STUDENT PERCEPTIONS OF THEIR LEADERSHIP SKILLS AT THE START AND END OF A WILDERNESS MEDICINE COURSE — A PILOT STUDY

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BACKGROUND

- Leadership is an important physician skill set.
- Challenges to effective leadership are amplified in austere environments.
- Training in wilderness medicine (WM) thought to improve leadership skills.
- No literature evaluating leadership skill gains after a wilderness medicine course.
- MCW’s new WM elective provided an opportunity to assess the students’ perception of leadership skills gained by taking course.

METHODS

- A survey was developed to assess leadership qualities using a 5-point Likert scale.
- Control group was planned but IRB approval not obtained in time to include.

Survey Questions
1. I am a leader.
2. I am able to lead in times of uncertainty.
3. I am able to quickly identify the strengths, opportunities, and limits of others.
4. I do not give up even when faced with major obstacles.
5. I see the big picture.
6. I am aware of my communication style and how it affects others.
7. I can establish role expectations to a group of people I have not met before.
8. I can clearly communicate with a diverse group of people.
9. I know how to identify what needs to be accomplished.
10. I am able to delegate tasks appropriately.
11. I enjoy helping others to work together to achieve a desired outcome.
12. I easily gain the support of others to accomplish goals.
13. I prepared to take a leadership role during times of uncertainty.
14. I can take control of chaotic situations.
15. I am creative at utilizing available resources.
16. I am persistent and continue to work towards my goal in new and different ways during times of difficulty.
17. I am able to manage conflict without losing focus of team goals.
18. I set clear expectations for others.

- Students (N=5) in MCW’s WM elective given informational letter and link to survey on the:
  1. First day of class.
  2. Last day of class.
- Survey anonymous
- Final grades submitted before survey results reviewed
- Answers converted into 1-5 scale
  - 5 = “Strongly agree”
  - 4 = “Moderately agree”
  - 3 = “Neither agree nor disagree”
  - 2 = “Moderately disagree”
  - 1 = “Strongly disagree”
- Median (CI) calculated and Wilcoxon Signed rank test performed for each question (SigmaPlot 12.5).

CONCLUSIONS

- Students started the course with an overall favorable perception of their leadership skills.
- This pilot study was underpowered and significant changes were not found. However, the trends have encouraged me to continue the study to increase the N and recruit a control group.

RESULTS

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre</th>
<th>Post</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall leader</td>
<td>4 (4-4.5)</td>
<td>4 (4-4.5)</td>
<td>P=0.500</td>
</tr>
<tr>
<td>2. Lead in times of uncertainty</td>
<td>4 (3.5-4)</td>
<td>4 (4-4.5)</td>
<td>P=1.000</td>
</tr>
<tr>
<td>3. Identify strengths of others</td>
<td>4 (3.5-4)</td>
<td>5 (4-5)</td>
<td>P=0.250</td>
</tr>
<tr>
<td>4. Does not give up</td>
<td>4 (4-5)</td>
<td>4 (4-5)</td>
<td>P=1.000</td>
</tr>
<tr>
<td>5. See the big picture</td>
<td>4 (3.5-4)</td>
<td>4 (4-5)</td>
<td>P=0.500</td>
</tr>
<tr>
<td>6. Aware of communication style affects</td>
<td>4 (4-4.5)</td>
<td>5 (4-5)</td>
<td>P=0.500</td>
</tr>
<tr>
<td>7. Establish role expectations</td>
<td>3 (3-3.5)</td>
<td>4 (4-4)</td>
<td>P=0.125</td>
</tr>
<tr>
<td>8. Clearly communicate w/ diverse group</td>
<td>4 (3.5-4)</td>
<td>5 (4-5)</td>
<td>P=0.250</td>
</tr>
<tr>
<td>9. Identify what needs to be accomplished</td>
<td>4 (3.5-4)</td>
<td>4 (4-5)</td>
<td>P=0.250</td>
</tr>
<tr>
<td>10. Able to delegate tasks appropriately</td>
<td>4 (4-4)</td>
<td>4 (4-4.5)</td>
<td>P=0.500</td>
</tr>
<tr>
<td>11. Enjoy helping others to work together</td>
<td>4 (4-5)</td>
<td>5 (4-5)</td>
<td>P=0.750</td>
</tr>
<tr>
<td>12. Establish team support</td>
<td>4 (3-3.5)</td>
<td>4 (4-5)</td>
<td>P=1.000</td>
</tr>
<tr>
<td>13. Prepared for leadership role</td>
<td>4 (4-4.5)</td>
<td>4 (4-5)</td>
<td>P=1.000</td>
</tr>
<tr>
<td>14. Control chaotic situations</td>
<td>3 (3-4)</td>
<td>4 (3.5-4.5)</td>
<td>P=0.250</td>
</tr>
<tr>
<td>15. Resource utilization</td>
<td>4 (3.5-4)</td>
<td>4 (4-4.5)</td>
<td>P=0.750</td>
</tr>
<tr>
<td>16. Persistent</td>
<td>4 (4-5)</td>
<td>5 (4-5)</td>
<td>P=1.000</td>
</tr>
<tr>
<td>17. Manage conflict without losing focus</td>
<td>4 (3.5-5)</td>
<td>4 (4-5)</td>
<td>P=0.1000</td>
</tr>
<tr>
<td>18. Clear expectations</td>
<td>3 (3-3.5)</td>
<td>4 (4-5)</td>
<td>P=0.063 (Simulated N=6; P=0.031)</td>
</tr>
</tbody>
</table>

MY ENTREPRENEURIAL MINDSET

CURIOSITY

I started this project curious about whether students taking a wilderness medicine course would increase their leadership skill set without including a dedicated leadership curriculum.

With the data collected, I have two further questions:
1. Would 4th year medical students in a different course have as favorable a perception of their leadership skills?
2. Will we see effects with a larger group?

CONNECTIONS

I was fortunate to make several connections through this project. My mentor Dr. Hershel Raff assisted throughout the project. Several other individuals helped in brainstorming and development of the project including Dr. Arthur Derse, Dr. Cheryl Maurana, Dr. Ryan Spellecy, the Wilderness Medicine Interest group leadership, and Anna Terc.

CREATING VALUE

The data suggest that students at the end of medical school have a favorable perception of their leadership skills but there may be room for continued improvement in specific areas such as expectation setting. This knowledge is important for all medical educators, suggesting areas of leadership that students are confident in and areas that can be improved upon. Students will benefit from educators having a better understanding of their strengths and weaknesses in leadership directing appropriate adjustments to curriculum.