</td>
</tr>
<tr>
<td>5</td>
<td>Analyzes factors from past experiences that inform current situation</td>
</tr>
<tr>
<td>6</td>
<td>Integrates previous experience with current events and evidence to inform future action</td>
</tr>
</tbody>
</table>