

Best Practices in School-Based Interventions for ADHD

George J. DuPaul, Ph.D.

School Psychology Program

Lehigh University

Bethlehem PA

CHADD Conference, Nov. 2008

Disclosure

- I have no actual or potential conflict of interest in relation to this program/presentation.

What are the most common school difficulties associated with ADHD?

- High rates of disruptive behavior
- Low rates of engagement with academic instruction and materials
- Inconsistent completion and accuracy on schoolwork
- Poor performance on homework, tests, & long-term assignments
- Difficulties getting along with peers & teachers

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 tutoring
- Daily report card or school-home notes

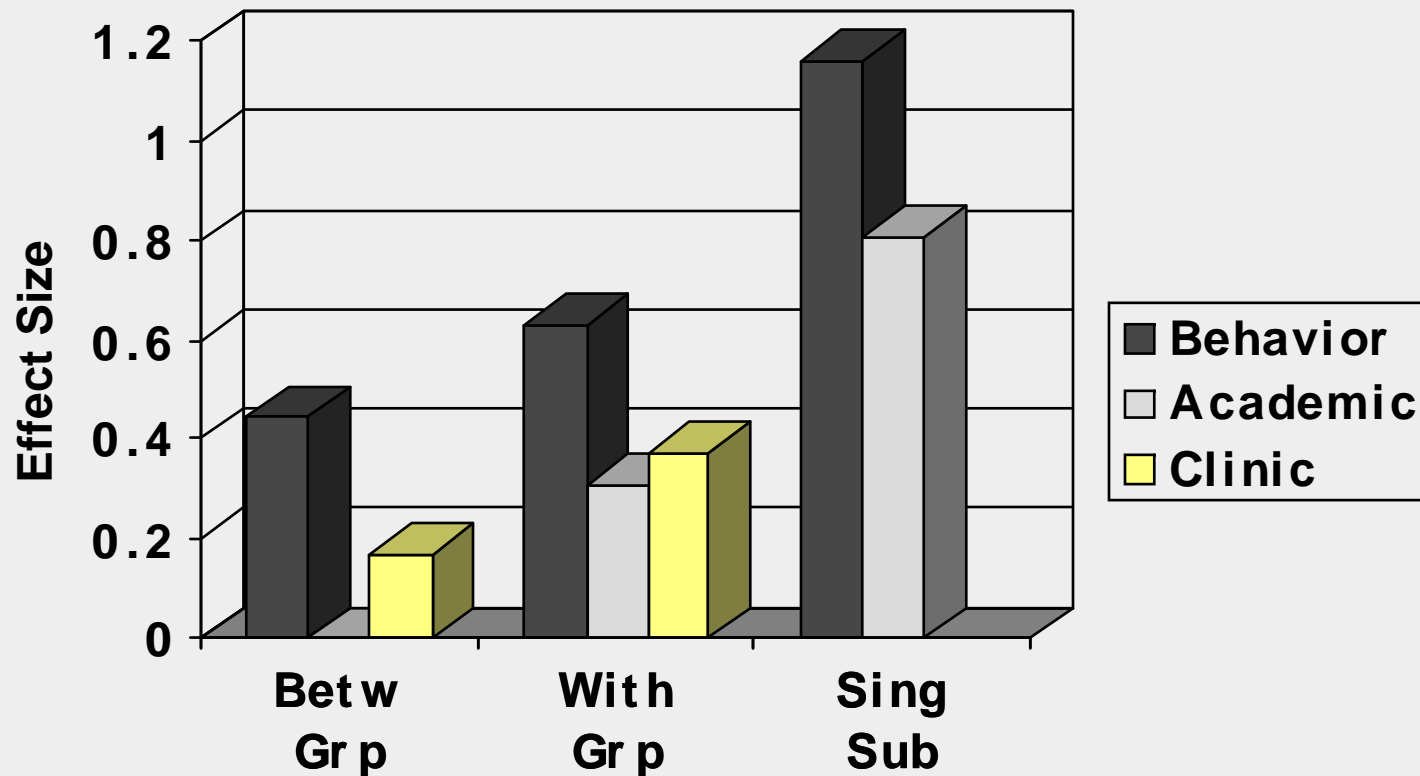
Problems with Currently Available Research Literature

- 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

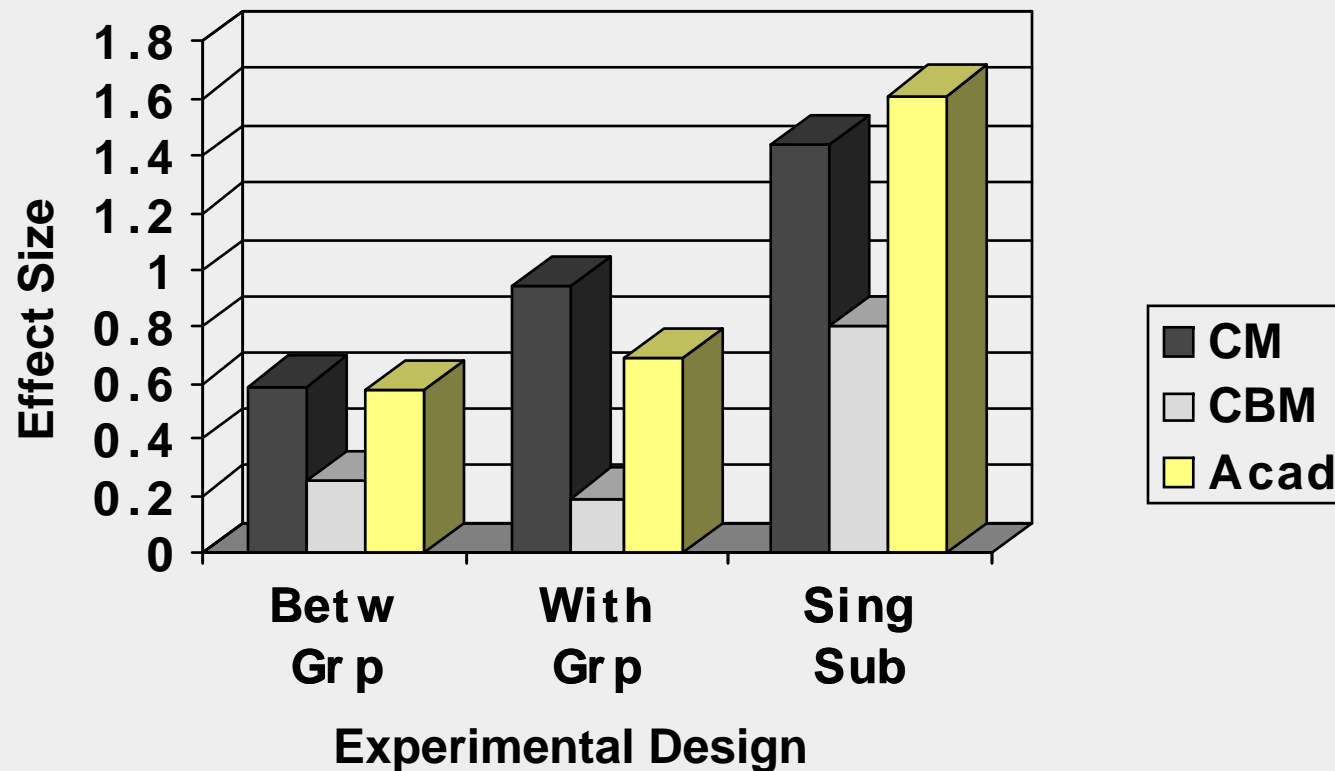
School Interventions: Meta-Analytic Findings

- Moderate to large effects on classroom behavior
- Smaller effects on academic performance
- Contingency management and academic interventions relatively similar in effects on behavior
- Cognitive interventions less effective
- Need more effective interventions for academic difficulties

School-based Intervention for ADHD: A Meta-analysis (DuPaul & Eckert, 1997)



School-based Intervention for ADHD: Effects on Behavior



School-based Interventions

- Balanced “game plan”
- Use multiple mediators (not just reliance on classroom teacher)
- Consider behavioral function
- Link intervention design to assessment data
- Evaluate outcomes regarding functional impairment

Balanced “Game” Plan



- Too often rely solely on defense (reactive) strategies
- Need a strong “offense” (proactive) and a strong “defense” (reactive)
- Intervention plan should always include both proactive & reactive procedures (emphasis on positive)

School-Based Interventions for ADHD

- _ Manipulating Antecedents (Proactive)
 - Post Rules
 - Instructional Modifications
 - Workload Adjustment
 - Providing Choices
 - Peer Tutoring

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

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)

Examples of School-Based Strategies Using Multiple Mediators

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
- Factors to consider:
 - Practicality for teachers
 - What to use for rewards
 - “Satiation” effect
 - Expansion to additional situations
 - Gradual “weaning” process
 - Reactions of other students

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)

HOME-SCHOOL PROGRAM (cont.)

- _ Parental cooperation solicited prior to implementation
 - Student input into goals and contingencies
- _ Goals/procedures modified as necessary

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

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

- 18 ch. 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

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)

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)

Interventions for Students with ADHD: Guiding Principles

- Stimulant medication is single most effective treatment for reducing ADHD symptoms
- Psychosocial (behavioral) treatments at home & school address impairments in functioning
- 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 between proactive and reactive strategies
- Typically no single intervention is sufficient; multi-component and multi-setting intervention is presumed more effective
- TO DOWNLOAD SLIDES GO TO
<http://www.lehigh.edu/education/adhd/>