Increasing experienced physician engagement in simulation labs

Introduction
Physicians are often wary of becoming involved in simulation activities due to perceived lack of free time, fear of judgment, concerns about the stressful environment and fears of inaccurate assessment of their skills and abilities1-2. Such barriers have indeed been labeled in the literature; Blazeck coined the term “Simulation Anxiety Syndrome” to describe the obstacle preventing practicing nurses from becoming involved in simulation education3. These barriers to change are difficult to overcome and the evidence in simulation literature is limited regarding suggestions.

The purpose of this study was to build on the evidence in change management and anxiety, and identify strategies that empower experienced physicians to engage in simulation.

We elected to assess the effect of three interventions on physician simulation anxiety: modeling, normalization, and competition. Though never formally utilized in the simulation setting, each of these tools has been shown to decrease anxiety or promote participation and engagement in other applications.

We hypothesized that one or more of the above interventions would decrease physician simulation anxiety.

Methods
A total of 40 physicians were recruited and selected a date for participation. Of these, 20 physicians cancelled prior to the start of the study or were not present on their study date without explanation.

Figure 1. Participant demographics.

<table>
<thead>
<tr>
<th>Group</th>
<th>Intervention</th>
<th>N</th>
<th>Mean age in years (SD)</th>
<th>Mean number of years in practice (SD)</th>
<th>Mean trait anxiety score (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control</td>
<td>4</td>
<td>54 (3)</td>
<td>25 (4)</td>
<td>32 (10)</td>
</tr>
<tr>
<td>2</td>
<td>Competition</td>
<td>4</td>
<td>58 (6)</td>
<td>26 (6)</td>
<td>31 (3)</td>
</tr>
<tr>
<td>3</td>
<td>Modeling</td>
<td>5</td>
<td>51 (10)</td>
<td>23 (9)</td>
<td>38 (7)</td>
</tr>
<tr>
<td>4</td>
<td>Normalization</td>
<td>7</td>
<td>50 (6)</td>
<td>16 (6)</td>
<td>35 (5)</td>
</tr>
</tbody>
</table>

Figure 2. “Wordle” - A pictorial of the participant responses when asked to list three words that come to mind when thinking of doing a simulation lab exercise.

Figure 3. Mean STAI across groups throughout study points. Analysis revealed no statistical difference within groups across time points.

Figure 4. Mean scores on end of day evaluation (scale of 0 to 5).

Evaluation question | Mean score
---|---
I found the day useful | 4.8
I would do this again | 4.5

Discussion
• Experienced physicians are a group who are self-described as highly anxious regarding involvement in simulation.
• Despite incentives, flexible timelines, no cost and close proximity of simulation lab, 20 of 40 physicians, who had booked a study participation date, cancelled.
• Post-simulation evaluations revealed that the participants had a great experience and a strong desire to participate in simulation again, regardless of their high pre-event anxiety. This highlights the importance of the safe learning environment in moving a highly anxious group to a group interested in coming back.
• The study was underpowered to determine a difference between intervention groups aimed at decreasing anxiety. There were no clear trends identified.
• Potential influencing factors could include: proximity of intervention to simulation session, location of intervention, quality of intervention, or external influences, such as peer normalization outside of the study.
• Future studies should examine performing the intervention remotely in advance of the session. Based on previous literature regarding anxiety treatment, cognitive behavioural therapy (Normalization) appears to be the most promising intervention4. Modeling interventions may be a cost-effective alternative8. Competition has been shown to increase motivation, and thus potentially engagement, however may also heighten anxiety7,10.

References