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# Psychosocial Treatment of Adults With Attention Deficit Hyperactivity Disorder

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## Chapter 12

# Psychosocial Treatment of Adults With Attention Deficit Hyperactivity Disorder

by **Laura E. Knouse, Ph.D.** and **Steven A. Safren, Ph.D.**

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## INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) in adults is a valid and impairing disorder associated with increased risk for psychiatric comorbidity and increased costs to the individual and society (Barkley, Murphy, & Fischer, 2008). This disorder was believed to be childhood-limited until relatively recently in the overall history of modern diagnosis and treatment of mental disorders. Accordingly, knowledge about effective clinical management has lagged behind that of childhood ADHD and other adult disorders. Whereas medication treatment for adults with ADHD has a wider base of empirical support, research on psychosocial management of adults with ADHD is best described as “emerging.” Several novel treatment packages have been created in the last five to ten years, and this is a time of rapid development in this field. We present the state of the science and recommended practices in psychosocial treatment of adults with ADHD with enthusiasm for new developments in the context of critical analysis, highlighting the need for continued forward momentum.

In this chapter, we first review the rationale for psychosocial treatment of adults with ADHD. We then focus on treatment programs that have received support in the research literature, highlighting the role of comprehensive assessment. Drawing upon existing interventions, as well as clinical guidelines and our clinical experiences in the Cognitive-Behavioral Therapy Program for Adult ADHD at Massachusetts General Hospital, we present recommendations for psychosocial treatment planning with this population. We conclude with a brief discussion of psychosocial management of comorbid disorders.

## REASONS FOR PSYCHOSOCIAL TREATMENT FOR ADULTS WITH ADHD

Stimulant medication treatment results in significant reductions in neurobiological symptoms of ADHD for a large portion of adults with the disorder (Prince, Wilens, Spencer, & Biederman, 2006). There are, however, multiple reasons why psychosocial treatment might be indicated for an adult with ADHD. Some adults do not respond to medication treatment at all, and others are not able to tolerate medication side effects. Even adults considered medication responders may continue to experience residual symptoms. In most medication treatment studies, a 30 percent reduction in symptoms is enough to categorize a participant as a responder (Steele, Jensen, & Quinn, 2006). Patients with higher baseline severity may continue to experience symptom levels well above that of the general population and associated impairments in daily functioning.

When core symptoms of ADHD are reduced via medication treatment, adults may continue to experience significant functional impairment in academic, occupational, social, or family functioning that requires psychosocial intervention. Problematic behavior patterns and symptoms often develop over a protracted time span, and thus pervasive impairments in functioning may require more long-term, comprehensive intervention to improve. Psychosocial treatment may be needed to directly target behavior relevant to these wider domains of functioning.

Psychosocial intervention may also be necessary when ADHD symptoms have impeded the development of skills that could compensate for ADHD-related deficits. Safren and colleagues (2005c), in their treatment model, posited that core symptoms

of ADHD and resulting functional impairments prevent adults from developing, using, and maintaining skills that might ameliorate the effects of symptoms—a kind of clinical double-bind. Skill areas in need of development might include organization, self-motivation, interpersonal, work, or academic skills. For example, when given no explicit instructions, adults with ADHD were less likely than adults without ADHD to use effective memory strategies during a word learning task (Knoose, 2008). The literature on ADHD in childhood suggests that effective pharmacological treatment of core ADHD symptoms does not translate into similarly-sized positive effects in academic outcomes (Conners, 2002). Thus, intervention may be needed to address compensatory skill deficits.

Psychosocial modalities may also address emotional and psychological consequences of coping with a lifetime of ADHD symptoms and associated impairments. In their model, Safren and colleagues (2005c) also hypothesized that ADHD-related impairments can lead to secondary problems with maladaptive thinking that perpetuate feelings of guilt, anxiety, and depression. An adult who did not receive appropriate diagnosis and treatment in childhood may have a lifetime of perceived failure experiences and negative messages from others. Even if adults with ADHD do not develop comorbid psychopathology, they may benefit from psychosocial interventions that provide appropriate psychoeducation about the disorder, help them to develop accurate and adaptive attributions for past events and current challenges, and set positive life goals in the context of their own individual strengths (Murphy, 2006).

Many adults with ADHD do suffer from comorbid disorders that require psychosocial treatment. ADHD in adults is associated with higher rates of mood, anxiety, and substance use disorders as well as a history of conduct problems (Barkley, Murphy, & Fischer, 2008; McGough et al., 2005; Miller, Nigg, & Faraone, 2007). Adults with ADHD may initially seek treatment for these disorders or for problems in related functional areas, including marital or other relational problems. Initial contact may also occur because of ADHD in patients' offspring and associated parenting difficulties (Chronis-Tuscano et al., 2008). An adult with ADHD may need psychosocial intervention for a variety of reasons and may arrive to it via a variety of pathways. This chapter will focus on the direct treatment of ADHD symptoms and associated skill deficits that contribute to functional impairment with treatment of comorbid disorders addressed at the conclusion of the chapter.

## **PSYCHOSOCIAL TREATMENTS SUPPORTED BY SCIENTIFIC EVIDENCE**

### **Comprehensive Assessment**

Effective psychosocial intervention is based on comprehensive assessment of the patient's symptoms and impairment and a solid working model of current difficulties. First, the clinician must ascertain whether ADHD is present at all—a task complicated by the fact that concentration problems are a symptom of many other conditions, including mood and anxiety disorders. Documentation of symptoms and impairment in childhood required for diagnosis presents another challenge. Second, the clinician must thoroughly assess comorbid conditions. Understanding comorbid conditions and their relationship to ADHD is critical to effectively sequencing or combining intervention components. Finally, the clinician must

formulate appropriate treatment recommendations that thoroughly address the patient's symptoms and impairment. Because ADHD can affect multiple domains of functioning, it is important that the full package of interventions is similarly broad-based, even if the clinician initially chooses a specific treatment goal. These assessment tasks generally cannot be accomplished via a brief clinical interview during a fifteen-minute office visit or with a single symptom-based rating scale.

Because a full discussion of the complexities inherent in the assessment of adults with ADHD is beyond the scope of the current chapter, we refer readers to the excellent chapter authored by Murphy and Gordon (2006). In brief, these authors recommend that an evaluating clinician obtain data in four areas: credible evidence of ADHD symptoms and substantial impairment in childhood, credible evidence of current ADHD symptoms that cause significant impairment, explanations other than ADHD that account for clinical data, and the existence of comorbid conditions. This requires a range of diagnostic tools. Rating scales based on *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV; American Psychiatric Association, 2000) assess current and past symptoms using the reports of the patient, parents, or other people who knew the patient in childhood, and a current significant other or close friend. Rating scales can establish symptom counts and, in the case of norm-referenced scales (e.g. Conners et al., 1999), developmental deviance. (For detailed discussions of ratings scales in clinical practice with adults with ADHD, see Knouse and Safren, 2009; Rösler et al., 2006.)

Unstructured, semistructured, and structured clinical interviewing with the patient and others provides the bulk of the assessment data. Structured interviews based on DSM-IV criteria assess the presence of ADHD symptoms currently and in childhood (e.g., Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS; Orvaschel, 1985) and screen for comorbid conditions (e.g., SCID, MINI; First, Spitzer, Gibbon, & Williams, 1995; Sheehan et al., 2006). Critically, the interview must establish whether there is a history of significant and chronic functional impairments across domains that could be reasonably related to ADHD symptoms. To evaluate clinical history and functional impairment, Murphy and Gordon (2006) recommend administering self-report questionnaires to glean initial data about developmental, health, employment, and social history and then further investigating each domain during the clinical interview. A functional analysis of the patient's most pressing current difficulties and impairments yields information critical to treatment planning.

Because research evidence does not support reliable prediction of a diagnosis of ADHD from specific patterns of cognitive or neuropsychological tests results (Murphy & Gordon, 2006; Woods, Lovejoy, & Ball, 2002), such results should only be used to augment information directly relevant to DSM-IV ADHD criteria and should not be the sole basis of diagnosis. Neuropsychological testing can provide information about the patient's cognitive strengths and weaknesses, providing a picture of neuropsychological symptoms that may impact real-world functioning and aid in tailoring the intervention. For example, if neuropsychological testing indicates very poor working memory, the clinician may wish to include several memory aids and strategies in the treatment. Data from this type of testing can also inform the clinician about the patient's level of functioning, which may impact the way the treatment is delivered. For example, if testing shows that a patient has difficulty with reading comprehension but has good auditory comprehension, he or she might make use of audiotaped sessions. Third, test results can be used to identify or rule out comorbid learning disabilities.

## Psychotherapies Without Empirical Support for Adults With ADHD

Insight-oriented psychotherapy and supportive psychotherapy have not received empirical support as treatments for adults with ADHD. One existing study described outcomes for sixty adults with ADHD who had not been previously diagnosed and who had received traditional psychotherapy for other identified problems (Ratey, Greenberg, Bemporad, & Lindem, 1992). They did not benefit from long-term psychodynamic treatment incorporating defense analysis or from short-term psychotherapy approaches not directly targeting ADHD. It is important to note, however, that these adults were selected because they had not benefited from prior treatment. Although there are no other empirical data to evaluate the efficacy of traditional psychotherapy, there are theoretical and clinical reasons to predict that these approaches might not be helpful. Theoretical accounts of ADHD emphasize difficulties with performance of skills rather than knowledge deficits (Barkley, 1997b) and variation in any of several neurobiological pathways leading to cognitive and behavioral impairments (Nigg, 2006). Thus, using traditional psychotherapy techniques to increase insight into ADHD-related problems is unlikely to affect changes in problematic behavior. Furthermore, the very symptoms of ADHD—forgetfulness, problems sustaining attention, verbal impulsivity—may interfere with the therapeutic processes central to many approaches. These behaviors may be interpreted by the therapist as resistance and may impede the progress of short-term approaches that do not target these symptoms (Ratey, Greenberg, Bemporad, & Lindem, 1992). The available evidence does not suggest that traditional, insight-oriented psychotherapy is a useful approach to treat ADHD in adults.

## Psychosocial Treatments With Emerging Empirical Support

Because empirical inquiry into psychosocial treatments for adults with ADHD is less than ten years old and no treatment package has been supported by more than two published studies, the evidence base must be described as “emerging.” Across the eleven published studies, however, the common elements of potentially efficacious treatment packages are taking shape. We first review individual treatments followed by group treatments.

**Individual Treatments.** Wilens and colleagues (1999) published a retrospective chart review study of patients who received an adaptation of cognitive therapy. Goals of treatment included increased awareness and modification of patterns of thinking that contribute to avoidance and negative emotionality. The twenty-six patients studied also received medication management coinciding with the start of cognitive therapy, and significant decreases in clinical global impressions (CGI) from baseline to medication stabilization were observed. Patients showed further improvements in CGI at cognitive therapy endpoint. Because medication dose remained stable, the authors attributed these further improvements to continued cognitive therapy. Rostain and Ramsay (2006) also obtained positive results for combined medication management and psychosocial treatment in their open trial of forty-three patients. These patients received sixteen sessions of cognitive-behavioral therapy, including psychoeducation, behavioral coping strategies, targeting of thoughts and behaviors that interfere

with treatment and behavior change, and building on individual strengths. They also received concurrent medication treatment with Adderall titrated to each patient's optimal dose. At post-treatment, patients showed significant reductions in clinician-rated ADHD symptoms and CGI. These studies provide convincing evidence that a structured, skills-based psychosocial treatment approach combined with medication management can result in significant reductions in ADHD symptoms. However, it is unclear whether the psychosocial treatment added benefit above and beyond those from medication treatment that have been demonstrated in prior studies.

Safren and colleagues (2005a; 2010) completed randomized controlled trials of an individual psychosocial treatment for adults with ADHD. Notably, patients in these studies were already stabilized on medications but continued to experience significant residual symptoms. A cognitive-behavioral treatment (CBT) package was developed, targeting both concrete behavioral skills for managing ADHD symptoms and maladaptive thinking patterns that decrease motivation and interfere with skill use. The treatment includes three core modules covering skills for organization and planning, distractibility reduction, and adaptive thinking (Safren et al., 2005c). This manualized treatment also includes many common CBT elements including structured sessions guided by an agenda, training of skills, homework assignments for skills practice and implementation, and tracking of symptoms at each treatment visit.

Following promising results in a waitlist controlled trial (Safren et al., 2005a), Safren and colleagues (2010) recently tested their CBT for residual symptoms in a randomized controlled trial with an active control condition, relaxation training with educational support (RES). Compared to RES ( $n = 43$ ), adults who received CBT ( $n = 43$ ) showed significant reductions in ADHD symptoms and CGI as rated by an assessor blinded to treatment status and in self-reported ADHD symptoms. In addition, CBT treatment responders maintained their gains over six- and twelve-month follow-up assessments. Observed gains can be attributed more conclusively to the skills-based psychosocial treatment in this study because participants were stabilized on medications before treatment began. In addition, the use of an active treatment control group and follow-up assessments provides evidence that CBT targeting specific compensatory skills, in combination with ongoing medication treatment, can potentially lead to positive outcomes in the longer-term.

**Group Treatments.** Wiggins et al. (1999) published the first study of a group-based intervention—a small wait-list-controlled trial of a four-session psychoeducational program. The method of assigning participants to groups was not reported. Sessions covered information on ADHD, goal setting and time management, strategies for task completion, and organization of the physical environment. Compared to wait-list, group members reported significant reductions in disorganization, inattention, and emotional lability. Subsequent group interventions have been based on a variety of treatment models.

Three group intervention packages are based upon neurocognitive models of ADHD and, like CBT approaches, involve learning compensatory skills to reduce the impact of symptoms. The Group Cognitive Remediation Program has received support in two small randomized controlled trials (Stevenson, Stevenson, & Whitmont, 2003; Stevenson, Whitmont, Bornholt, Livesey, & Stevenson, 2002). In the first study, eight clinician-led group sessions were supplemented by a client workbook and patient contact between sessions with an individual support person who served a cuing or prompting role for skill use and homework completion. Structured sessions focused on learning compensatory strategies for cognitive functions impaired by ADHD and restructuring the environment to support ADHD-related deficits. Compared to wait-list control ( $n = 21$ ), the treatment group ( $n = 22$ ) self-reported significant reductions in

ADHD symptoms and improvements in organizational skills and self-esteem. At two-month and one-year follow-up assessments, the treatment group had maintained many of their gains. Stevenson et al. (2003) then tested a version of their treatment involving less therapist contact—only three treatment sessions—augmented by the workbook and support person. The pattern of results for participants receiving wait-list ( $n = 18$ ) versus treatment ( $n = 18$ ) was similar to that described above although there was no twelve-month follow-up.

Solanto and colleagues (2008) developed a manualized treatment that also focuses on developing compensatory strategies to enhance self-regulation from a neuropsychological perspective. Metacognitive Therapy (MCT) targets deficits in executive self-regulatory skills associated with ADHD. Sessions focus on training time management, organization, self-motivational and planning skills with repeated practice outside of sessions to increase the likelihood that such skills will become more automatic and less effortful over time. In an open trial, thirty participants—some taking ADHD medications—completed eight- or twelve-week versions of the program and reported significant pre-to-post reductions in inattentive symptoms on two self-report scales. Prior to treatment, all participants scored above the clinical cutoff for inattentive symptoms on a normed rating scale. At post treatment, nearly half of participants (47 percent) scored below this clinical cutoff.

Solanto and colleagues (2009) recently completed a randomized controlled trial comparing MCT to group supportive psychotherapy—an even more rigorous test of this intervention's efficacy. As in the previous trial, the treatment incorporated behavioral activation strategies and targeting of obstacles to skills use, including examination of maladaptive cognitions with sessions devoted to skills application. Participants completing MCT ( $n = 45$ ) had significantly greater reductions in inattentive symptoms than those completing supportive therapy ( $n = 43$ ) as measured by both self-report and ratings by a clinician blinded to group status. Observers' reports of participants' inattentive symptoms also showed significantly greater change for the MCT group, and a significantly greater number were considered treatment responders as defined by at least 30 percent change on clinician ratings of inattentive symptoms. This study is a methodologically rigorous test of a psychosocial treatment for adults with ADHD, showing a significant impact on ADHD inattentive symptoms in this structured, skills-focused intervention compared to a supportive group experience.

In an open trial, Virta and colleagues (2008) describe using neuropsychological theories of ADHD to develop a “cognitive-behaviorally oriented group rehabilitation.” Twenty-nine adults with ADHD completed ten or eleven weekly group sessions covering a range of topics including a substantial psychoeducation/social support component. At post-treatment, 31 percent of group members showed at least 20 percent improvement on a self-report ADHD rating scale for adults; however, there were no changes in observed symptom ratings made by patients' significant others. This research group (Salakari et al., 2009) obtained follow-up data for twenty-five of their twenty-nine participants at three and six months post-treatment. Eleven of the participants were classified as “improved” (20 percent reduction in self-reported symptoms), and these participants maintained their reductions in ADHD symptoms at three and six months. The other fourteen participants showed no effect on their ADHD symptoms at any time during the trial. This treatment's smaller effects on ADHD symptoms might be attributed to its inclusion of a broader range of topics not directly related to compensatory skills development (e.g., self-esteem, comorbidity, communication).

Two group treatments for ADHD incorporate concepts of mindfulness—one based on Linehan's Dialectical Behavior Therapy (DBT) skills training (Linehan, 1993) and



the other on mindfulness meditation training. Hesslinger et al. (2002) initially tested their adaptation of DBT skills training groups in a small, nonrandomized controlled trial ( $N = 15$ ) and later in a larger, multisite open trial ( $N = 72$ ; Philipsen et al., 2007). DBT is a cognitive-behavioral approach developed for the treatment of borderline personality disorder that blends traditional change-oriented CBT skills with acceptance- and mindfulness-based skills. The authors decided to adapt DBT skills training because of shared features between ADHD and borderline personality disorder (e.g., impulsivity, emotional dysregulation). Thirteen weekly group sessions covered psychoeducation about ADHD, core mindfulness training, organizational strategies, emotion regulation and depression, behavior analysis, impulse control, and substance use. Among the sixty-six participants who completed the study, significant reductions from pre-to-post-treatment were observed in self-reported ADHD and depression symptoms (Philipsen et al., 2007). Outcomes did not differ based on whether patients were taking medications. The authors are now undertaking a large, multisite randomized controlled trial comparing medication to group treatment to their combination.

Zylowska and colleagues (2008) conducted an open trial of modified mindfulness meditation training with twenty-four adults and eight adolescents. Their hypothesis was that the attention control cultivated during mindfulness exercises would improve distractibility and emotion regulation for patients with ADHD. Eight weekly sessions focused on education about and practice of mindfulness, and included weekly out-of-session practice assignments. Treatment completers self-reported significant decreases in inattentive and hyperactive-impulsive symptoms, with 30 percent of participants showing a treatment response of 30 percent symptom reduction or more. Most intriguingly, participants improved their performance on attention conflict and set-shifting neuropsychological tests from pre- to post-treatment. It is unclear to what extent improvements in performance on these tests correspond to improved performance in real-life situations that place demands on executive functions (Burgess, 1997), and controlled trials will be needed to account for possible practice effects on these tasks.

## Summary of Findings, Limitations, and Future Directions

Features of the psychosocial treatment programs that have received at least preliminary support can be identified. First, both group and individual treatments have shown promising results. Second, most of the treatments are short-term, averaging about ten to twelve sessions, though in most studies, only acute outcomes have been measured. Third, most treatments appear to be highly structured. Session content is often specified by a manual and guided by an agenda. Fourth, in studies that include both medicated and nonmedicated adults with ADHD, no clear pattern has emerged with respect to differential treatment effects. One could hypothesize that some level of symptom control at the neurobiological level might increase the efficacy of compensatory strategies, but this effect has not emerged.

The treatments described are heterogeneous in content and fall roughly into two categories: those that primarily focus on acquisition and maintenance of specific skills and those that cover a broad range of topics associated with adults with ADHD. Metacognitive Therapy and CBT for adults with residual symptoms exemplify the former approach while the latter is illustrated by Virta and colleagues' program (2008) and in the modified DBT skills training program. Arguments can be made supporting

both approaches. Because adults with ADHD experience a wide range of impairments across functional domains, a broad topic-based approach may more comprehensively address associated impairments. On the other hand, a more targeted, skills-based approach could help the patient acquire strategies that could be applied across a variety of settings. Research comparing treatment approaches to one another should examine these differences in more detail, taking into account effects on a range of outcome measures directly and indirectly related to ADHD symptoms.

Limitations of the existing literature highlight research challenges that must be addressed in subsequent studies (Weiss et al., 2008). Most treatment programs have yet to accumulate support from more than one study. Sample sizes are small and measurements of treatment adherence infrequent. Existing studies for the most part do not employ the more scientifically rigorous research design elements that can account for threats to internal validity, such as control groups with randomization or independent assessors blinded to treatment condition. Instead, the majority of published studies rely on self-report measurement of treatment-related change, which is subject to positive biases in participants' views of symptom improvement. Because assessment of adults with ADHD is a developing area and no true "gold standard" measures have been identified, researchers often select different outcome measures, complicating attempts to compare results across studies. Deciding at what level to measure outcomes in an ADHD treatment study is complicated by the fact that compensatory strategies may reduce the functional impact of symptoms while the symptoms themselves may still be present (Weiss et al., 2008). Studies should measure a range of outcomes and address the stability of treatment effects over time. Finally, we have little empirical data upon which to decide "what works for whom" and to tailor interventions based on patient characteristics (e.g., medication treatment status, psychiatric or cognitive comorbidity).

Other limitations of prior studies may be the representativeness of samples and, in some cases, variation in the methodological rigor with which those samples are selected. There is variation across the studies reviewed above as to the degree to which rigorous, multimeasure criteria are employed for diagnosis and inclusion, such as those discussed previously. Additionally, the samples of adults who end up participating in psychosocial clinical trials may not represent all adults with the disorder. Samples of self-referred adults identified as having ADHD in adulthood and those identified and followed from childhood tend to differ in a number of respects (Barkley, Murphy, & Fischer, 2008). Accordingly, intervention studies may have samples of self-referred individuals with potentially higher educational achievement and lower rates of externalizing psychopathology. A cursory review of the participants sections of these studies (e.g., Safren et al., 2005a; 2010; Solanto et al., 2008) indeed shows relatively high levels of educational achievement compared to longitudinally-followed children with ADHD. Hence, we do not currently know the degree to which results from these relatively short-term treatments would generalize to adults with higher levels of chronic, multidomain functional impairment who may be less likely to refer themselves for psychosocial treatment. In addition, many studies have exclusion criteria that screen out individuals with significant comorbid psychopathology.

As psychosocial treatments have been developed and tested for adults with ADHD relatively recently, the focus has been on maximizing the internal validity of studies. Following a logical approach to accumulating an evidence base for psychosocial intervention that is standard in the field (Chambless et al., 1996; Rounsaville, Carroll,

& Onken, 2001), additional studies should be conducted to replicate current findings in different samples and by different research teams followed by effectiveness studies with more diverse samples. Clinical research programs, as they continue to develop, should address these next steps and meet the growing need for empirically-based treatment approaches for adults with ADHD. Difficulties with self-regulation and self-management are likely to interfere with psychosocial treatments if they are not recognized and targeted in those treatments.

## **RECOMMENDED PRACTICES IN PSYCHOSOCIAL TREATMENT OF ADULTS WITH ADHD**

Because the critical components have yet to be conclusively identified via scientific studies, psychosocial treatment recommendations for adults with ADHD are largely derived from clinical observations and the insights of clinicians with extensive experience with this population (e.g., Murphy, 2006; Ramsay & Rostain, 2007). In this section, we present a list of “good practices” in psychosocial management of adults with ADHD derived from clinical resources, common features of efficacious psychosocial treatments, and our clinical observations in the CBT for adults with ADHD treatment protocol and patient guide developed at Massachusetts General Hospital (Safren, Perlman, Sprich, & Otto, 2005b; 2005c). We refer to these as “good practices” because they are consistent with current theoretical accounts and empirical data on adults with ADHD (e.g., Barkley, Murphy, & Fischer, 2008). However, we reserve the term “best practices” for the time when empirical data provide more solid support for these recommendations.

Psychosocial treatment, like medication treatment of ADHD, is best conceptualized as symptom management rather than symptom elimination. Compensatory skills do not permanently alter the underlying neurobiological impairment leading to problematic behaviors. Clinicians should be mindful of this treatment model as they work with their patients, helping them to develop adaptive attitudes toward long-term skill use.

### **Conduct a Thorough Diagnostic Assessment**

As discussed above, a thorough and accurate diagnostic assessment is the foundation of an effective treatment plan. The assessment process continues throughout treatment as the clinician focuses on the variables triggering and maintaining the patient’s problem behaviors.

### **Choose a Few Clear and Salient Treatment Goals**

Because adults with ADHD often struggle to maintain consistent focus on a topic or task, it is wise to direct treatment efforts at a few (e.g., one to three) clearly operationalized goals at a time. Too many poorly defined goals can result in an unfocused treatment effort, which can be more problematic given the patient’s difficulty with sustained attention, task completion, and follow-through. Goals should be collaboratively established and should be closely associated with the patient’s valued long-term outcomes. Emphasize how shorter-term symptom management

connects to the patient's long-term goals. For example, management of symptoms such as forgetfulness and chronic lateness could be tied to a patient's stated desire to improve the quality of his or her social relationships. If skill-related goals are tied to salient long-term outcomes, this can serve as a motivational foothold for the client when lapses occur. Additionally, it is important to make sure that the goals articulated are controllable for the patient, and that there is discussion about how realistic they are. For example, in a down economy with significant unemployment, a short-term goal of therapy may not be to return to work in twelve weeks. Alternatively, short-term goals of therapy might involve steps that would maximize the chances of this happening (e.g., enroll in an appropriate vocational training program, prepare one's resume, have a system for reviewing advertisements for employment opportunities).

## **Focus on Compensatory Skills**

In addressing the client's treatment goals, the clinician should consider choosing a limited number of behavioral skills designed to address the most impairing or distressing problem behavior. Helping the client focus on consistent use of a few skills is likely to be more effective than introducing a wide array of strategies without allowing time for sufficient practice and real-world application. It is critical to help the client practice the skill consistently until it becomes more habitual and less effortful. Patients should discuss specific instances of problem behaviors and skill use in daily life (Ramsay & Rostain, 2007).

## **Develop a Structured Format**

During sessions, adults with ADHD will frequently engage in off-topic, tangential speech making it difficult to focus on those few salient goals and strategies. The structured format of cognitive-behavioral therapy can help address this problem. Start each session by setting an agenda that defines the topics to be covered, modeling planning and time management skills in the context of the treatment. While setting the agenda collaboratively, the patient may nominate topics not directly relevant to the skills material or may have difficulty "keeping it short" when updating the clinician about recent events. Together, the therapist and client can negotiate the best way to use session time, for example saving nonskills-related discussions for the last portion of the session.

## **Maintain a Collaborative and Transparent Working Relationship**

To enable the flexible use of skills and strategies described above, it is critical that clinician and patient maintain a collaborative, nonjudgmental working relationship. For the clinician, it is not always easy to ensure that the patient feels heard and valued while, at the same time, helping him or her set appropriate limits or redouble efforts towards agreed-upon treatment goals. In the initial sessions, frank discussion of difficulties, staying on-topic, and following through with assignments should take place. The clinician can explain that he or she will often give direct constructive

feedback and that he or she is also open to the patient's feedback. Negotiate how to do this. For example, therapist and patient may identify a key phrase or nonverbal signal to indicate when the discussion is going off topic (the patient should use this if the therapist goes off-topic as well!). Taking a "do what works" attitude and explaining that, "If something doesn't work, we'll come back next week and look at it together and try to figure it out," can reduce the likelihood that the patient will start to avoid assignments or sessions because of unaddressed fear of failure or frustration with the therapy.

## **Assess Symptoms Throughout Treatment**

Formal monitoring of progress throughout therapy serves many functions and is associated with better outcomes in therapy (Persons, 2008, p. 188). A simple self-report rating scale can give the clinician a snapshot of the patient's prior week and can be used to track treatment-related change over time. Therapist and patient discuss which skills are positively impacting symptoms and which symptoms still need to be targeted. Weekly ratings can also reinforce a patient's consistent use of skills. For example, plotting scores on a graph can be an excellent way to illustrate a patient's progress and provide positive feedback (Knouse & Safren, 2009).

## **Provide Appropriate Psychoeducation**

Expert clinicians emphasize accurate psychoeducation about ADHD as the bedrock of effective treatment (Ramsay & Rostain, 2007). Adults with ADHD may not know that substantial research supports ADHD as a neuropsychiatric, biologically-based disorder that has significant psychosocial consequences throughout the lifespan. It is important that patients understand that having ADHD does not equate to being unintelligent or lazy (Safren et al., 2005c). Unfortunately, they may have repeatedly received these messages—subtly or not-so-subtly—throughout their lives and may continue to believe them either explicitly or implicitly. The first treatment session can include a brief outline of the biological underpinnings of ADHD and a discussion of how symptoms have impacted important areas of life. Educational resources, such as the *ADHD: What We Know* fact sheets (available online via the National Resource Center on ADHD at [www.help4adhd.org](http://www.help4adhd.org)), can be provided to patients. A simple but coherent model of how ADHD symptoms affect thoughts, feelings, and behavior provides the rationale for skills-based treatment.

## **Attend to Medication Adherence**

For many patients with ADHD, medication is a critical part of overall symptom management. Difficulties with forgetfulness and planning can interfere with adherence. Medication adherence problems should be assessed and behavioral strategies applied as appropriate, as improvement in this target behavior is likely to result in a large payout for the patient in terms of better symptom management. If the patient has medication concerns or questions, these should always be directed toward the patient's prescribing physician.

## **Practice, Reinforce, and Repeat**

Adults should be encouraged to practice compensatory strategies consistently until they begin to see the benefits and they become more habitual. In the early stages of learning new skills, patients can be encouraged to think of ways to reward themselves for successful skill use, such as engaging in a pleasant activity or tracking progress on a large chart at home. Lapses in skill use can be framed as opportunities to gather data about triggers for slips, to troubleshoot, and to get back on track successfully. To help patients remember session content and cue skill use, they can take notes, write all homework assignments on a task list, or keep a therapy notebook containing all notes and handouts related to treatment.

## **Attend to Thoughts and Feelings That Block Skill Use**

Even if cognitive restructuring is not a formal part of a particular patient's treatment plan, the therapist should probe for thoughts or feelings that occur during the times that patients report slips in skill use. Sometimes patients report automatic thoughts such as, "I shouldn't have to use these tricks to get things done. I should just be able to do it myself." Helping the patient become more aware of the influence of specific thoughts and feelings and discussing more adaptive ways of thinking can be an important part of promoting skill use and reducing avoidance (McDermott, 2000; Ramsay & Rostain, 2007).

## **Watch for Overly Positive Thinking**

Clinical observation (Mitchell, Nelson-Gray, & Anastopoulos, 2008) and emerging research (Knouse, Bagwell, Barkley, & Murphy, 2005; Mitchell, Anastopoulos, Knouse, Kimbrel, & Benson, 2008) indicates that, for adults with ADHD, habitual thinking patterns that precede problem behaviors are often overly positive rather than overly negative. This often impulsive overestimation of one's capabilities or underestimation of risk may cause a patient to forego using skills. If a patient can become more aware of their own overly positive "red flag" thoughts (e.g., "Well, it will all work out for me because I'm a good person." "I can just get one more thing done before I leave the house."), he or she may be able to use these thoughts as a cue for re-evaluation and skill use.

## **Restructure the Environment**

In his neuropsychologically-based theory of ADHD, Barkley (1997a, p. 338) emphasized the importance of placing interventions "at the point of performance" for individuals with ADHD. This means that the closer the intervention is to where and when the target behavior is to occur, the more likely the intervention is to be effective. Keeping this in mind, clinicians should train patients to place prospective memory cues and reminders for skill use in their everyday environments. Teaching the patient to set alarms for task completion, appointments, or taking medications can be a critical skill. Nearly every patient is likely to have a cell phone with an alarm, and this can be an extremely useful daily tool. The patient should be encouraged to set up his or her physical environment as much as possible to support ADHD-related difficulties by using visual cues and reducing unnecessary distractions.

## **Be Creative, But Keep it Simple**

In treating adults with ADHD, there is ample room for therapist creativity in formulating behavioral solutions and in teaching important concepts that will be memorable outside of the therapy session. Simple yet salient visual metaphors that cue skill use may come to mind when needed in daily life. For example, when working with a patient who took on too many commitments and failed to follow through, one therapist in our group used the metaphor of a flimsy, grease-soaked paper plate loaded down with food. “Can this really fit on my plate?” became a salient thought that, in the appropriate moment, helped to cue the patient to step back and consider whether to take on a new commitment. Keeping metaphors and strategies vivid yet directly connected to the target concept is advised, as overly complicated abstract concepts may result in lengthy, unproductive discussions in the therapy session.

## **Consider the Length and Frequency of Treatment**

Ideal length and frequency of psychosocial treatment for adults with ADHD has not yet been evaluated scientifically. Short-term treatments of ten to twelve sessions have demonstrated immediate effects, but it is unclear whether long-term maintenance would require extended treatment or other maintenance strategies such as booster sessions. Tapering of sessions from weekly to biweekly in the latter half of treatment could be a viable option because this gives patients increased time between sessions to practice skills while still in the supportive context of therapy. The patient can take responsibility for formulating the session agenda, focusing on particular skills that need to be reviewed and refined. Sessions are primarily a venue for patients to self-reflect on skill use and to practice troubleshooting and relapse prevention.

## **Consider Referral for Other Services**

Clinicians should think broadly about their patients and consider the multiple life impairments that can be associated with the disorder. Ameliorating symptoms may not always be sufficient to resolve long-standing difficulties and, when appropriate, referrals for adjunctive services are recommended (Murphy, 2006; Ramsay & Rostain, 2007). Patients may benefit from couples counseling, child behavior management training, life coaching, vocational counseling, academic counseling, organizational consultation, or participation in a support group for adults with ADHD. The national advocacy group Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD), provides educational resources and sponsors support groups around the country ([www.chadd.org](http://www.chadd.org)).

## **PSYCHOSOCIAL TREATMENT OF COMORBID DISORDERS IN ADULTS WITH ADHD**

Adults with ADHD frequently have higher rates of mood, anxiety, and substance use disorders as well as higher rates of personality disorders (PDs) including antisocial and borderline PDs than adults without the disorder (Barkley, Murphy, & Fischer, 2008; Biederman et al., 1993; Kessler et al., 2006; McGough et al., 2005; Miller,

Nigg, & Faraone, 2007; Young, Toone, & Tyson, 2003). In practice, clinicians are likely to encounter patients with ADHD who have comorbid conditions that must also be targeted in psychosocial treatment and, in some cases, these conditions may be sufficiently severe and impairing to warrant first priority (Mitchell, Nelson-Gray, & Anastopoulos, 2008). For example, if a patient is severely depressed, at significant risk for self-harm, or dependent upon substances, addressing these problems would take first priority in treatment.

If empirical research on psychosocial treatment of adults with ADHD can be described as “emerging,” research on the management of other psychiatric disorders in these adults is virtually nonexistent. Little is known about the nature and development of these comorbid disorders in individuals with ADHD and whether they differ in clinically important ways. Because ADHD typically emerges before other disorders, it can be thought of as a risk factor for comorbid problems, but the mechanisms involved in this increased risk are largely unknown. Understanding these mechanisms could point to particular intervention approaches. We discuss depression as an example.

ADHD is associated with increased rates of depressive disorders across the lifespan (Barkley, Murphy, & Fischer, 2008). Only recently have studies begun to closely examine the mechanisms involved in this increased risk. Many in the field have speculated that a lifetime of perceived failure experiences might lead to the development of negative patterns of thinking that influence both maladaptive behavior and negative mood (e.g., Murphy, 2006; Safren, Perlman, Sprich, & Otto, 2005), but empirical support for this hypothesis is only recently accumulating. Using a cross-sectional sample of children, Ostrander and Herman (2006) modeled the relationship between ADHD and depression with respect to environmental (quality of parent management) and cognitive variables (locus of control). Supporting their developmentally-based predictions, only the adverse environmental factor—poor parent management—mediated the relationship between ADHD and depression for younger children. For older children (age ten and older) the ADHD-depression relationship was also mediated by maladaptive cognitions, as was the contribution of parent management to depression. Results were largely replicated with respect to school maladjustment and control-related beliefs (Herman & Ostrander, 2007).

Do maladaptive cognitions continue to predict the link between ADHD and depression in adulthood? Two cross-sectional studies provide preliminary evidence. Mitchell, Anastopoulos, and colleagues (2008) found that negative automatic thoughts were a significant mediator between ADHD symptoms and depressive symptoms in a college sample. In another study, adults diagnosed with ADHD were more likely than controls to have an internal-uncontrollable attributional style that has been associated with vulnerability to depression (Rucklidge, Brown, Crawford, & Kaplan, 2007). People with this style view problems in their lives as both caused by their actions or characteristics and as out of their control. This study did not examine whether this attributional style in adults with ADHD was indeed more strongly related to depression.

These studies point to maladaptive beliefs as a possible target for psychosocial treatment in depressed adults with ADHD and support the use of cognitive restructuring strategies, but more refined and empirically supported models of these relationships are necessary to selecting optimal intervention targets. Other clinically-relevant predictors of depression have not been examined in adults with ADHD and may be even more critical to this comorbidity. First, the influence of stressful life events must be more closely examined because both ADHD and depression are associated with



this variable (Mazure, 1998). Second, depressed adults are more likely to respond to a stressor with avoidance behaviors that eventually contribute to a narrowing of behavioral range, decreased access to rewards, and a downward depressive spiral (Ottenbreit & Dobson, 2008). Adults with ADHD may be particularly vulnerable to avoidant coping because of difficulties with the executive functions necessary for problem-solving and planning (Boonstra, Oosterlaan, Sergeant, & Buitelaar, 2005). Finally, neurocognitive factors critical to emotion regulation in ADHD have not been adequately explored in ADHD and depression. Depression has been linked to both limbic and frontal lobe functioning (Beck, 2008) and these regions and the circuits connecting them have been implicated in ADHD (Nigg & Casey, 2005). Data on these critical variables might provide a theoretical rationale for choosing some psychosocial interventions over others. Even when proximal treatment targets, such as maladaptive beliefs or behavioral avoidance, have been identified, intervention for these problems is likely to look different when a clinician is working with a patient with ADHD.

Treatment outcome studies of specific comorbid disorders in adults with ADHD have not been conducted for any psychosocial intervention. Somewhat of an exception is recent work by Bramham and colleagues (2009) examining a group treatment designed to target anxiety, depression, and self-esteem problems in adults with ADHD. Forty-one adults with ADHD receiving medication treatment participated in six sessions across three day-long workshops delivered over three months. Information on whether participants met criteria for comorbid diagnoses was, unfortunately, not reported. The treatment consisted of two psychoeducation sessions about ADHD and one session each addressing anger and frustration management, ADHD and emotion (depression, anxiety), relationship issues, and time management/problem-solving. Group participants were compared to thirty-seven medicated adults on the waiting list for the groups. Group participation was associated with increases in ADHD knowledge, self-esteem, and self-efficacy but no changes in depression or anxiety symptoms. Thus, this treatment was not successful in affecting depression and anxiety in adults with medication-treated ADHD not specifically selected based on comorbid diagnoses. This does not, however, mean that a much more targeted intervention based on empirically supported treatments for a specific comorbidity would not be efficacious—only that these data are not currently available.

Though systematic studies on psychosocial treatment of comorbid disorders in adults with ADHD have not been conducted, it is likely that they would find the symptoms of ADHD to be a complicating factor in the management of other disorders. Comorbidity is related to increased functional impairment (Miller, Nigg, & Faraone, 2007), and many of the empirically supported treatments shown to be efficacious for mood and anxiety disorders (Kendall & Chambless, 1998) require substantial self-management including attendance at weekly sessions, completion of homework outside of session, and significant self-monitoring. Even if ADHD symptoms are not the direct target of treatment, they will undoubtedly be an influential presence in the clinician's office. Helpful approaches to treatment of comorbid disorders might include any of the above recommended practices in treating adult ADHD symptoms directly. Clinicians may be well served in focusing on one or two concrete goals at a time and in modifying session content or breaking down homework exercises to increase the patient's likelihood of success. Therapy-interfering behaviors (missing appointments, arriving late for sessions, not completing homework assignments) should themselves become the target of behavioral and cognitive interventions delivered in a nonjudgmental fashion.

## CONCLUSION

While research on psychosocial treatment of adults with ADHD is accumulating, there is a large population of individuals who are in immediate need of treatment for this distressing and impairing disorder. This requires clinicians to be familiar with the emerging evidence base while working flexibly with their patients and incorporating recommendations based on clinical observations and expertise. Clinicians must continue to submit their treatment practices to scientific investigation and be willing to continually improve treatments based on the empirical data. While much work remains on the psychosocial treatment of adults with ADHD, future progress is likely to have significant clinical and scientific impact.

This chapter emphasized the following points:

- Psychosocial treatment of adults with ADHD as a field of empirical study is still in its initial stages. Several novel approaches have received preliminary support relatively recently.
- Whereas psychopharmacological treatments are efficacious in reducing symptoms of ADHD for many adults, psychosocial treatment may be needed for adults who cannot take medications or who continue to experience residual symptoms, functional impairment and skills deficits, and who suffer from comorbid conditions.
- Comprehensive assessment—including critical thinking about the ADHD diagnosis, assessment of comorbidities, and a working model of the patient’s current problems—is the foundation of effective psychosocial treatment.
- Traditional, insight-oriented psychotherapy has not received scientific support as a treatment for adults with ADHD.
- Structured group and individually-formatted psychosocial treatments for adults with ADHD have received preliminary empirical support in open trials and small randomized controlled trials. Tested programs are mostly short-term and skills-focused. Appropriate psychoeducation is a key element in most treatment packages.
- The existing empirical evidence can best be described as “emerging” and a number of methodological limitations must be addressed in larger samples with more rigorous designs.
- Recommended clinician practices in psychosocial treatments are based on clinical observation, but can increasingly rely on the common elements of studied treatments. Clinical recommendations in this area include choosing a few salient treatment goals, focusing on consistent practice outside of sessions of a few compensatory skills, developing a structured format and collaborative working relationship, assessing symptoms and medication adherence throughout treatment, and attending to maladaptive thoughts.
- Treatment of comorbid disorders in adults with ADHD might benefit from the above recommended practices, but additional research on effective treatment of these disorders in this population—as well as more basic research on the nature of comorbidity in ADHD—are needed to inform treatment decisions.

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