

Workshop: School-Based Behavioral and Academic Strategies for Students with ADHD

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Agenda

- Overview of school-based interventions
- Key concepts for developing school-based intervention plan
- Examples of school-based interventions using multiple mediators
- Small group discussion of case examples
- Large group discussion of small group activities
- Progress monitoring & data-based decision making
- Need for special education and/or educational accommodations
- Wrap-up and Q/A

Part 1 of 4

Most Common Interventions for Children with ADHD

- Psychotropic Medication (e.g., CNS stimulants such as methylphenidate)
- Home-based contingency management (behavioral parent training)
- School-based contingency management interventions (e.g., token reinforcement)
- Academic intervention/tutoring
- Daily report card or school-home notes

Problems with Currently Available Research Literature

- Limited data on school-based interventions in gen. ed. settings
- “One size fits all” approach is typical
- Emphasis on reduction of disruptive behavior rather than improvement in social behavior or academic skills
- Few studies of adolescents
- Focus on short-term outcomes & limited data on generalization of effects

School-based Interventions: Key Concepts

- Balanced “game plan”
- Use multiple mediators (not just reliance on classroom teacher)
- Individualize intervention plan based on assessment data (e.g., functional assessment)

Balanced Game Plan for Intervention

- Proactive (antecedent-based) strategies to prevent challenging behavior
- Instructive strategies to directly address skill deficits in academic and/or social functioning
- Motivational (consequence-based) strategies to encourage appropriate behavior

School-Based Interventions for ADHD

- ✿ Manipulating Antecedents (Proactive)
 - Post Rules
 - Workload Adjustment
 - Providing Choices

School-Based Interventions for ADHD

- ❁ Instructive Strategies
 - Direct instruction
 - Peer tutoring
 - Organizational/study skills training

School-Based Interventions for ADHD (cont.)

- ✿ Manipulating Consequences (Reactive)
 - Token Reinforcement
 - Verbal Reprimands
 - Response Cost
 - Time Out from Positive Reinforcement
 - Self-Management

Possible Mediators for School-Based Interventions (DuPaul & Power, 2000)

- Teacher-mediated
 - Instructional strategies; Token reinforcement
- Parent-mediated
 - Parent tutoring; Home-based reinforcement
- Peer-mediated
 - Classwide peer tutoring
- Computer-assisted
 - Drill-and-practice
- Self-mediated
 - Self-monitoring; Self-management

Design Interventions Based on Functional Assessment

❁ Descriptive analysis

- Identify antecedents, consequences, sequential conditions
- Direct observation, teacher interview, parent interview, student interview

❁ Experimental Analysis

- Develop hypotheses related to function of behavior
- Test hypotheses using direct observation

❁ Develop intervention plan based on results of experimental analyses

Possible Functions of ADHD Behavior

- ✿ Avoid/escape effortful tasks
- ✿ Obtain peer attention
- ✿ Obtain teacher attention
- ✿ Obtain tangible object
- ✿ Sensory stimulation

Link Interventions to Behavioral Function

- ❁ Avoid/escape effortful tasks
 - ❁ Increase stimulation value of task and/or provide brief “attention breaks”
- ❁ Obtain peer attention
 - ❁ Provide peer attention following appropriate behavior (e.g., peer tutoring)
- ❁ Obtain teacher attention
 - ❁ Provide attention following appropriate behavior while ignoring inappropriate behavior (or time out from positive reinforcement)

Part 2 of 4

Examples of School-Based Strategies Using Multiple Mediators

Teachers/School Personnel as Mediators

TEACHING TECHNIQUES TO PREVENT BEHAVIOR PROBLEMS

- ❁ Remind students of rules
- ❁ Maintain eye contact with students
- ❁ Remind students about expected behaviors
- ❁ Circulate thru classroom to monitor/provide feedback
- ❁ Use nonverbal cues to redirect
- ❁ Maintain brisk pace of instruction
- ❁ Insure understanding of activities
- ❁ Manage transitions in well-organized manner
- ❁ Communicate expectations about use of class time

TOKEN REINFORCEMENT

- ❁ Establish behavioral or academic goals
- ❁ Choose several target situations
- ❁ Break situation (task) into smaller units
- ❁ Tokens (points, stickers) provided immediately
- ❁ Tokens turned in for privileges later in day or week
- ❁ Factors to consider:
 - Practicality for teachers
 - What to use for rewards
 - “Satiation” effect
 - Expansion to additional situations
 - Gradual “weaning” process
 - Reactions of other students

“DEAD PERSON’S RULE” (Lindsley, 1991)

- ❁ If a dead person can do it, it’s not a good target behavior for intervention
- ❁ Examples: sit still, stay on-task, don’t call out, don’t fight
- ❁ Appropriate target behaviors involve active responding
- ❁ Examples: completion of tasks, accuracy on work, participating in class discussions, getting along with others

RESPONSE COST

- Removal of token reinforcement following inappropriate behavior and/or rule violation
- Effective in reducing disruptive behavior & may result in better maintained behavior when intervention is faded
- Attention training system video

Teachers and Parents as Mediators

Organizational and Study Skills Training

- Challenging Horizons Program (Evans et al., 2004) <http://www.oucirs.org>
- Homework, Organization, and Planning Skills (HOPS) Interventions (Langberg, 2011)

Challenging Horizons Program (Evans, Axelrod, & Langberg, 2004) <http://www.oucirs.org>

- School based treatment program for middle school youth with ADHD
 - After-school model
 - 3 days per week throughout school year
- Work with parents, teachers, community providers
 - Social skills
 - Study skills
 - Homework management

CHP: Academic Interventions

<http://www.oucirs.org>

- Homework Management Plan
- Organization skills
- Taking Notes
- Study Skills
- Written language

CHP: Organizational Skills

■ Assignment notebook checking

– Methods

- ❖ Check assignment notebook and compare to “gold standard”
- ❖ Record percentage
- ❖ Provide contingencies
- ❖ Report to parents
- ❖ Teacher initials
- ❖ Don't facilitate - If we only make task of tracking assignments easier (e.g., teacher writes them down for a child) then we remove incentives for independence

CHP: Organizational Skills

- Notebooks (binders), Book bags, & Lockers
 - Develop a checklist
 - Dump, clean, & sort
 - Provide contingencies
 - ❖ Begin with daily checks
 - ❖ Taper towards weekly random checks
 - ❖ Always accompany a check with fixing errors

CHP: Organizational Skills

- Example checklist for Binder
 - Section for each class student is taking
 - HW folder in front of binder with HW to be completed on left side & HW to be turned in on right side
 - All folders & papers secured by three-rings & no loose papers or folders

CHP: Note-Taking

■ Note taking process

- Format
- Present information, think aloud, and coach notes
- Begin to ask class to help with think aloud and discuss main ideas & details
- Fade prompts

■ Notes

- Check quality of notes
- Main ideas harder than details

CHP: Note-Taking

■ Generalization

- This is the hardest part
- Obstacles to independently taking notes in class
 - ❖ Feeling different
 - ❖ Recognizing opportunities
 - ❖ Don't feel like it
- Teacher facilitation

CHP: Homework Management

■ Parents require:

- Amount of time doing academic work
- Quality products at end of time

■ Details

- Amount of time is negotiated based on grades
- If no school work brought home, parents assign work
- Home privileges contingent on completion of time

CHP: Homework Management

- After-school program (8 weeks)
 - Counselors check accuracy of HW assignment recording & teacher initialing
 - Weekly check with teachers to prevent forging
 - 55-min group intervention time including HW completion, math worksheets, outlining chapters in texts or recreation time
 - HW completed first before activities
 - Recreation time based on earned points
- Two 1-hr parent sessions in evening
 - Description of after-school program
 - Transfer of forms and tracking to parents

CHP Outcomes

- Some initial promising group outcome data
 - Improvements in meeting organizational skills criteria, HW accuracy, & academic performance (e.g., Langberg et al., 2007)
- Individuals vary greatly in response
 - Some students show mastery within days
 - Others display “honeymoon” followed by decline and then gradual improvement
 - Still others show gradual improvement across months
 - Some show no improvement
- Important to persist past the low points that characterize the great variability in behavior and performance associated with ADHD particularly in adolescence

Other Homework Programs

- Homework Success for Children with ADHD (Power, Karustis, & Habboushe, 2001)
- Meyer & Kelley, 2007

Homework & Study Skills Intervention (Meyer & Kelley, 2007)

- $N = 42$ students (36 boys, 6 girls) in 6th to 8th grade all of whom had ADHD & homework problems
- Intervention included self-monitoring of HW completion and training in SQ4R method (for social studies reading comprehension & test preparation)
 - Survey titles & headings prior to reading
 - Formulate Questions
 - Read to find answers to questions
 - Recite answers to questions in own words
 - Write answers to questions
 - Review text & question answers
- Training held over 1-2 sessions

Homework & Study Skills Intervention (Meyer & Kelley, 2007)

- Parents prompted teen to begin HW, organize materials, & complete monitoring checklists daily
- Parents did not participate in completing checklist or critiquing accuracy; provided contingencies for completion of HW and monitoring checklists (80%)
- Results indicated significant reduction in HW problems and improvements in classroom preparedness as reported by teachers relative to a wait-list control group
- Improvements maintained at 4-wk follow-up
- Parents and students reported high levels of satisfaction

CHECKLIST BEHAVIORS	YES	NO
1. I turned in my homework today		
2. I wrote down my HW assignments & obtained teacher initials		
3. I brought home materials needed to do HW		
4. I completed all homework		
5. I checked my work		
6. I began my HW within 30 min of arriving home		
7. I completed my HW in my quiet area		
8. I completed the steps in my SQ4R study strategy		
9. I organized my book bag & notebook so that I can find and turn in assignments tomorrow		
10. I needed parent reminders to complete HW		
11. I needed parent reminders complete checklist		
12. I needed parent reminders to organize		
13. I received my reward for completing form		

COMPONENTS OF EFFECTIVE HOME-SCHOOL COMMUNICATION PROGRAM

- ❁ Daily/weekly goals specified in a positive manner
- ❁ Both academic and behavioral goals included
- ❁ Small number of goals at a time
- ❁ Quantitative feedback about performance
- ❁ Feedback provided by subject or class period
- ❁ Communication is made on a regular basis (either daily or weekly)
- ❁ Home-based contingencies tied to performance (both short-term and long-term)

Daily Report Card Example

Class Periods/Subjects

Behaviors to be rated:	1	2	3	4	5	6	7
Class participation							
Classwork performance							
Follows class rules							
Gets along well w/others							
Quality of HW							
Teacher's initials							
Comments on back							

Examples of Daily Report Card Targets

■ Academic

- Returns completed homework
- Stays on task with X or fewer reminders
- Completes assignments in specified amount of time
- Completes assignments with X% accuracy
- Begins work with X or fewer reminders
- Organized/prepared/on time for class
- Answers/responds to teacher questions

Examples of Daily Report Card Targets

■ Social behavior

- Follows directions with X or fewer reminders
- Respectful to teacher/accepts feedback appropriately
- Raises hand with X or fewer reminders
- When upset, will display appropriate coping behaviors
- Has X or fewer rule violations
- Appropriate behavior in specials/cafeteria

HOME-SCHOOL PROGRAM (cont.)

- ❁ Parental cooperation solicited prior to implementation
 - Student input into goals and contingencies
- ❁ Goals/procedures modified as necessary
- ❁ DRC associated with reduction in rule violations and greater academic productivity (Vannest et al., 2010)
- ❁ More information:
http://casgroup.fiu.edu/pages/docs/1401/1321381613_How_To_Establish_a_School_DRC.pdf
<http://www.directbehaviorratings.com>

Peers as Mediators

CLASSWIDE PEER TUTORING

- ❁ Divide classroom into pairs
- ❁ Provide academic scripts
- ❁ Take turns tutoring
- ❁ Immediate feedback & error correction
- ❁ Teacher monitors progress & provides bonus points
- ❁ Points tallied & progress charted
- ❁ Pairs change weekly
- ❁ See video example

CWPT Effects on ADHD (DuPaul et al., 1998)

- 18 children w/ADHD & 10 comparison students (1st to 5th grade gen. ed.)
- CWPT increased active engagement w/ reduction of off-task behavior
- 50% of ADHD improved academically
- Positive effects for comparison peers
- High rates of student and teacher satisfaction

Computer Technology as Mediator

Computer-Assisted Instruction

- 1. Delivery of instruction (e.g., aid to acquisition of new material)
- 2. Drill-and-practice (e.g., fluency and retention of already-instructed material)
- May be effective for both purposes with more evidence for drill-and-practice
- Effects due to higher stimulation value of material, self-paced, & provision of frequent, immediate feedback?

CAI: Controlled Case Study (Ota & DuPaul, 2002)

- 3 students with ADHD in 4th-6th grade at a private school for children with LD
- All with math skill acquisition difficulty
- All three students receiving medication
- Math Blaster software introduced sequentially across students while assessing on-task and math skills (CBA)
- Gains in on-task behavior and slope of math skill acquisition (for 2 out of 3)

CAI: Replication in Public School Setting (Mautone, DuPaul, & Jitendra, 2005)

- 3 2nd through 4th grade children in general education or special education classrooms
- All met research criteria for ADHD & none being treated with psychostimulants
- Baseline= typical math instruction & work
- CAI = Math Blaster software 15 min X 3 days per week
- Multiple baseline across participants design
- Math fluency, direct observations of behavior, & consumer satisfaction ratings were measures

Part 3 of 4

Target Student as Mediator

Self-monitoring of organizational skills

- Adolescents with ADHD typically have difficulties in class prep. and HW
- For some students, problems related to poor attention to detail and low motivation to complete mundane tasks
- Possible students can be trained to monitor own behaviors (e.g., being ready for class)

Self-monitoring of org. skills: Controlled case study (Gureasko, DuPaul, & White, 2006)

- Three 7th grade students with ADHD
- All had significant problems being prepared for class
- Checklist of preparatory behaviors developed with teachers (% steps)
- Training in self-monitoring (4 days)
- Self-monitoring followed by fading
- Gains in organizational skills maintained without treatment
- Replicated with additional 6 middle school students and extended effects to homework performance (Gureasko-Moore et al., 2007)

SELF-MANAGEMENT PROGRAM

- ❁ Initially incorporates external and internal evaluation but works toward complete self-monitoring and evaluation
- ❁ Teacher and student independently “grade” student performance regarding behavior and academics for specified work period
 - Established performance criteria
 - Points earned for performance
 - Bonus points for “matching” ratings
 - Penalties for “inflated” ratings
 - Points turned in for school based or home based privileges

Sample Self-Management Criteria

- ❁ 5 = Excellent
 - Followed all rules for entire interval; Work 100% correct
- ❁ 4 = Very Good
 - Minor infraction of rules; Work at least 90% correct
- ❁ 3 = Average
 - No serious rule offenses; Work at least 80% correct
- ❁ 2 = Below Average
 - Broke rules to some degree: Work 60 to 80% correct
- ❁ 1 = Poor
 - Broke rules almost entire period; Work 0 to 60% correct
- ❁ 0 = Unacceptable
 - Broke rules entire period; No work completed

SELF-MANAGEMENT (cont.)

- ❁ Gradual weaning from external ratings
 - Longer work periods to be rated
 - Periodic, random “matching” challenges
 - Eventual reliance on self-ratings only
- ❁ Factors to consider:
 - Practical constraints
 - “Drift” of student ratings
 - Prepare student using external system

Group Discussion Exercise: Case Examples

- For each case:
 - Identify 3 goals for school-based intervention
 - Design balanced intervention plan with multiple mediators
 - Develop plan for tx evaluation

Part 4 of 4

INTERVENTION EVALUATION

- Periodic collection of assessment data (e.g., teacher ratings, observations, academic performance measures)
- Consumer satisfaction ratings
- Comparison with normal peers
- Revision of treatment plan based on assessment data

Data-Based Decision Making-- Problem Identification

(Kratochwill & Bergan, 1990; Witt, Daly, & Noell, 2000)

- Teacher Education on ADHD
- Academic area(s) of concern
- Identify antecedent conditions
- Child's typical response to antecedents
- Identify consequent conditions
- Patterns to academic behavior problems?
- Goal-setting and prioritizing
- Specifics of lesson to be observed for academic assessment
- Agree on additional observational procedures based on data-driven hypotheses

Data-based Decision Making- Academic Assessment

- Classroom observation
 - Information about teacher routine that occurs
 - Student, teacher, and peer behaviors
- Review student work products in comparison to peers
- Basic skills assessment (CBA data)

Data-Based Decision Making: Problem Analysis

- Determine specifics of intervention plan based on deficits & hypotheses
- Consultant may train the teacher and/or the student(s) on intervention implementation
- Progress monitoring every week; data collected by teacher and/or consultant
- Treatment integrity and feedback biweekly

Data-Based Decision Making: Treatment Evaluation

- Approximately 4 weeks into intervention
- Use visual analysis to determine if:
 - mastery
 - no progress
 - adequate progress
 - inadequate progress
 - motivation problem
- Determine next steps (i.e., leave plan in place, simplify, redefine goals, improve antecedents, retrain)

School Services for Students with ADHD

- ❁ Qualifies for special education on basis of having another disability (e.g., LD)
- ❁ Qualifies for special education on basis of “other health impairment”
- ❁ Qualifies for accommodations on basis of Section 504

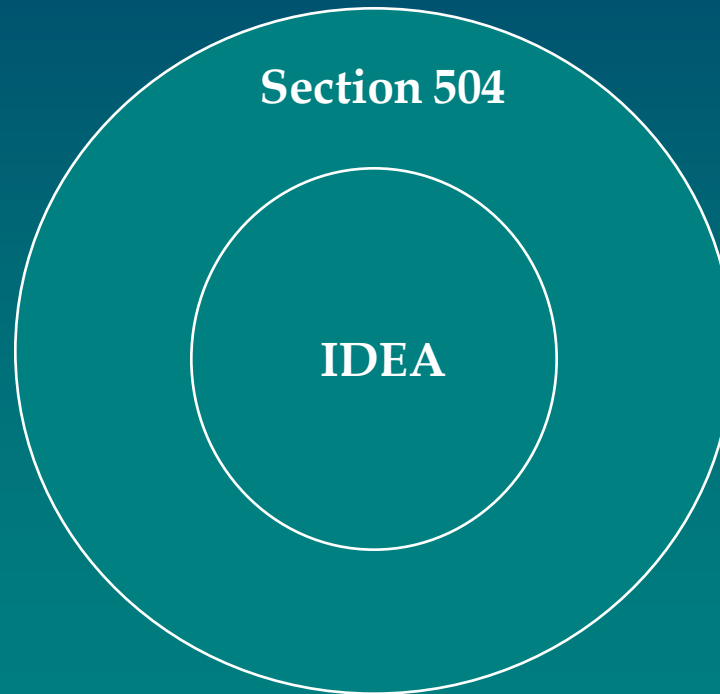
ADHD as “Other Health Impaired”

- ❁ Chronic or acute health problem that results in limited alertness?
- ❁ Adversely affects educational performance?
- ❁ Are special education and/or related services necessary?

Accommodations for ADHD based on Section 504

- ❁ Physical or mental impairment which substantially limits one or more major life activities
- ❁ Learning, speaking, walking, seeing, hearing, or caring for one's self
- ❁ Is the degree of impairment substantial?

Relation of IDEA & Section 504



Interventions for Students with ADHD: Guiding Principles

- Stimulant medication is effective treatment for reducing ADHD symptoms
- Psychosocial (behavioral) treatments at home & school address impairments in functioning in addition to symptomatic behaviors
- Intervention design linked directly to assessment data (e.g., functional assessment)
- Consultative problem-solving process integral to intervention design
- Intervene at “point of performance”
- Go beyond “train and hope”
- Intervention evolves based on ongoing assessment

Guiding Principles for Intervention (cont.)

- All behavior serves a purpose; intervention should lead to functionally equivalent behavior
- Aim for balance among proactive, instructive, and reactive strategies
- Use multiple mediators to deliver intervention
- Typically no single intervention is sufficient; multi-component and multi-setting intervention is presumed more effective

For more information, please go to the main website and browse for related videos on this topic or check out our additional resources.

Additional Resources

Online resources:

1. Center for Children and Families website: <http://ccf.fiu.edu>
2. Challenging Horizons Program : <http://www.oucirs.org>
3. Society of Clinical Child and Adolescent Psychology website: <http://effectivechildtherapy.com>

Books:

1. DuPaul, G.J., & Stoner, G. (2003). *ADHD in the schools: Assessment and intervention strategies (2nd ed.)*. New York: The Guilford Press.
2. Greenwood, C.R., Seals, K., & Kamps, D. (2010). Peer teaching interventions for multiple levels of support. In M.R. Shinn & H.M. Walker (Eds.), *Interventions for achievement and behavior problems in a three-tier model including RTI*. (pp. 633-676). Bethesda, MD: National Association of School Psychologists.

Peer-reviewed Journal Articles:

1. DuPaul, G. J., Weyandt, L. L., & Janusis, G. M. (2011). ADHD in the classroom: Effective intervention strategies. *Theory into Practice, 50*(1), 35-42.
2. Gureasko-Moore, S., DuPaul, G. J. & White, G. P. (2007). Self-management of classroom preparedness and homework: Effects on school functioning of adolescents with attention-deficit/hyperactivity disorder. *School Psychology Review, 36*, 647-664.
3. Meyer, K., & Kelley, M. L. (2007). Improving homework in adolescents with attention-deficit/ hyperactivity disorder: Self vs. parent monitoring of homework behavior and study skills. *Child & Family Behavior Therapy, 29*, 25-42.
4. Vannest, K. J., Davis, J. L., Davis, C. R., Mason, B. A., & Burke, M. D. (2010). Effective intervention with a daily behavior report card: A meta-analysis. *School Psychology Review, 39*, 654-672.

Manuals:

1. Langberg, J. M. (2011). *Homework, organization and planning skills (HOPS) interventions: A treatment manual*. Bethesda, MD: National Association of School Psychologists (NASP) Publications.
2. Power, T. J., Karustis, J. L., & Habboushe, D. F. (2001). *Homework success for children with ADHD: A family-school intervention program*. New York: Guilford Press.
3. Witt, J. C., Daly, E. M., & Noell, G. (2000). *Functional assessments: A step by step guide to solving academic and behavior problems*. Longmont, CO: Sopris West.

