Doctors’ rural practice self-efficacy is associated with small rural locations of practice <25,000

Lucie Walters, Nadine Drummond, Megan Bentley
Vivian Isaac, Heidi Hodge
Background

- Medical students who participate in rural clinical school are more likely to enter rural practice
- There is argument about whether this finding is due to nature (rural background) or nurture (exposure)
- There is no well-established conceptual framework to explain how these factors influence intention
Rural practice self-efficacy provides a theoretical framework

(Bandura 1994)

“Peoples’ beliefs in their capabilities to produce designated levels of performance that exercise influence over events that affect their lives… determine[s] how people feel, think, motivate themselves and behave”
Rural practice self-efficacy provides a theoretical framework (Bandura 1994)

Four proposed sources of self-efficacy:
1. mastery experiences
2. social persuasion
3. vicarious experiences
4. emotional/physical responses to experiences
Rural practice self-efficacy provides a theoretical framework (Bandura 1994)

Four proposed sources of self-efficacy:
1. mastery experiences
2. social persuasion
3. vicarious experiences
4. emotional/physical responses to experiences

**Context specific**
# Rural practice self-efficacy questions

(Isaac 2015)

<table>
<thead>
<tr>
<th>Mastery</th>
<th>I believe rural practice is too hard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I have the necessary skills to practice in a rural setting</td>
</tr>
<tr>
<td>Social persuasion</td>
<td>People tell me I should work in a rural setting</td>
</tr>
<tr>
<td>Vicarious experiences</td>
<td>I identify with people practising medicine in a rural area</td>
</tr>
<tr>
<td>Emotional responses</td>
<td>I get a positive feeling when I think of working in a rural setting</td>
</tr>
</tbody>
</table>
Methods

• Cross-sectional study
• Flinders University Parallel Rural Community Curriculum (PRCC) alumni
• Alumni from PRCC 1997-2015
• Online survey
• Series of questions regarding self-efficacy, current practice location and rural career intent
• Small rural communities (<25,000)
Results: Participants

> Overall response rate was (n=102 of 252) 40.5%
  - 56.9% female
  - 86.3% commenced/completed vocational training
  - 55.9% working outside a capital city
  - 85.3% happy with their current location of practice
  - 59.9% already in or planning to join General Practice
  - 43% made their decision regarding specialty training following graduation
Results: Participants cf non-participants

> Overall response rate was (n=102 of 252) 40.5%

- 56.9% female
- 86.3% commenced/completed vocational training
  - 55.9% working outside a capital city (↑ T= 53%)
  - 85.3% happy with their current location of practice
  - 59.9% already in or planning to join General Practice (↑ T = 50%)
  - 43% made their decision regarding specialty training following graduation
Results: Participants

- 28.5% reported currently practicing in towns of <25,000 population
- 41.6% reported a rural background, with the majority of these having more than eight years of rural upbringing (37.3%)
- 49% reported that they had a partner with a rural background
Rural practice self-efficacy scores (max 25)

> Rural practice self efficacy scores statistically significantly increased with:
  – Rural background
  – More experienced current career status
  – Speciality decision in medical school

> Rural practice self efficacy scores not affected by gender
Results: total self-efficacy score increased with smaller location of practice (max 25)
## Association between rural self-efficacy and intention to remain/return to rural practice

<table>
<thead>
<tr>
<th>Individual Adjustments</th>
<th>OR (95% CI)</th>
<th>( \chi^2 ) (df)/ p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unadjusted</strong></td>
<td>1.6 (1.3-1.9)</td>
<td>21.2 (1) &lt;0.001</td>
</tr>
<tr>
<td>Gender</td>
<td>1.6 (1.3-2.0)</td>
<td>21.7 (1) &lt;0.001</td>
</tr>
<tr>
<td>Rural background</td>
<td>1.6 (1.3-1.9)</td>
<td>19.8 (1) &lt;0.001</td>
</tr>
<tr>
<td>Career status</td>
<td>1.6 (1.3-2.0)</td>
<td>20.9 (1) &lt;0.001</td>
</tr>
<tr>
<td>Practice location</td>
<td>1.4 (1.2-1.7)</td>
<td>13.2 (1) &lt;0.001</td>
</tr>
<tr>
<td>Decision time</td>
<td>1.5 (1.2-1.8)</td>
<td>15.5 (1) &lt;0.001</td>
</tr>
<tr>
<td>Expectation gap</td>
<td>1.5 (1.2-1.8)</td>
<td>17.0 (1) &lt;0.001</td>
</tr>
</tbody>
</table>
Logistic regression analysis of rural self-efficacy and intention to remain/return to rural practice

<table>
<thead>
<tr>
<th></th>
<th>Sequential Adjustments</th>
<th>( \chi^2 ) (df) / p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unadjusted</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.6 (1.3-2.0)</td>
<td>21.7 (1) (&lt;0.001</td>
</tr>
<tr>
<td>Rural background</td>
<td>1.7 (1.3-2.1)</td>
<td>20.3 (1) (&lt;0.001</td>
</tr>
<tr>
<td>Career status</td>
<td>1.7 (1.4-2.1)</td>
<td>20.0 (1) (&lt;0.001</td>
</tr>
<tr>
<td>Practice location</td>
<td>1.6 (1.2-2.0)</td>
<td>12.9 (1) (&lt;0.001</td>
</tr>
<tr>
<td>Decision time</td>
<td>1.5 (1.2-2.0)</td>
<td>11.4 (1) (0.001</td>
</tr>
<tr>
<td>Expectation gap</td>
<td>1.5 (1.1-1.9)</td>
<td>8.7 (1) (0.003</td>
</tr>
</tbody>
</table>
Conclusions

> This cross-sectional study demonstrates rural practice self-efficacy is associated with current rural practice and future intention to practice rurally

> Rural practice self-efficacy increases with career progression and increases with smaller, more isolated locations of practice

> Rural practice self-efficacy offers an explanation of how nature and nurture contribute to rural medical practice intent
References

