

POSTSECONDARY OUTCOMES OF A SCHOOL-BASED INTERVENTION FOR ADOLESCENTS WITH ADHD

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Agenda

- Learner Objectives
- Practice Model
- Background Information
- Method
- Results
- Discussion
- Implications

Learner Objectives

- Identify key areas of prevention for adolescents with ADHD prior to high school graduation
- Increase awareness of evidence-based interventions for high school students with ADHD to produce meaningful outcomes in young adulthood
- Identify strategies to support high school students with ADHD meet both proximal and distal goals.

NASP Practice Model

- Academic Interventions and Supports
- Mental and Behavioral Health Services
- Research and Evidence-Based Practice



Attention-Deficit Hyperactivity Disorder (ADHD) in Adolescence

- ADHD in adolescence is often associated with challenges with academic, organizational, and social functioning:
 - Homework/assignment tracking and completion
 - Initiation of and sustained focus on tasks
 - Organization of academic materials
 - Risk-taking behavior
 - Emotion regulation

School Impairment among Students with ADHD Predicts Postsecondary Outcomes

High school impairment

- Failing tests/classes
- Placement in remedial courses
- Lower achievement test scores
- Disciplinary problems
- Drop-out



Postsecondary challenges

- Less postsecondary educational attainment
- Lower postsecondary academic performance
- Higher rates of unemployment and termination
- Shorter job maintenance

Treatment Approaches for Adolescents with ADHD

- Skills training interventions supporting students with ADHD may prevent long-term difficulties
 - Advantages over pharmacological treatment (e.g., sustainable improvement, acceptability, targets specific challenges)
 - Organizational skills
 - Homework completion
 - Academic performance

The Challenging Horizons Program (CHP)

- Multicomponent, school-based intervention designed to address student's academic success, interpersonal behavior, and family functioning
- Individual Sessions (15-20 min, 2x per week)
 - Organizational Skills
 - Academic Skills
 - Problem-solving
- Group Sessions (10, 1 h concurrent evening sessions)
 - Interpersonal Skills Group
 - Parent Group

Academic and Organizational Benefits of the CHP

- Improvements in organizational skills
- Increased homework performance
- Sustained effects
- Stabilization of GPAs

CHP Adapted for High School Students

Middle School CHP

- After-school program
- 2-hour sessions, twice per week

High School CHP

- In-school coaching sessions, twice per week
- Addition of problem-solving component

- The CHP, first implemented with middle school students, was modified for the high school setting
 - Ensure feasibility
 - Prevent attrition
 - Promote problem-solving
- Students receiving approximately twice weekly sessions demonstrate maximal benefit

Organizational Checklist

BINDERS/ BOOKBAG	DATES						
Are your binders free from loose and irrelevant material (e.g., non-subject related material)? Electronic Considerations: Are your folders and files well organized & use consistent naming-convention?							
Is your planner present? Electronic Considerations: Can you access your electronic planner quickly and easily?							
Is your planner free of loose and irrelevant material?							
Inside your binders: are there <i>clearly defined</i> locations for storing incomplete assignments? “I keep them in _____.” Electronic Considerations: Same question should apply to electronic folders and files.							
Inside your binders: are there <i>clearly defined</i> locations for storing completed assignments (i.e., those assignments ready to be turned in.)? “I keep them in _____.” Electronic Considerations: Same question should apply to electronic folders and files.							
Inside the binders: are there clearly defined locations for storing all other class papers (e.g., graded assignments, class notes, class handouts)? “I keep them in _____.” Electronic Considerations: Same question should apply to electronic folders and files.							
Is there a <i>clearly defined</i> central location for recording all long-term projects for each subject? “I record them in _____.” Electronic Considerations: Same question should apply to electronic folders and files.							

Planner Checklists

Long-term projects/assignments: Once a week, answer the following questions about the <u>entire</u> previous week.	DATES			
Has a long-term project/assignment, in any class, been recorded in the last week?				
Was the subject recorded in which the assignment is due?				
Was the due date of the assignment recorded?				
Was there sufficient detail recorded in order to complete the project?				

Short-term projects/assignments: Once a week, answer the following questions about the <u>last time</u> you could have been assigned work/ the last time you had the class. <i>*See below for examples.</i>		DATES		
Language Arts	Has a short-term project/assignment been recorded in the last week, including “none”?			
	Was the assignment recorded in the proper location so the subject is clear? is due?			
	Was the due date of the assignment recorded?			
	Was there sufficient detail recorded in order to complete the project?			
	Record the NUMBER of missing assignments.			
Math	Has a short-term project/assignment been recorded in the last week, including “none”?			
	Was the assignment recorded in the proper location so the subject is clear?			
	Was the due date of the assignment recorded?			
	Was there sufficient detail recorded in order to complete the project?			
	Record the NUMBER of missing assignments.			

Long-term Effects of Interventions for Adolescents with ADHD

- Limited research examining long-term effects of psychosocial interventions for youth with ADHD
 - Modest benefits of intensive summer treatment program for high school students with ADHD on organizational skills and symptom severity observed at four-year follow-up (Sibley et al., 2022)
- Sustained effects of school-based interventions for adolescents with ADHD on skills critical for success in emerging adulthood remain understudied

Purpose

To inform prevention efforts of school mental health professionals who aim to support the long-term success and well-being of students with ADHD

Research Question:

- Do young adults with ADHD who participated in a school-based organizational skills intervention in high school exhibit better educational and occupational outcomes relative to control group participants?

Participants – Original RCT Sample

Original RCT Sample $N = 185$ (CHP = 92; CC = 94)	
	% / $M(SD)$
Age at Eligibility	15.09 (.88)
Gender	79% Male; 21% Female
Race	
Asian	1%
Black	15%
White	78%
Not listed	5%
Ethnicity – Hispanic	11%

- ❖ Exclusionary criteria included an IQ below 75 and substance use risk as well as diagnoses of bipolar disorder, psychosis, and/or obsessive-compulsive disorder

Participants – Long-term Follow-up (LTFU)

Participants retained at LTFU $N = 73$ (CHP = 32; CC = 41)	
	% / $M(SD)$
Age at LTFU	20.96 (1.12)
Age at Eligibility	15.20 (.87)
Gender	71% Male; 29% Female
Race	
Asian	3%
Black	15%
White	79%
Not listed	3%
Ethnicity – Hispanic	5%

- ❖ LTFU sample did not differ significantly on baseline grade, race, medication status, parent education, comorbid conduct disorder, or ADHD symptom severity
- ❖ Significantly greater proportion of females (29% vs. 21%) and significantly smaller proportion of Hispanic participants (5% vs. 11%) retained at LTFU relative to the original RCT

Procedures

- Retention efforts included phone calls, text messages, mailed letters, newsletters, birthday and holiday cards, emails, and social media outreach
 - Mean # of contact attempts prior to participation = 7.85 (range = 1 to 23)
- LTFU occurred **4-7 years** after RCT eligibility ($M = 5.05$; $SD = .62$, range = 4.31 to 7.72)
- Participants completed self-report measures of living, financial, educational, and occupational status in an in-person study session or an online survey based on their location and availability

Measures

■ Educational functioning (self-report)

- Whether they were currently enrolled in school (i.e., “yes/no”)
- Highest level of educational attainment (e.g., high school diploma, second year of postsecondary school)
- Most recent GPA

■ Occupational functioning (self-report)

- Number of times quit or fired from a job
- Job history (i.e., positions held, duration of positions [in months], reasons for leaving)

Data Analytic Plan

■ Independent sample *t*-tests

- Job maintenance
- Postsecondary GPAs

■ Chi-square tests of independence

- Number of jobs quit (i.e., 0, 1, 2+) or fired from (i.e., never, terminated at least once)
- Postsecondary educational attainment (i.e., completed or partially completed a postsecondary education program, high school or less)

Results – Educational Outcomes

Outcome	CHP	CC	Test Statistic	<i>p</i>
Postsecondary education completion (%)	48.4	37.5	$\chi^2[1, N=71]=0.85$.36
Postsecondary GPA (<i>M</i>)	2.92	3.18	$t[27]=-1.38$; Hedge's $g = .51$.09

- ***More*** CHP participants completed or partially completed a postsecondary education program than CC participants
- Among those that went on to postsecondary school, CHP participants reported ***slightly lower*** postsecondary GPAs than CC participants

Results – Occupational Outcomes

Outcome	CHP	CC	Test Statistics	<i>p</i>
Longest job maintained (mean # of months)	17.60	14.58	$t[64]=.97$; Hedge's $g = .24$.17
% who have never been fired	78	58	$\chi^2[1, N=73]=3.13$.08
% who have never quit a job	25	26.8	$\chi^2[1, N=73]=0.22$.90
% who have quit one job	28.1	31.7	$\chi^2[1, N=73]=0.22$.90
% who have quit multiple jobs	46.9	41.5	$\chi^2[1, N=73]=0.22$.90

- CHP participants reported a **greater** number of months at their longest job maintained
- **Fewer** CHP participants reported they had been fired from a job
- No meaningful differences in number of jobs quit
 - Reasons for leaving included “found a better job,” “left for school,” “not enough pay,” and conflicts with coworkers/managers

Discussion

- This study uniquely contributes to research evaluating and detecting long-term, youth psychosocial treatment effects
- Young adults with ADHD who received a multi-component training intervention while in high school were:
 - Less likely to be fired from a job
 - Maintained longer employment
 - Enrolled in or completed a postsecondary education program at higher rates
- Effects on postsecondary GPA and the number of jobs quit were less clear
- Although effects are not statistically significant due to a small sample size, findings are likely *clinically significant*

Limitations and Future Directions

- Research with larger samples and multi-informant measures of educational and occupational functioning is needed
- Additional research is needed to facilitate feasibility and acceptability of an effectiveness trial of the high school-based CHP as administered by school mental health professionals

Implications for School Psychologists

- Advocate for skills-training interventions targeting functional skills (e.g., time management, assignment tracking, problem-solving) at the secondary level
- Consider cost-effectiveness of brief, coaching sessions in preventing proximal and distal challenges for students with ADHD
- Integrate skills training interventions into the IEP/504 plans that many students with ADHD are already receiving as well as other resource spaces (e.g., study hall, homeroom)

Questions?

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