Are pharmacy students’ motivations for learning fit for 21st century practice?

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Continuing professional development requires pharmacists to engage in life-long learning, including upskilling for advanced pharmacy services

Achievement goals:
• Are students motivated by
  a) internal standards (either striving for mastery or avoiding failure)? or
  b) how they perform relative to others (striving to beat others or avoiding being worse than others)?
Objective

To determine whether BPharm students have different achievement goals from students studying other subject areas

• And also, differences in those with pharmacy as single programme preference vs. those who applied for multiple health professional programmes
Methods

- Questionnaire sent to **ALL** second year students at University of Otago
- Questionnaire contained
  - Demographics and grades
  - Achievement Goals Questionnaire - Revised
  - Other questionnaires
    - Big Five Personality Inventory
    - The Need for Cognition Scale
    - Knowledge and perceptions of pharmacy practice questions
Results

- 565 students completed the survey (16% response rate)
  - 97 pharmacy, 69 medicine, 31 other health, 368 other

Demographics

<table>
<thead>
<tr>
<th></th>
<th>Pharmacy</th>
<th>Medicine</th>
<th>Other Health</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (%)</td>
<td>74</td>
<td>71</td>
<td>74</td>
<td>n/a</td>
</tr>
<tr>
<td>Age yrs (SD)</td>
<td>19.6 (2.1)</td>
<td>19.9 (2.1)</td>
<td>20.9 (4.0)</td>
<td>20.3 (3.2)</td>
</tr>
<tr>
<td>BFI</td>
<td></td>
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</tr>
<tr>
<td>Neuroticism</td>
<td>54.8 (18.8)</td>
<td>49.7 (20.0)</td>
<td>56.6 (21.5)</td>
<td>54.1 (22)</td>
</tr>
<tr>
<td>Extraversion</td>
<td>54.7 (19.1)</td>
<td>58.1 (20.7)</td>
<td>59.9 (17.6)</td>
<td>56.7 (21.1)</td>
</tr>
<tr>
<td>Openness</td>
<td>70.1 (13.9)</td>
<td>70.1 (14.1)</td>
<td>71.9 (15.4)</td>
<td>73.1 (17.1)</td>
</tr>
<tr>
<td>Agreeable</td>
<td>75.6 (14.6)</td>
<td>72.1 (13.9)</td>
<td>73.5 (16.3)</td>
<td>71.8 (16.4)</td>
</tr>
<tr>
<td>Conscientious</td>
<td>67.9 (14.4)</td>
<td>69.0 (14.6)</td>
<td>64.7 (15.9)</td>
<td>66.8 (16.1)</td>
</tr>
</tbody>
</table>
Results

Graph comparing the mastery of pharmacy vs. non pharmacy.
Results

![Graph showing scores and means comparison between multiple programmes and only pharmacy, along with Cohen's d values.]

- Performance Avoidance
- Performance Approach
- Mastery Avoidance
- Mastery Approach
Results

• Pharmacy students vs. other students on composite scores:
  • “Should be legal restrictions on what pharmacists can tell patients” and “it is unethical for pharmacists to tell patients what the purpose of a medication”
    • Low endorsement, no differences; Pharmacy mean 25.7
  • “Should do new roles (BP measurement, cholesterol screening, diabetes testing/screening, flu shots)”
    • Medicine -14.7*, Other health -10.9*, Other students -7.3* (* all p<0.001); Pharmacy mean 46.8
  • “Should do traditional roles (compounding, OTC, medication use, med review)”
    • Medicine -15.1*, Other health -15.7*, Other students -15.51* (*all p<0.001) Pharmacy mean: 86.7
  • “Reliance on physician/physician is better (medicine advice – physician is better and give patients all they need to know”
    • Medicine 9.8*, Other health 13.4*, Other students 11.9* (* all p<0.002) Pharmacy mean: 35.2
Conclusions

• Pharmacy students have a higher focus on mastery
• Even before training, there are engrained pre-conceptions of pharmacy/pharmacist roles
• Follow-up longitudinally
  • Future role engagement