Feedback by Elementary school Educators on “Unstuck and on Target” online training & implementation among students with ASD &/or ADHD

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What is Executive Functioning?

- Executive Functioning (EF)
  - Contains working memory (WM), inhibitory control, and set shifting
  - planning, flexibility, organization, and working memory
Why EF matters?

- Most students with ASD and ADHD tend to have EF challenges²
- EF challenges make it difficult for disciplining children²
- Children experiencing EF challenges may not perform as well in academic settings²
What is “Unstuck and On Target?”

- “Unstuck and On Target” (UOT)
  - EF intervention for elementary students
  - Contains 21 training modules
  - Includes workbook sheets, videos, & lesson plans
Why “Unstuck” matters?

- Previous study indicated that participants significantly improved in EF skills from Unstuck group compared to PATSS²

- PATSS (Parents and Teachers Supporting Students)²
  - an adaptation of contingency behavioral management
  - 15 weeks
  - Not actively teaching EF skills
Module 6: Identifying and Coping with Emotions

LESSON 3 HANDOUT

Feelings Chain Blank

Scenario 1: Use the first example to create a Feelings Chain based on a situation when emotions drove actions, and the situation did not improve.

<table>
<thead>
<tr>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Feelings word: Number:

<table>
<thead>
<tr>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How Others Feel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I Feel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Feelings word: Number:
Research Aims

1. Is there a difference in Unstuck knowledge among implementers before and after the training?

2. Educators’ responses to how they felt recognizing EF challenges in their students

3. Educators’ responses to their ability to apply strategies for creating affirming environments for their students
Overarching Hypothesis

After implementing Unstuck, educators will report that they felt more prepared to meet needs of their students, more knowledgeable about curriculum, and creating affirming environment.
Methods

- Survey participants: 152 implementers
- Likert scale
  - Aim 2: 1=totally disagree, 5=totally agree
  - Aim 3: 1=strongly decreased, 5=strongly increased
- Paired samples t-test
  - pre-test & post-test surveys
  - Knowledge based questions (Aim 1)
- Descriptive statistics
  - Post-test data only
  - Learning objectives (Aim 2)
  - Affirming environment (Aim 3)
## Demographic Descriptive Data of Implementers, n=152

<table>
<thead>
<tr>
<th></th>
<th>Number of years of professional experience</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>11.23</td>
<td>40.54</td>
</tr>
<tr>
<td><strong>median</strong></td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>8.25</td>
<td>10.9</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td>281</td>
<td>265</td>
</tr>
</tbody>
</table>
### Demographics (N=281)

<table>
<thead>
<tr>
<th>Race</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American/Alaska Native</td>
<td>1</td>
<td>0.36%</td>
</tr>
<tr>
<td>Asian</td>
<td>7</td>
<td>2.49%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>8</td>
<td>2.90%</td>
</tr>
<tr>
<td>White</td>
<td>253</td>
<td>90.40%</td>
</tr>
<tr>
<td>multiracial</td>
<td>9</td>
<td>3.20%</td>
</tr>
<tr>
<td>another race</td>
<td>2</td>
<td>0.71%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>17</td>
<td>6.05%</td>
</tr>
<tr>
<td>female</td>
<td>264</td>
<td>93.95%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profession</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education Teacher</td>
<td>97</td>
<td>34.52%</td>
</tr>
<tr>
<td>General Education Teacher</td>
<td>28</td>
<td>9.96%</td>
</tr>
<tr>
<td>School/Guidance counselor</td>
<td>48</td>
<td>17.08%</td>
</tr>
<tr>
<td>School Psychologist</td>
<td>53</td>
<td>18.86%</td>
</tr>
<tr>
<td>Social worker</td>
<td>22</td>
<td>7.83%</td>
</tr>
<tr>
<td>other</td>
<td>32</td>
<td>11.39%</td>
</tr>
</tbody>
</table>
Paired Sample Test for Correct Answers on Knowledge Based Questions

<table>
<thead>
<tr>
<th></th>
<th>Post</th>
<th>Pre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>19.14</td>
<td>18.54</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.580</td>
<td>2.988</td>
</tr>
<tr>
<td>$df$</td>
<td>158</td>
<td></td>
</tr>
<tr>
<td>$t$</td>
<td>2.04</td>
<td></td>
</tr>
<tr>
<td>$p$-value (one-tail)</td>
<td>0.021</td>
<td></td>
</tr>
</tbody>
</table>

Inferential Statistics for Aim 1
### Descriptive Data for Aim 2

Learn how to recognize executive function problems in your students:

<table>
<thead>
<tr>
<th>survey response</th>
<th>mean</th>
<th>STDV</th>
<th>Variance</th>
<th>total</th>
<th>Totally disagree</th>
<th>Agree</th>
<th>Totally Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My ability to apply strategies for creating affirming environments for elementary students has:</td>
<td>4.18</td>
<td>0.6</td>
<td>0.36</td>
<td>141</td>
<td>0.71%</td>
<td>6.38%</td>
<td>26.95%</td>
</tr>
</tbody>
</table>
Discussion

- My hypothesis = supported
- Aim 1:
  - significant difference between # of correct answers before & after Unstuck
  - increased in Unstuck knowledge after the training
- Aim 2:
  - implementers felt that they were able to detect EF challenges in students
- Aim 3:
  - implementers felt that their ability for creating affirming environments for students increased
Future Directions

- Unstuck can be applied to different age groups
  - Preschool
  - Middle school
  - High school

- Unstuck can support other groups
  - learning differences
  - mental health conditions
Strengths & Weaknesses

● Strengths:
  ○ Implementors from different elementary schools
  ○ Large sample size (n=122)
  ○ Both descriptive & inferential

● Weaknesses:
  ○ Convenience sampling
  ○ Only elementary schools (limited external validity)
  ○ Not enough data for additional inferential stats
Conclusion

Data shows that Unstuck can facilitate implementers' abilities to better recognize EF challenges & offer an open environment
My PURPLE Experience

- Shadowing
- Interpersonal skills
- Didactic meetings
- Helped Unstuck team
- Acquired new skills
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- Colorado Children’s Hospital
  - Syd Staggs, Clinical Research Coordinator, MPH candidate
  - Dr. Stoddard, MD, MAS
  - Dr. Hagman, MD, director of Eating Disorders Program
- All of you
References


Image citations

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Image citations continued

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¹⁷http://www.clipartpanda.com/clipart_images/download-team-strength-clipart-61765125
²¹https://medschool.cuanschutz.edu/pediatrics/research/programs/perinatal-research-center
²²https://www.cuanschutz.edu/offices/communications/brand/visual-identity/logos/variations-and-typographic-treatments
²³https://www.wishesmsg.com/thank-you-wishes-msg-wording-card/
²⁴https://www.gthankyou.com/everyday-employee-thank-you-ideas/
Other resources

https://app.luminpdf.com/viewer/62992953157e41ed86931dd1 (Colorado schools), created by Colorado Unstuck Research Team

https://app.luminpdf.com/viewer/62992925157e41ed869313d1 (Virgina Schools), created by Colorado Unstuck Research Team

https://docs.google.com/spreadsheets/d/16XDQVjIt3V33c8XjXoNFFX98L-AyJMR_1OjpfdfToA0/edit#gid=1406666233