

Psychosocial Intervention for AD/HD: *How Well Does It Work?*

Many children and adolescents with AD/HD, including individual "talk" therapy, play therapy, family therapy, sensory integration therapy and a host of others. Yet only one form of psychosocial treatment has been established in empirical trials as clearly effective for this population: the broad class of behavioral therapies, including parent training, school consultation and social skills training. The questions I will address relate to how well these kinds of treatment "work" — for which kinds of problems, how effectively, for how long and for which subgroups of youth with AD/HD? I will also discuss how well they compare and combine with medication treatments.

Behavioral treatments may not always be advertised as such and the wise parent or advocate should get to know specifically what kinds of treatment local practitioners actually use. For example, some family therapists are well versed in working with families to set up behavioral contingencies with their children who have AD/HD or other disruptive behavior disorders. In addition, some group treatments for children with AD/HD (but unfortunately, all too few) are based on sound behavioral reward programs, incorporating the teaching of social skills. Consumers have the right to ask potential therapists what kinds of principles and procedures they employ in their work. Familiarity with the types of references found at the end of this article is a sign that a potential clinician is knowledgeable about what works (and what doesn't).

Behavior Therapy and Behavior Modification

Three types of behavioral intervention have been found to be effective for youth with AD/HD (see reviews of Hinshaw, in press; Hinshaw et al., 1998; Pelham & Hinshaw, 1992; Pelham, Wheeler, & Chronis, 1998):

(1) Direct Contingency Management: Here, positive and negative contingencies are directly applied in carefully engineered environments, including special education classrooms, residential settings, and summer treatment programs (e.g., Pelham & Hoza, 1996). The therapists are engineers." Effects on disruptive behavior are often strong. Careful research has shown that prudent negative consequences, including time-out and response cost, are particularly effective for children with AD/HD when combined with rewarding contingencies (see Pfiffner & Barkley, 1998). An excellent example of a highly structured, multifaceted summer program for children with AD/HD is the Summer Treatment Program of Pelham and colleagues (Pelham, Greiner, & Gnagy, 1997). A major issue is how transportable such highly individualized and structured contingency management programs are to home, school and peer settings.

(2) Clinical Behavior Therapy: The most common application of behavioral procedures to children with AD/HD involves consultation to parents and teachers regarding such

strategies as measuring behavior, devising a reward menu and token system, prompting appropriate behavior, utilizing consistent (and nonphysical) punishment procedures, and coordinating programs between home and school. Such clinical behavior therapy incorporates both behavioral parent training and teacher consultation. The "client" is not the child himself or herself; rather, consultation is delivered to key adults in the environment, who receive training in home- and school-based behavioral programs. Such interventions have led to significant gains for children with AD/HD (Hinshaw et al., 1998; Pelham et al., 1998), but improvements are not as large as those from direct contingency management per se. This result should not be surprising, as clinical behavior therapy imparts behavioral skills and procedures to busy parents and teachers, who perform many tasks in addition to managing the child with AD/HD. Clinical behavior therapy requires active participation on the part of these adults.

(3) Social Skills Training: This type of treatment is typically performed in small groups, where clinicians facilitate discussions of relevant concepts (e.g., "cooperation"), have the children rehearse the skills repeatedly, and directly reward socially skilled behaviors. Successful social skills programs are highly structured. That is, they are not "feelings groups" but instead follow a set curriculum. Although early manifestations of social skills training produced mixed results, more recent and systematic applications have yielded robust benefits (Pfiffner & McBurnett, 1997). Combining social skills training with parent training may promote wider application of the skills by the children who receive the intervention. I recommend the manual of Pfiffner and McBurnett (2000) as a model of effective, intensive, behavioral social skills training.

A fourth kind of "behavioral" treatment is sometimes promoted for children with AD/HD: cognitive-behavioral therapy. Here, intervention is conducted directly with the child, either individually or in small-group formats, with training in self-instructions (teaching the child to "think out loud" in order to guide behavior) and problem-solving (to provide a scheme for better planning of social and academic tasks). Although these procedures have shown some success with mildly impaired, "impulsive" children, applications to youth with AD/HD have been quite disappointing (Hinshaw, in press). The attempt to teach cognitive, meditational strategies without clearly established reward programs appears premature in a population plagued by serious problems in self-regulation (Barkley, 1997).

How Effective are These Treatments?

In a recent chapter, my colleagues and I (Hinshaw, Klein, & Abikoff, 1998) reviewed published studies on behavioral intervention. We found clear evidence that direct contingency management and clinical behavior therapy approaches are effective treatments for children with AD/HD. Gains have been found for the core symptoms of the disorder (e.g., improving "on-task" behavior, reducing hyperactive and disruptive behaviors), as well as for such important areas as reducing parental stress, increasing academic accuracy, and enhancing some aspects of socially skilled behavior. Improving these latter areas is quite important in that long-term outcome is clearly related to harmony at home, academic progress and better peer relations.

Head-to-head comparisons reveal that on average, medication leads to greater gains in these same domains. Yet some children (up to 20 percent) do not respond well to stimulant medication or are susceptible to prohibitive side effects. For them, as well as for those whose families are not comfortable with a pharmacologic approach, psychosocial treatments must be primary. The good news is that evidence clearly shows the effectiveness of these procedures as long as the family and school are willing participants.

Although medication treatments and behavioral treatments appear quite different, an intriguing similarity exists between these modalities: both tend to persist in their benefits only as long as the treatment is offered. That is, the clear gains from medication do not appear to extend beyond the last dosage given; and the benefits of contingency programs tend to dissipate unless parents and teachers either keep up the rewards or plan carefully for their gradual fading. As we increasingly recognize that AD/HD is often a lifelong condition, we realize that short-term treatments are not adequate to the task. A key clinical need is for consistent, ongoing evaluation of psychosocial and medication treatments in order to know (rather than guess) how well the treatment is going and when to make appropriate modifications.

Important literature has developed around the benefits of combining medication and behavioral treatments. (1) Combinations of pharmacologic and behavioral interventions almost always lead to improvements that are (a) much stronger than those from behavioral treatment alone and (b) comparable or somewhat superior to those from medication treatment alone. (2) Only the combination treatment usually leads to gains that can be construed as approaching the normal range of functioning; thus, multimodal approaches may be necessary for maximal benefit. (3) Behavioral and medication interventions may complement each other in that medication is typically optimal for school hours (and after-school hours, with appropriate dosing), whereas behavioral interventions may be required for family interactions during non-medicated periods. (4) Combined treatment strategies may lead to improvements at somewhat lower dosages of medication (and, comparably, at lower intensity of behavioral treatment) than would be needed if each approach is tried alone. Thus, there are real advantages to considering multimodal approaches.

MTA Study

Results from the largest-scale study ever performed on this topic were recently published (MTA Cooperative Group, 1999a, 1999b). The Multimodal Treatment Study of Children with AD/HD (MTA) was a six-site clinical trial with 579 children between 7.0 and 9.9 years of age and diagnosed with combined-type AD/HD serving as participants. At urban and rural centers in the U.S. and Canada, these children and their families were assigned randomly to one of four treatment strategies for a 14-month period:

medication management (involving a month-long dosage adjustment period followed by monthly medication visits);

behavioral treatment (involving an intensive blend of parent training sessions, teacher consultations, a summer treatment program, and a paraprofessional aide in the child's class for three months following the summer program, thus incorporating both direct contingency management and clinical behavior therapy);

combined treatment (involving both of the above components); or

community care (families in this condition did not receive MTA treatments but rather got services from local practitioners). Note that the behavioral treatment was faded in intensity across the 14-month treatment period, with the summer treatment program held near the beginning of treatment and with parent training sessions beginning weekly but then tapering to bi-weekly and monthly. The overall goal was to determine the long-term benefits (relative and combined) of two treatments that had been well-established in short-term trials — stimulant medication and behavioral intervention.

Although all four groups showed improvement across the 14-month study period for the outcome domain of AD/HD symptoms, medication management and combined treatment (which were quite similar) produced much greater benefit than did behavioral treatment alone or community care (which were quite similar). Note that two-thirds of the latter group received medication treatments in the community; meaning that behavioral treatment was comparable to medication treatments as usually administered. For additional outcome domains (oppositional/aggressive and internalizing symptoms,

social skills, parent–child relations, academic performance), group differences were smaller with results supporting combined treatment as the only condition consistently superior to community care. When we defined outcomes categorically in terms of "excellent response" — meaning very low symptom levels by the end of treatment — combined treatment was superior (Swanson, Kraemer & Hinshaw, in press). Two-thirds of the combined participants, contrasted with just over half of those in medication management, about a third in behavioral treatment and a quarter in community care, met this criterion by the end of treatment. Note also that the medication dosage in combined treatment was lower than that in medication management.

Although these overall findings held up across boys vs. girls and children with vs. without comorbid oppositional/aggressive behavior patterns, two variables — comorbidity with an anxiety disorder and socioeconomic status — qualified some of our treatment findings. First, children whose parents were receiving public assistance (19 percent of the sample) did relatively better regarding their social skills at school, when they received combined medication/behavioral treatment. For highly stressed families with limited resources, combination treatments may be needed to enhance social and peer functioning at school. Second, AD/HD/anxious children showed particularly good responses to behavioral and combined treatments regarding reduction of inattentive/hyperactive as well as anxious/depressed symptoms. That is, for the 34 percent of the MTA sample who were diagnosed (before treatment began) with AD/HD plus a significant anxiety disorder (e.g., multiple phobias, separation anxiety, overanxious disorder), response to the behavioral treatment alone was indistinguishable from response to medication treatment, with extra benefit for those receiving combined intervention. It was not the case that this anxious subgroup did worse on medication; rather, they did relatively better with psychosocial/behavioral treatments.

One additional result is noteworthy (Hinshaw et al., in press). Combined treatment produced dramatic improvements in school-related behavior (i.e., reducing hyperactive and disruptive behavior into the normal range) when parents receiving this treatment combination were able to reduce their negative and ineffective discipline. In other words, one of the processes through which multimodal treatment appears to "work" is improvement in parenting practices. Thus, when our combined treatment families were able to reward more consistently and refrain from harsh punishment practices, their children's school behavior improved dramatically; but for families in this condition who did not report such improved parenting practices, effects of combination treatment were not nearly so strong. Although AD/HD is a biologically based disorder, changes in the child's environment are associated with adaptation and behavioral improvement.

Conclusions

Psychosocial treatments for AD/HD that focus on behavioral parent training and school consultation — and on intensive behavioral rehearsal of social skills — are effective for this population. Although medication treatments on average produce stronger benefits, psychosocial treatment may be the primary option if side effects develop with medication or if families do not prefer this modality. Furthermore,

medication treatment cannot work in a vacuum: children with AD/HD typically need direct training to learn how to apply their academic and social knowledge in the classroom and with their peers. Combination (medication plus behavioral) treatments offer some advantages over single treatments, and lower dosage levels of medication may be achieved with multimodal approaches. Finally, parents and advocates deserve to know the types of psychosocial interventions practiced by local therapists; better knowledge of what works (and what doesn't) can and should lead to demand for the growth of appropriate services to benefit the many needs of youth with AD/HD.

References

Barkley, R. A. (1997a). *ADHD and the nature of self-control*. New York: Guilford Press.

Hinshaw, S. P. (in press). Attention-deficit hyperactivity disorder: The search for viable treatments. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures* (2nd ed.). New York: Guilford Press.

Hinshaw, S. P., Klein, R. G., & Abikoff, H. (1998). Childhood attention-deficit hyperactivity disorder: Nonpharmacologic and combination approaches. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work* (pp. 27–41). New York: Oxford University Press.

Hinshaw, S. P., Owens, E., et al. (in press). Family processes and treatment outcome in the MTA: Negative/Ineffective parenting in relation to multimodal treatment. *Journal of Abnormal Child Psychology*.

MTA Cooperative Group. (1999a). Fourteen-month randomized clinical trial of treatment strategies for attention-deficit hyperactivity disorder. *Archives of General Psychiatry*, 56, 1073–1086.

MTA Cooperative Group. (1999b). Effects of comorbid anxiety, poverty, session attendance, and community medication on treatment outcome in children with attention-deficit/hyperactivity disorder. *Archives of General Psychiatry*, 56, 1088–1096.

Pelham, W. E., Greiner, A., & Gnagy, B. (1997). *Summer Treatment Program manual*. Buffalo, NY: CTADD, Inc.

Pelham, W. E., & Hinshaw, S. P. (1992). Behavioral intervention for attention-deficit hyperactivity disorder. In S. M. Turner, K. S. Calhoun, & H. E. Adams (Eds.), *Handbook of clinical behavior therapy* (2nd ed., pp. 259–283). New York: Wiley.

Pelham, W. E., & Hoza, B. (1996). Intensive treatment: A summer treatment program for children with ADHD. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice* (pp. 311–340). Washington, DC: American Psychological Association.

Pelham, W. E., Wheeler, T., & Chronis, A. (1998). Empirically supported psychosocial treatments for attention-deficit hyperactivity disorder. *Journal of Clinical Child Psychology, 27*, 190–205.

Pfiffner, L., & Barkley, R. A. (1998). Treatment of ADHD in school settings. In R. A. Barkley, *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (2nd ed., pp. 458–490). New York: Guilford Press.

Pfiffner, L., & McBurnett, K. (1997). Social skills training with parent generalization: Treatment effects for children with attention deficit disorder. *Journal of Consulting and Clinical Psychology, 65*, 749–757.

Pfiffner, L., & McBurnett, K. (2000). *Social skills training manual*. Unpublished manuscript, University of Chicago Department of Psychiatry.

Swanson, J. M., Kraemer, H. C., & Hinshaw, S. P. (in press). Conceptual and methodologic issues in the evaluation of treatment effectiveness for attention-deficit hyperactivity disorder. *Journal of Child Psychology and Psychiatry*.

Stephen Hinshaw, Ph.D., is professor of Psychology and director of Clinical Psychology Training at the University of California, Berkeley. He conducts NIMH-funded summer research programs for children with AD/HD and is one of the principal investigators for the MTA Study. He is president of the International Society for Research in Child and Adolescent Psychopathology.

Attention!® Magazine Volume 6, Number 4, Page 30