DEVELOPING ACADEMIC SELF-MANAGEMENT SKILLS AMONG COLLEGE STUDENTS WITH MENTAL HEALTH CONDITIONS: EXECUTIVE FUNCTIONING SKILLS THAT PROMOTE SUCCESS

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The mission of the Transitions to Adulthood Center for Research is to promote the full participation in socially valued roles of transition-age youth and young adults (ages 14-30) with serious mental health conditions. We use the tools of research and knowledge translation in partnership with this at risk population to achieve this mission.

Visit us at: http://www.umassmed.edu/TransitionsACR

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Agenda

• Importance of education for young adults
• Barriers affecting college students
• FAST intervention
• Overview of the study
• Next Steps

Come to the HYPE table later and we can chat…
Importance of Higher Education

- Competitive in seeking employment
- Increased options in the workforce
- Better employment
- Higher wages & greater earnings over time
- Benefits
- Career mobility
- Socialization & networking
- Prestigious (and normalizing) role
- Course loads be adjusted by semester; as compared to work
Education Pays…

Unemployment rates and earnings by educational attainment, 2016

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Unemployment Rate (%)</th>
<th>Median Usual Weekly Earnings ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral degree</td>
<td>1.6</td>
<td>1,664</td>
</tr>
<tr>
<td>Professional degree</td>
<td>1.6</td>
<td>1,745</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>2.4</td>
<td>1,380</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>2.7</td>
<td>1,156</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>3.6</td>
<td>819</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>4.4</td>
<td>756</td>
</tr>
<tr>
<td>High school diploma</td>
<td>5.2</td>
<td>692</td>
</tr>
<tr>
<td>Less than a high school diploma</td>
<td>7.4</td>
<td>504</td>
</tr>
</tbody>
</table>

Total: 4%

All workers: $885

Role of Education in Employment

• Work history is predictive of future work history \(^4,5\)

• Educational achievement is predictive of both being employed and income. \(^5,6,7\)

• Diminishing returns of completing education as one becomes older, thus offering educational support to older adults may limit its impact.

• *Early* educational and employment interventions are critical to youth and young adults in order to have a longer time span to build human capital and avoid a life-time of poverty.
Helping Youth on the Path to Employment (HYPE)

- Prioritizes education over employment for young adults
- Blended employment & education approach
  - Fully integrated educational supports
- Emphasis on *early* education/ advanced training completion
- Intentionally services to prevent disruptions
- Purpose:
  - Prevent disability
    - Avoid SSA enrollment and/or assist in “coming off the roles”
  - Create economic self-sufficiency
History of HYPE & FAST

2008
• A Randomized, Controlled, Multisite Trial of the “Effectiveness of Supported Education for Postsecondary Students with Psychiatric Disabilities.” NIDILRR #H133B100037 (Gill, Salzer, Mullen; Temple)

2011
• “Developing Executive Functioning through Cognitive Remediation for College Students with Psychiatric Disabilities” NIDILRR #H133G110239 (Mullen; Rutgers)
• “A Study of Age-Associated Need, Services, and Outcomes of Participants enrolled in Supported Education” NIDILRR #H133B090018. (Gill, Davis, Salzer, Mullen; UMASS)

2012
• “Manual and Training Program to Promote Career Development among Transition Age Youth and Young Adults with Psychiatric Conditions” NIDILRR #H133A120152 (Mullen; Rutgers)
Barriers endorsed by students in a multi-site SEd study

Over **70%** of respondents:
- Concentration (85%),
- Time management (77%),
- Stamina (75%),
- Organization (71%),
- Prioritizing tasks (70%)

Over **50%** of respondents:
- Difficulty memorizing information
- Managing psychiatric symptoms
- Studying for exams
- Taking exams
- Preparing for class
- Writing papers
- Taking notes
- Researching information
- Meeting deadlines
My aha moment…

- Preliminary analysis of educational barriers revealed that students more commonly endorsed issues associated with executive functioning tasks than “classic” mental health symptoms.
- Students may not be failing out/dropping out of school because of their mental health symptoms per se, but because they had difficulty with:
  - Remembering when their assignment was due
  - Keeping themselves organized
  - Couldn’t remember lectures
- Students needed **self-management skills** in order to be effective.
- At time of FAST grant submission, no published literature existed for CR interventions for college students with mental health conditions.
What is FAST?

- A manualized intervention based in the cognitive remediation literature

- CR refers to an intervention that “targets cognitive deficit using scientific principles of learning with the ultimate goal of improving functional outcomes” (McGurk et al., 2013).
  - Approaches vary in length, methods, and format.

- Skill or strategy coaching focuses on teaching skills that can be used to improve cognitive performance with the aim of reducing the impact of impairment and enhancing performance on real-world cognitive tasks.

- Some CR programs have been designed to be combined with specific psychiatric rehabilitation interventions

- FAST is a modification of Beth Twamley’s CCT intervention for SE (Twamley et al., 2012)
What’s In The Manual?

• Strategies that help students develop self-management skills to reduce barriers in school and enhance performance

• Develop skills and strategies to **compensate** for cognitive barriers

• Tools for them to boost efficiency…work smart, not hard

• Skills for them to practice that can improve cognitive functioning
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Session 1 – Introduction and Calendars
Session 2 – Prospective Memory (Calendars, Lists, Linking Tasks)
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Session 4 – Conversational Attention, Task Attention
Session 5 – Task Attention
Session 6 – Verbal Learning and Memory/Name Learning
Session 7 – Verbal Learning and Memory
Session 8 – Verbal Learning and Memory/Note-taking
Session 9 – Cognitive Flexibility and Problem-Solving
Session 10 – Cognitive Flexibility and Problem-Solving
Session 11 – Cognitive Flexibility, Problem-Solving, and Planning
Session 12 – Skills Integration, Review, and Next Steps
Selected FAST Self-Management Skills & Strategies

• Goal setting
  • Identification of goals that relate to areas of cognitive difficulty

• Calendaring:
  • the most important self-management skill

• To-do lists

• Eisenhower’s Principle: urgent vs important
  • Focus on figuring how to prioritize time and tasks

• Self-talk

• Task linking

• Set Shifting vs Multi-Tasking

• Visualization
  • Encode- Store -Retrieve
Study Design

- A randomized controlled trial to evaluate the efficacy of FAST among college students with psychiatric conditions.

- **SAMPLE:**
  - College students were recruited from the New Jersey-NY metro area.
  - **92 eligible participants:** 119 participants enrolled; 27 ineligible

  - Participants are college or graduate students who:
    - are between the ages of 18-64;
    - have a DSM-IV Axis-I diagnosis;
    - **[for primary study]** have cognitive impairment in at least one domain as measured by performance on the MATRICS Consensus Cognitive Battery (MCCB).

- **DESIGN:**
  - Each participant is randomized into either the:
    - Treatment group: campus services as usual plus cognitive remediation;
    - Control group: campus services as usual plus one meeting with a cognitive specialist.
Study Design

• The experimental condition participants undergo the intervention for 12 weeks.

• All participants are assessed at 0 (baseline), 4, 8, and 12 months with:
  - the MCCB;
  - symptom ratings (BPRS);
  - self report measures of educational difficulties, cognitive problems, compensatory cognitive strategy use, and college self-efficacy.

• Transcripts are collected throughout study participation.

• Primary hypothesis: Participants receiving FAST will improve on primary academic outcomes (GPA, proportion of courses successfully completed) to a significantly greater degree across the follow-up period compared to controls.

• Secondary: performance on the MCCB; self-reported educational difficulties, cognitive problems, cognitive strategy use and college self-efficacy; symptom ratings.
FAST Intervention: Quick Overview

• Manualized compensatory cognitive remediation intervention to develop self-management skills
• Begins with Session 0
• 12 sessions divided into 4 units
  • Prospective Memory ("Remembering to Remember")
  • Attention/Vigilance
  • Verbal Learning & Memory
  • Cognitive Flexibility & Problem-Solving
• 1 hour meeting per week
• Meetings occur on campus in private meeting areas
Session 0

- All participants receive at least one meeting
  - Those assigned to control only receive Session 0

- Review implications of common cognitive issues as they relate to school

- Personalized discussion about goals, accommodations, assistive technology, and resources on campus

- Encouraged to register with Disability Services
# Baseline Demographics

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<tr>
<th>Demographic</th>
<th>FAST treatment (n=38)</th>
<th>Control (n=34)</th>
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</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>28.76 (10.02)</td>
<td>28.62 (10.91)</td>
</tr>
<tr>
<td>Age range</td>
<td>18-54</td>
<td>18-54</td>
</tr>
<tr>
<td>Gender, n (%) female</td>
<td>26 (68%)</td>
<td>23 (68%)</td>
</tr>
<tr>
<td>Ethnicity(^a), n (%)</td>
<td>14 (37%) Caucasian</td>
<td>16 (47%) Caucasian</td>
</tr>
<tr>
<td></td>
<td>8 (21%) African American</td>
<td>5 (15%) African American</td>
</tr>
<tr>
<td></td>
<td>5 (13%) Hispanic</td>
<td>5 (15%) Hispanic</td>
</tr>
<tr>
<td></td>
<td>7 (18%) Asian</td>
<td>7 (21%) Asian</td>
</tr>
<tr>
<td></td>
<td>4 (11%) other</td>
<td>1 (3%) other</td>
</tr>
<tr>
<td>Subject years of education, mean (SD)</td>
<td>14.08 (1.76)</td>
<td>13.62 (1.23)</td>
</tr>
<tr>
<td>Parental years of education, mean (SD)</td>
<td>14.70 (3.09)</td>
<td>13.78 (3.09)</td>
</tr>
<tr>
<td>Prior college attempts(^b), n (%)</td>
<td>20 (53%) 0 attempts</td>
<td>23 (68%) 0 attempts</td>
</tr>
<tr>
<td></td>
<td>9 (24%) 1 attempt</td>
<td>6 (18%) 1 attempt</td>
</tr>
<tr>
<td></td>
<td>9 (24%) 2 or more attempts</td>
<td>5 (15%) 2 or more attempts</td>
</tr>
<tr>
<td>Employment status, n (%)</td>
<td>16 (42%) unemployed</td>
<td>14 (41%) unemployed</td>
</tr>
<tr>
<td></td>
<td>16 (42%) PT</td>
<td>16 (47%) PT</td>
</tr>
<tr>
<td></td>
<td>6 (16%) FT</td>
<td>4 (12%) FT</td>
</tr>
</tbody>
</table>
## Baseline Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>FAST treatment (n=38)</th>
<th>Control (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic status, n (%)</td>
<td>27 (71%) mood disorder</td>
<td>25 (74%) mood disorder</td>
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<tr>
<td></td>
<td>21 (55%) anxiety disorder</td>
<td>16 (47%) anxiety disorder</td>
</tr>
<tr>
<td></td>
<td>5 (13%) psychotic disorder</td>
<td>5 (15%) psychotic disorder</td>
</tr>
<tr>
<td>Age first diagnosed, mean (SD)</td>
<td>21.16 (7.25)</td>
<td>20.12 (7.92)</td>
</tr>
<tr>
<td>Psychotropic medication status, n (%)</td>
<td>14 (37%) none</td>
<td>10 (29%) none</td>
</tr>
<tr>
<td></td>
<td>17 (45%) antidepressant</td>
<td>18 (53%) antidepressant</td>
</tr>
<tr>
<td></td>
<td>8 (21%) anxiolytic</td>
<td>4 (12%) anxiolytic</td>
</tr>
<tr>
<td></td>
<td>4 (11%) mood stabilizer</td>
<td>4 (12%) mood stabilizer</td>
</tr>
<tr>
<td></td>
<td>3 (8%) psychostimulant</td>
<td>3 (9%) psychostimulant</td>
</tr>
<tr>
<td></td>
<td>7 (18%) antipsychotic</td>
<td>5 (15%) antipsychotic</td>
</tr>
<tr>
<td></td>
<td>7 (18%) other</td>
<td>3 (9%) other</td>
</tr>
<tr>
<td>Ever hospitalized for psychiatric reasons, n (%)</td>
<td>12 (32%) yes</td>
<td>13 (38%) yes</td>
</tr>
</tbody>
</table>
Group Comparisons: Self-Reported Educational Difficulties
Educational Barriers Questionnaire, M. Mullen
Group Comparisons: Self-Reported Cognitive Strategy Use
Cognitive Problems & Strategies Assessment, E. Twamley

![Graph showing comparison between treatment and control groups over time. The graph indicates a significant increase in the treatment group from baseline to 4 months, while the control group remains relatively unchanged.](image-url)
Next Steps:

- Currently evaluating GPA and successful academic progress
- Analyze the impact on MCCB scores after 4 months
- Apply FAST intervention within programming
  - Always looking for new partners…let us know if you are interested
- Add a module (or two) on social skills
Thank You!

Please contact me:
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