School-based Interventions for Students with ADHD

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Agenda

- Brief overview of treatment for ADHD
- Overview of school-based interventions
- Principles underlying school-based interventions
- Behavioral classroom strategies
- Academic support
- Home-school communication
- Self-regulation strategies
- Integrating medication & school-based intervention
- Guiding principles for school-based intervention
- Wrap-up & discussion
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
School-Based Interventions for Students with ADHD

- Behavioral classroom strategies
- Academic support
- Home-school communication
- Self-regulation strategies
School-based Interventions: Core Principles

- Balanced treatment plan
- Use multiple mediators (not just reliance on classroom teacher)
- Consider behavioral function
- Link intervention design to assessment data
Balance between Proactive and Reactive Strategies

- Proactive strategies involve doing something *before* behavior occurs to reduce probability of problems occurring
- Reactive strategies involve doing something *after* behavior occurs to either reduce or increase probability of future occurrence
- Too often rely solely on reactive strategies
- Need to increase focus on being preventive and proactive
- 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 (Accommodation)
- 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

- 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)
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

See Paine et al. (1983)
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 at end of day
- Could also incorporate response cost, if necessary
STUDENT CONTRACT

Specify several short-term objectives

Identify possible contingencies
  – Positive for reaching goal
  – Aversive for rule violations

Determine time period for meeting goals

Include both short and long-term payoffs

Agreement by both student and teacher (counselor) to follow through

Periodic revisions of contract as necessary
Academic Support

- Explicit instruction in academic skills
- Peer tutoring
- Computer-assisted instruction
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
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

**Behaviors to be rated:**

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Class Periods/Subjects

Barkley & Murphy (2006)
HOME-SCHOOL PROGRAM (cont.)

- Parental cooperation solicited prior to implementation
  - Student input into goals and contingencies
- Goals/procedures modified as necessary
- Associated with reduction in rule violations and greater academic productivity (see Owens et al., 2012)

More information:
- [http://www.directbehaviorratings.com](http://www.directbehaviorratings.com)
HOME-SCHOOL PROGRAM (cont.)

- Probability of positive tx response higher for younger children (K-3) who have never repeated a grade (Owens, 2013)

- Largest improvement obtained in 1st month (ES = .78) with gradual reduction in incremental benefit over time (Owens, 2013)

- Thus, program should be tried for at least one month before discontinuing
Self-Regulation Strategies for ADHD

- Self-monitoring
- Self-evaluation & self-reinforcement
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-EVALUATION 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-Evaluation 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
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
Integrating Interventions

- Research indicates that combined medication and behavioral intervention is optimal for many children with ADHD

- Possible reduction in “dosage” of complementary treatments
  - Examples: MTA study; classroom intervention study (Fabiano et al., 2007)
Frequency of Classroom Rule Violations (Fabiano et al., 2007)
Percentage of Seatwork Completed (Fabiano 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 behavioral assessment)
- School-based interventions associated with moderate to large effects on academic & behavioral outcomes
- Academic interventions for academic outcomes
- Behavioral, self-regulation, and academic interventions for behavioral outcomes
- Multiple mediators beyond classroom teacher should be involved
Guiding Principles for Intervention (cont.)

- Intervening as early as possible is important, especially in key functioning areas (e.g., reading)
- 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
- Whenever possible, school-based interventions should be tried before medication and/or educational accommodations
Questions and Discussion
References


References


References


References