Evidenced-Based Treatment for Child ADHD: 
"Real-World" Practice Implications

Jason H. Edwards

The purpose of this article is to discuss evidenced-based treatment for 7- to 10-year-old children experiencing ADHD (combined type) with the goal of potentially informing "real-world" mental health counselor practice. This article first discusses the results of the landmark Multimodal Treatment Study of Children with ADHD (MTA; MTA Cooperative Group, 1999a). Then, clinical implications of this well controlled study for outpatient practice are addressed. Specifically, a family-based, behaviorally oriented, multimodal, and multisystemic approach is suggested by the study. The comprehensive treatment approach includes parent management training, school interventions, and medication. Common treatment considerations relevant to working with child ADHD are discussed.

Attention-deficit/hyperactivity disorder (ADHD) is a complex and chronic mental health disorder involving problems with inattention and hyperactivity-impulsivity developmentally inconsistent with the age of the child. Behavioral disinhibition appears to be a central feature of child ADHD (Barkley, 1997a). Child ADHD seems to be a disorder of performance rather than a skills and/or knowledge problem. As Barkley (1998a) notes, child ADHD involves a problem "of doing what one knows, rather than knowing what to do" (p. 69). It is estimated that 3% to 7% of school-age children (most frequently males) experience ADHD disorder (American Psychiatric Association, 2000). Moreover, child ADHD referrals constitute a significant proportion of child referrals for mental health services (Goldman, Genel, Bezman, & Slanetz, 1998; Popper, 1988). ADHD significantly impacts the child's emotional, family, school, and social functioning (Barkley, 1998b). Furthermore, comorbid disorders are common including oppositional defiant disorder, conduct disorder, and learning disorders (Barkley, 1996).

Jason H. Edwards, Ph.D., an associate professor and co-director, Center for Children and Families, Department of Psychology, Frostburg State University, Frostburg, MD. Email jedwards@frostburg.edu.

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Due to the complexity, chronicity, prevalence, and multisystem impact of child ADHD, mental health counselors' knowledge and use of effective outpatient treatment for children experiencing ADHD is imperative. Yet, how can counselors find out about effective treatment such that they can use it in their day-to-day practice? The most accurate resource for counselors is the treatment outcome literature, which is primarily published in professional journals. However, there are many good reasons why counselors do not access the outcome research concerning child ADHD. First, counselors might not know how to conduct literature searches to locate relevant journal articles. Second, treatment outcome articles can be “boring” and not one's first choice for reading material. Third, the articles can be difficult to understand and possibly not relevant to daily practice. Fourth, counselors in full-time outpatient practice often have little time to read in the context of seeing many clients, keeping up with written documentation requirements (e.g., progress notes), and case management responsibilities (e.g., returning phone calls).

The purpose of this article is to discuss the clinical implications of recent treatment efficacy research concerning child ADHD with the goal of informing mental health counselor outpatient practice in a potentially useful manner. This article is written in an attempt to “translate” the results such that they are clinically meaningful to practitioners. In essence, I am attempting to address the following challenge: “What can mental health counselors ‘take’ from the evidenced-based ADHD outcome research that will inform their practice in the next hour with a child experiencing ADHD?” Although this is not a how-to article, it is hoped that mental health counselors can utilize the information in their clinical settings. I first discuss a recent landmark National Institute of Mental Health sponsored study (MTA Cooperative Group, 1999a) and follow-up report (Conners et al., 2001). Then I discuss clinical implications to potentially inform “real-world” practice.

THE MTA STUDY

The Multimodal Treatment Study of Children with ADHD (MTA; MTA Cooperative Group, 1999a) is the largest and most well-controlled study in child mental health. The details of this study are discussed in many articles (e.g., MTA Cooperative Group, 1999a; MTA Cooperative Group, 1999b). Hence, I only briefly address the study here. The overall purpose of the study concerned what is the most efficacious treatment for child ADHD (combined type) over a 14-month period of time: medication (MED), behavioral treatment (BEH), combined treatment (COMB; medication and behavioral treatment), and routine community care (CC; “treatment-as-usual” which turned out to be medication for approximately 67% of the children). In essence, “Cadillac” versions of intensive state-of-the-art treatment approaches (MED,
BEH, and COMB) were compared with each other and with "treatment-as-usual" (CC). There were 19 measures of six dependent variables: (a) ADHD symptoms, (b) aggression-oppositional defiant disorder, (c) internalizing symptoms, (d) social skills, (e) parent-child relations, and (f) academic achievement.

Characteristics of the Children

The study participants were 579 children (80% males), 7 to 9.9 years of age, who were randomly assigned to the aforementioned four treatment groups at each of six sites in the United States and in Canada. All the children were diagnosed as experiencing ADHD, combined type. The three most common comorbid disorders were oppositional defiant disorder (39.9%), anxiety disorders (33.5%), and conduct disorder (14.3%). Approximately 61% of the children were White, 20% African-American, and 8% Hispanic. The educational levels of mothers and fathers were 94% and 90% high school educated respectively. Approximately income levels of the families were: 21% in the $0 to $20,000 range, 41% in the $20,000 to $50,000 range, and 36% greater than $50,000. Household family composition was 69% two-parent households and 30% one-parent households. The relative heterogeneity of the participant sample has broad applicability to the outpatient practice of many mental health counselors.

Description of Treatment Groups

The BEH group treatment consisted of parent training, school-based intervention, and a summer treatment program. Parent training in child behavior management (discussed below) or what is often referred to as parent management training (PMT), involved 27 group and 8 individual sessions. The school-based intervention included biweekly teacher consultation by the counselor on classroom behavior management (10 to 16 weeks), classroom aide (12 weeks), and the use of a daily behavior report card. The teacher-completed daily behavior report card focused on targeted behaviors and was brought home by the child for home-based rewards. The summer treatment program (8 weeks) involved use of a point system, time out, social reinforcement, modeling, social-skills training, group problem solving, and sports-skills training. Interestingly, PMT was the only BEH intervention that was used during the last few months of the study, and it occurred approximately once per month.

The MED group consisted of intensive and closely monitored medication management starting with a double-blind placebo-controlled trial of methylphenidate (MPH; Ritalin) three times daily over 28 days. Each child in this group received all administered medication conditions in a random fash-
ion (placebo, 5mg., 10mg., 15mg. or 20mg.). This method is the most empirical procedure to determine for an individual child if MPH is effective and if so, what dose is most helpful. Typically, these questions are answered by trial and error for most children receiving MPH. After the medication trial, the optimal dose was then used throughout the study with close monitoring. If the child did not benefit from MPH, then a protocol of alternative medications (e.g., dextroamphetamine) was implemented until an appropriate medication was found. Compared to the BEH group, MED treatment occurred every day for 14 months.

The COMB group received both BEH and MED treatments for 14 months. The CC group was referred to community mental health resources. Hence, this group did not receive any of the intensive treatment approaches; and as mentioned previously, approximately 67% of the children in this group received medications.

Results of MTA Study and a Follow-Up Report

All four groups improved over the 14 months but there were significant differences in degrees of improvement. Namely, COMB and MED were usually statistically significantly superior to CC. COMB was statistically significantly superior to BEH on many measures and MED was not statistically significantly superior to BEH on most measures. There were not any statistically significant differences between the COMB and MED groups. However, the COMB group was superior to the MED group on most of the 19 measures. Interestingly, children in the COMB group required lower doses of medication on average than the MED group. Moreover, families seemed to prefer the COMB and BEH groups to the MED group.

Conners et al. (2001) conducted a reanalysis of the data using an overall dependent variable based on parent and teacher completed measures. The results revealed that the COMB group was statistically significantly superior to all the other groups including the MED group. The results of this and the original MTA study might suggest that the COMB treatment approach is a likely “winner” of the “horse race” for now.

CLINICAL IMPLICATIONS

Although analyses of the landmark MTA study will probably continue for the next few years, there are several clinical implications that can inform current mental health counselor practice. These implications are discussed below.

Overall, it seems that a family-based, behaviorally oriented, multimodal, and multisystem approach is currently the most efficacious and preferred
treatment for child ADHD. Specifically, multicomponent behavioral treatment involving the family and school, in conjunction with medication, is most advantageous for latency-age children (7 to 10 years old) experiencing ADHD (combined type). The treatment approach must address family and school environments. Several researchers in the field (e.g., Barkley, 1998a) have recommended this type of treatment package prior to the MTA study. The effectiveness of particular aspects of the BEH treatment approach considered separately is not clear. However, it seems reasonable to discuss how some of these interventions can be incorporated into outpatient practice in conjunction with medication as a multicomponent treatment approach. Specifically, there are four components of this efficacious treatment approach that can be adapted and integrated into individual mental health counselor practice: (a) PMT, (b) school interventions, (c) medication, and (d) aspects of the summer treatment program.

Parent Management Training

PMT refers to an organized, psychoeducational approach to helping parents manage their child's behavior difficulties and to manage their own reactions to their child's behavior. This component of treatment focuses on the parental subsystem and in essence establishes an appropriate hierarchy in the family system. Implicit in PMT is the notion that effective parenting is a crucial factor in helping children experiencing ADHD to be successful in the family environment. Effective parenting in this case means that the child's environment may need to be structured differently for the child to negotiate typical developmental tasks for their age. A significant challenge for the parent of a child with ADHD is that "good parenting" may be only adequate for their child due to the impact of ADHD and associated difficulties.

Although there are many different PMT approaches, the MTA study parent training version integrated Barkley's (1987) and Forehand and McMahon's (1981) programs. I will focus on Barkley's (1997b) behaviorally oriented PMT approach as he has recently updated his treatment manual, and it is very accessible for mental health counselors. Further, the reader can consult Anastopoulos, Smith, and Wien (1998) for a good overview of this approach. The program was originally designed for a group treatment format but, as utilized in the MTA study, the approach can be adapted for use with individual families. The program integrates six basic child-management training concepts: (a) consequences need to be immediate, (b) consequences need to be specific, (c) consequences need to be consistent, (d) incentive programs should be established before punishment, (e) parents must anticipate and plan for misbehavior, and (f) family interactions are reciprocal.
There are 10 steps in the program and treatment length is approximately 10 sessions depending on how much of the program is utilized to meet a particular family’s needs. It is recommended that that the steps are followed in sequence. Barkley (1997b) clearly delineates the goals, handouts (enclosed in manual), activities, and homework tasks for each step. The first step concerns reasons why children may exhibit behavior problems including child, parent, and parent-child factors. Parents are taught about the nature of ADHD and providing them with additional ADHD resources (e.g., Barkley, 2000) may be helpful in that session. The second and third steps focus on improving parental-attending skills and their value to children to increase compliance. Step four introduces a more “formal” reinforcement system involving making privileges contingent on compliance. This is an important intervention for children experiencing ADHD because praise and attention alone are often not enough for them to be successful.

Steps five and six introduce forms of punishment including removal of tokens/points (response cost) and time out procedures. In step seven, the skills that parents have learned are applied to managing their children’s behavior in public places. The daily school-home behavior report card is discussed in step eight. The child’s behavior is reinforced with points at school and then rewarded at home. This intervention can potentially significantly impact not only the child’s behavior in school but also school-home relationships, and parent-child relationships. A common experience for the parent of a child with ADHD is that any contact from the school means that their child has not been successful in some way at school (i.e., “any news is bad news”). The school-home behavior report card changes the contingencies such that the child and parent are learning about the child’s behavior daily regardless of their behavior. Many parents with whom I have worked, have remarked that they no longer cringe when they receive information about their child’s behavior in school after this intervention has been implemented. Step nine concerns preparing to handle behaviors that the child might exhibit in the future and hence functions as sort of a relapse prevention session, except that the behaviors have not yet occurred. Finally, the last step is a one month booster session.

School Interventions

It is important for the mental health counselor to coordinate treatment with the child’s teachers (of course, with permission of the child’s legal guardians) as the child with ADHD often experiences difficulties in the school environment. Consistent with the MTA study, one way to do this is to consult/collaborate with the child’s teachers on a regular basis focused on classroom behavior management and academic interventions related to the
child's functioning. Pfiffner and Barkley (1998) have suggested many classroom behavior management strategies and academic adjustments that may be helpful to the child. Certainly, the daily school-home behavior report card (mentioned above) is potentially a significant classroom behavior management intervention among other strategies. As with any behavioral intervention, it is most helpful if the behavior report card system is structured such that the child is successful the first day. I use a percentage-based approach, and I have found that setting the initial criterion at 60% of possible points (when baseline information is not available) contingent on school behavior allows most children to be successful (privileges earned at home) the first day of the program. I then increase the criterion in 5% increments over time based on the child's success, up to 90%, which I consider "perfection."

Examples of academic adjustments suggested by Pfiffner and Barkley (1998) include: (a) matching tasks to the child's abilities; (b) increasing the stimulation qualities of a task; (c) using a variety of presentation formats and materials related to the task; (d) making academic assignments brief by reducing longer tasks into smaller steps (e.g., math sheets and number of pages to be read before answering relevant questions) and providing more immediate feedback after task completion; (e) allowing for brief physical exercise after academic periods; and (f) scheduling the majority if not all academic subjects for the morning. The reader is referred to Pfiffner and Barkley (1998) for many other potentially helpful classroom behavior management and academic strategies.

Another important school intervention-related implication is that the child experiencing ADHD may meet special education criteria for services (Individuals with Disabilities Education Act, 1991; Public Law 101-476) or Section 504 services (Section 504 of the Rehabilitation Act of 1973; Public Law 93-112). Three relevant special education disability categories include: (a) other health impaired, (b) specific learning disability, and (c) serious emotional disturbance (often referred to differently depending on the state). There is one broadly defined disability category for Section 504. As in the MTA study, special education services could involve the assistance of a classroom aide in school. However, it is important to note that not all children experiencing ADHD (combined type) meet criteria and/or need special education or Section 504 services.

**Medication**

It is clear that medication, especially methylphenidate, is potentially helpful for children experiencing ADHD. Medication seems particularly effective in addressing the core symptoms of ADHD. Yet, medication can be a controversial intervention for some educational and mental health professionals,
and families. For example, I have been aware of some schools for which the “A” word (ADHD) cannot be mentioned for fear of medication being used and/or the possibility of special education services being activated. Similarly, I have known some schools for which medication is the first and only intervention thought of as helpful for a child experiencing ADHD.

The role of the mental health counselor with regard to medication is twofold. First, it is important for the counselor to refer the child experiencing ADHD for a medication evaluation with a child psychiatrist or other appropriate physician (e.g., pediatrician) if the child is not currently on medication. It is important for the family to understand that the referral enables them to obtain the necessary information to make an informed decision concerning medication if the psychiatrist thinks that the child is a good candidate for this type of intervention. The referral does not mean that there will be an automatic recommendation for medication or that the family has to agree with the recommendation. A related issue concerns who will be managing the medication intervention if deemed an appropriate intervention and the child’s parent agrees with the recommendation. Child psychiatrists are typically the most knowledgeable about psychotropic medications for children. However, it seems that there is a paucity of child psychiatrists in many areas of the country. Hence, pediatricians or family practitioners are managing medication for many children with ADHD. If the medication is managed by a pediatrician and the child’s difficulties are complicated (a common situation for children with ADHD, combined type) it is not unusual for the pediatrician to consult with a child psychiatrist or even have the child psychiatrist take over mediation management. In any event, it is important for the physician who is managing the medication to be aware of the closely monitored medication management protocol (Greenhill et al., 1996) including how to run a double-blind, placebo-controlled trial of methylphenidate.

A second suggestion for mental health counselors is to coordinate treatment with the physician who is managing the child’s medication as part of a multidisciplinary team approach. This means regular contact to make sure everyone is “on the same page”. The reader is referred to DuPaul, Barkley, and Connor (1998) for further information concerning psychostimulants for child ADHD and to Spencer, Biederman, and Wilens (1998) regarding antidepressants for ADHD.

Aspects of the Summer Treatment Program

It may not be possible for a child to participate in a summer treatment program for children experiencing ADHD as few programs currently exist nationwide. However, there are at least three aspects of the program that can be integrated into mental health counselor outpatient practice. First, the
summer program paired each child with another child to facilitate friendship (Wells et al., 2000). This pairing was done with the intention that the pairs of children would become "buddies." Although this specific type of intervention may not be possible, counselors might consider focusing on friendships with the goal of the child having at least one friend. The significant peer relationship difficulties of children experiencing ADHD (Barkley, 1996) and the importance of children having at least one good friend suggest that some attention to this area of functioning may be of benefit. However, counselors might be wary of implementing social-skills training as it does not appear to be effective (Barkley, 1998a). If social-skills training is used, then it should occur in the environment in which the child is experiencing social difficulties (e.g., the school setting) rather than in the counselor's office.

Sports-skill training was implemented in the summer program to improve sports competence. The focus was on helping children learn how to follow game rules and to improve motor skills, social interactions, and self-esteem. Helping children experiencing ADHD in outpatient practice identify and successfully participate in a sport may be of benefit. Encouraging the identification of areas of competence in general for children with ADHD is probably a useful intervention.

Finally, several behavioral interventions were used in the summer treatment program (e.g., point systems and time out). As discussed above, these interventions can be implemented in the home and school environments.

CONSIDERATIONS IN TREATING CHILD ADHD

Although not expressly addressed by the MTA study, there are several additional facets of treatment to consider in a multicomponent, multisystem approach to child ADHD. Support for parents and family members seems very important in light of the stress evident in families of children with ADHD (Baldwin, Brown, & Milan, 1995). A referral to a local support group for parents of children experiencing ADHD (if available) can be helpful. Children and Adults with Attention Deficit Disorder is a national organization (C.H.A.D.D.) with local support chapters in many communities. In addition, there are several good educational books concerning child ADHD for parents, children experiencing ADHD, and siblings of children with ADHD that might be recommended to the family. See the Appendix for a listing of some suggested readings. The list is by no means comprehensive and is meant to provide counselors with a place to start. It is important that the counselor read any potential reference first before recommending the reading to a family.
Integrating individual and other types of family counseling into the multicomponent approach for child ADHD may be considered depending on the needs of the child and family. Caution seems warranted when using types of treatment other than in the MTA study due to the lack of empirical support for other treatment approaches, limited financial resources of many families, and typical length of stay in counseling. Counseling can be expensive and desperate parents wanting the best for their child may engage in treatments that are potentially not the best use of time and money. Barkley (1998a) delineates several types of treatment that do not have good empirical support (e.g., dietary treatments). Anecdotally, I have worked with families that have tried other empirically unsupported treatments prior to seeing me or concurrently for child ADHD without success (e.g., chiropractic treatment). With regard to length of stay in treatment, it appears that generally for individual, couple, and family counseling, many clients are no longer in treatment after approximately 10 sessions (Edwards, 1991; Edwards & Jurkovic, 1991; Garfield, 1986; Phillips, 1985). It is not clear if utilization of treatment by children with ADHD is any different in typical outpatient practice and different from the well-controlled MTA study. However, for the reasons delineated above, it seems prudent for the counselor to implement evidenced-based treatment specific to the individual needs of the child and family during the limited amount of sessions that might be spent with the family.

A related issue is that episodes of multicomponent treatment for child ADHD might need to occur over the course of the child's life and that the child's progress should be monitored due to the chronic nature of ADHD (Barkley, 1998a). Whether all or some of the components of evidenced-based treatment will be used for a child and the family depends on their needs at the time. Certainly, family life cycle and family systems perspectives (Carter & McGoldrick, 1999; Everett & Volgy Everett, 1999) might inform assessment of counseling needs for the child experiencing ADHD and the family. Use of booster/follow-up sessions or what Robin (1998) referred to as the 'dental checkup' (p. 197) approach might be considered after a course of intensive treatment. This type of practice for child ADHD seems to be a potentially helpful treatment approach since the focus is on management of ADHD rather than "curing" the disorder.

Counselor expertise is a significant consideration in integrating evidenced-based treatment for child ADHD into daily practice. For example, it is important that the mental health counselor is familiar with and has some expertise in utilizing cognitive-behavioral strategies (Anastopoulos et al., 1998). As is often a concern with manualized treatment, applying the PMT component of treatment in a "cookbook" manner might not be most helpful to a family especially without counselor familiarity with behavioral strategies.
COMMON CONVERSATION CONSIDERATIONS

There are a number of common conversations that can occur with families and professional team members in treating child ADHD. The mental health counselor should be aware of and able to negotiate these conversations to be most helpful to the child and family.

The Responsibility Conversation

It is not uncommon for a child experiencing ADHD to be perceived as doing or not doing things "on purpose," particularly when they have acted appropriately (e.g., completed a classroom assignment) on at least one occasion. As this is a "no-win" conversation for everyone involved, the mental health counselor might consider discussing how the child's environment needs to be structured at home and school (e.g., a point system) so that the child can take responsibility consistently for his or her behavior. Barkley (1997b) discusses the need for a "prosthetic social environment" (p. 100) to enable a child to function in a more adaptive manner in their environment.

The Expertise Conversation

In general, it is important for mental health counselors to honestly discuss their training and expertise when asked by parents. Parents of children experiencing ADHD seem to be particularly knowledgeable about ADHD compared to parents of children experiencing other types of child mental health difficulties. Hence, it is important for counselors who treat children with ADHD and their families to develop expertise in ADHD and be prepared for questions concerning their expertise and about child ADHD. Client expectancy concerning helpfulness (e.g., hope) is an important factor in therapeutic change (Asay & Lambert, 1999). The counselor's expertise in ADHD and communication about their expertise might significantly impact client expectancy and therefore improvement in the child's and family's functioning.

The Bribery, Internalizing, and Rights-versus-Privileges Conversations

When behavioral strategies are used it is not uncommon for a parent or teacher to raise the issue of whether "bribing" the child is helpful. Clarification of the distinction between bribery versus contingency management can be of benefit. Specifically, bribery describes offering an incentive (often illegal) to someone to engage in illegal, immoral, or dishonest behavior (Barkley, 1997b). External consequences (e.g., rewards) are meant for the child to be successful in environments where the child is currently unsuccess-
ful. Many parents can relate to the idea of trying to encourage a child to eat a healthy but “yucky” tasting food (to the child) by indicating that the child may have dessert if they eat the less desirable food. When it is explained that such a situation and similar situations exemplify contingency management, parents often are more amenable to behavioral strategies.

A related conversation concerns the fact that the child should be “internally motivated” such that external consequences (e.g., incentives) are unnecessary. This is a variation of the responsibility conversation. Hence, a similar communication is suggested involving the idea that a structured environment is necessary due to the chronic and pervasive effects of ADHD and associated challenges.

Parents sometimes confuse the issue of rights-versus-privileges when they are developing their approved list of privileges for their child. For instance, watching television is not a right but a privilege. Clarification is often helpful for parents in developing and implementing contingency management strategies. Barkley (1997b) discusses this conversation and others specific to the implementation of PMT strategies.

CONCLUSION

This article discusses evidenced-based treatment for children experiencing ADHD and their families to potentially inform mental health counselor practice. A multimodal, multisystem approach that includes parent management training, school interventions, and medication seems to be the current treatment of choice based on the recent MTA study. Mental health counselors might consider integrating this empirically supported approach into their day-to-day outpatient practice with 7- to 10-year-olds experiencing ADHD (combined type) and their families. It might be most helpful to conceptualize the approach as consisting of intensive courses of treatment over time with monitoring of progress in terms of checkups or booster sessions after a course of treatment. Moreover, treatment needs to be flexible in addressing the developmental needs of the child and family over time.

REFERENCES


APPENDIX

There are many potentially useful references concerning ADHD for counselors, parents, children experiencing ADHD, and siblings. A few examples are delineated below. The counselor should consider reading any potential reference before suggesting the book to a parent, child, or sibling of the child experiencing ADHD.

Potentially Helpful References for Counselors


Potentially Helpful References for Parents, Children, and Siblings


