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

Michelle G. Mullen, UMASS
Amy Banko, Rutgers University
Brittany Stone, Rutgers University

31st Annual Research & Policy Conference on Child, Adolescent, & Young Adult Behavioral Health

March 6, 2018
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

The contents of this presentation were developed under a grant with funding from the National Institute on Disability, Independent Living, and Rehabilitation Research, United States Department of Health and Human Services (NIDRR grant number H133G110239). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.
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>
<tr>
<td><strong>Total: 4%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All workers: $885</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 \textit{compensate} for cognitive barriers
- Tools for them to boost efficiency…work smart, not hard
- Skills for them to practice that can improve cognitive functioning
Table of Contents

Session 1 – Introduction and Calendars
Session 2 – Prospective Memory (Calendars, Lists, Linking Tasks)
Session 3 – Short-term Prospective Memory, Conversational Attention
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

<table>
<thead>
<tr>
<th>Demographic</th>
<th>FAST treatment (n=38)</th>
<th>Control (n=34)</th>
</tr>
</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>Ethnicitya, 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 attemptsb, 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>
</tr>
<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
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:
Michelle.Mullen@umassmed.edu

STAY INFORMED!

Sign up for our e-mail newsletter for our products and announcements!

Text TRANSITIONSACR to 22828

Visit us at
umassmed.edu/TransitionsACR