Initial Impressions of Educational Group Teaching Compensatory Strategies For Traumatic Brain Injury

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### BACKGROUND & SIGNIFICANCE

- Patients with traumatic brain injury (TBI) can experience chronic impairments with attention & concentration, memory, and executive functions. Symptoms can significantly affect patients’ daily lives, including vocational, educational, and/or social interactions.
- Examples of academic consequences of TBI can include:
  - Difficulties with reading, mathematics, and written language
  - School support services needed
  - Poor school performance
  - High rates of being held back
- Examples of social consequences of TBI can include:
  - Reduced inhibition
  - Difficulty understanding social interactions
  - Losing meaningful relationships
- In addition to restorative treatment, compensatory strategies can be implemented to support patients’ attention, memory, and/or executive function.
- External compensatory strategies: Modify external aspects to compensate for symptom, such as environmental modifications.
- Internal compensatory strategies: Exercises that facilitate tasks that use a specific cognitive ability. These strategies work to improve those abilities and high functions that depend on cognitive abilities.
- Educational groups are used to help teach ways to implement strategies in daily living contexts.

### PURPOSE

- To examine the feasibility of implementing a group intervention program designed to provide cognitive training for patients with TBI who are returning to academic or vocational settings.
- To examine the structure and delivery of the educational modules.
- To determine if this group intervention service delivery model is viable for future research.

### METHODS

#### Procedures

- Four educational modules were developed by a graduate student clinical researcher with guidance from a clinical supervisor, using evidence-based practice methodology (i.e., evidence base, patient values and goals, clinical judgment).
- Educational cognitive training group met weekly for 4 weeks during the fall 2016 semester. Each educational session was approximately 1.5 hours in length.
- Group participants answered a short survey following the four week intervention to evaluate program feasibility.

#### Educational Modules

<table>
<thead>
<tr>
<th>Educational Modules</th>
<th>Procedures</th>
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<tr>
<td>Attention &amp; Managing Distractions</td>
<td>External distractions</td>
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<tr>
<td>Social Communication &amp; Relationship Strain</td>
<td>Internal distractions</td>
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<tr>
<td>Memory &amp; Planning</td>
<td>Strategies to help eliminate social difficulties</td>
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<td>Problem Solving &amp; Learning</td>
<td>Strategies for improve memory</td>
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<td>Self Advocacy</td>
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<td>7 step routine for problem solving</td>
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<td>Importance of advocacy</td>
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<td>Who can be an advocate</td>
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<td>Resources</td>
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### RESULTS

#### Preliminary Impressions

- External distractions (e.g., sensitivity to light, environmental noise) seem to be one of the hardest cognitive impairments to cope with.
- Increase education in this area, particularly in regards to best use of technology (e.g., reducing or changing light on phones).
- Increase educational sessions about use of technology for cognitive support.
- Continue educational sessions about note taking services or alternative note-taking such as video recording and audio notes.
- Increase educational sessions about ways to approach self-disclosure without becoming a burden.
- Continue education about reading physical books vs. ebooks.
- Discussion among the participants was helpful. Continue this component of the modules.
- Continue education about memory techniques.

#### Summary of Survey Reactions

- Eliminating distractions was the most useful module.
- Patients reported using taught strategies daily.
- Patients reported an interest in attending sessions again.
- Patients reported that they needed feedback during the sessions.
- Patients suggested having a survey to complete during the last session as they had trouble remembering all of the modules by the time the survey came out.

#### Post-Intervention Program Feasibility Survey Questions

- Which module did you find the most useful for your daily life?
- Which module did you find least useful for your daily life?
- Which strategy or strategies have you found most useful in improving your attention, memory, social communication, and problem solving?
- How useful were the strategies presented in this training?
- How often do you use strategies presented in this training?
- Do you have any suggestions for how this group could be improved for future participants?

### DISCUSSION

- This group intervention service delivery model for cognitive training is feasible and can be implemented on the UM campus for ease of access to students, veterans, and community members.
- Qualitative survey data will be used to refine future sessions of this service delivery model.
- Future studies will investigate the efficacy of teaching compensatory strategies in the group setting for students, veterans, and community members with TBI.