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Abstract

It is currently recognized that attention deficit/hyperactivity disorder (ADHD) persists into adulthood for more than half of affected individuals. ADHD in adulthood is associated with impairments in most adult roles. Medications are considered an effective treatment for the core symptoms of ADHD. Adjunctive psychosocial treatment, primarily cognitive-behavioral therapy (CBT), is efficacious in cases of residual symptoms and impairments. However, a minority of adults with ADHD may not be able to take medications due to medical contraindications, non-response, or intolerable side effects. The goal of this article is to discuss the case of an adult with ADHD who is unable to take medications for ADHD due to cardiac risk. The patient sought a course of CBT for adult ADHD to address difficulties he experienced at work and in his home life. His case illustrates the challenges of and opportunities for CBT for adult ADHD without medications.

Keywords

adult ADHD, attention deficit hyperactivity disorder, cognitive-behavioral therapy, nonmedication treatment for adult ADHD, psychosocial treatment

I Theoretical and Research Basis for Treatment

It is increasingly acknowledged that symptoms and impairments associated with attention-deficit/hyperactivity disorder (ADHD) persist in adulthood for the majority of individuals first diagnosed in childhood/adolescence. The international prevalence of childhood ADHD is estimated at 6.5% (Polanczyk, Lima, Horta, Biederman, & Rohde, 2007), and the syndrome persists into adulthood in more than 50% of these childhood cases. The specific persistence rates cited depend on whether a syndromatic (i.e., meeting full diagnostic criteria) or symptomatic (i.e., having prominent residual symptoms that create clinically significant impairments) definition is used. Syndromatic persistence rates fall around 40%, whereas symptomatic persistence rates fall upward of 90% for children diagnosed with ADHD (Biederman, Petty, Clarke, Lomedico, & Faraone, 2011; Faraone, Biederman, & Mick, 2006). A minority of individuals may eventually

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reach the point at which they are asymptomatic, but these individuals may still face difficulties associated with previous functional problems (e.g., low educational attainment; Barkley, Murphy, & Fischer, 2008).

Prevalence rates for adult ADHD in the United States have been estimated at 4.4% of the adult population (Kessler et al., 2006), and international rates have been estimated at 3.4% (Fayyad et al., 2007). Persistence rates of childhood ADHD do not account for individuals who exhibited symptoms when they were younger but were not identified until encountering difficulties in adulthood. Moreover, mere persistence rates do not adequately reflect the wide range of life domains affected by ADHD as well as the degree of impairments experienced by these individuals.

Adults with a lifetime diagnosis of ADHD, when compared with controls, are at increased risk for experiencing functional problems in academic settings, occupational underperformance, being fired from jobs, and having various interpersonal problems, including marital and parenting difficulties (Barkley et al., 2008; Biederman et al., 2006; Wilens, Biederman, & Spencer, 2002). These studies also indicate a greater incidence of coexisting psychiatric diagnoses of depression, anxiety, and/or substance use problems. Individuals with ADHD also exhibit a myriad of difficulties organizing and managing the demands of daily life, such as managing finances (including having higher credit card debt and being less likely to have savings or retirement accounts), maintaining good health practices, and have poorer driving records (Barkley et al., 2008; Biederman et al., 2006, 2011).

ADHD has come to be understood as a developmental disorder of impaired executive functions. A useful definition of executive functions is “those self-directed actions of the individual that are being used to self-regulate” (Barkley, 1997, p. 56), often involving organizing and executing behaviors across time to achieve future-focused objectives. Recent research has identified the following executive function domains: time management, organization/problem solving, self-motivation, impulse control, and emotional management (Kessler et al., 2010).

Although ADHD may rank as one of the more impairing disorders encountered in outpatient psychiatry and psychology, surprisingly few individuals receive treatment. A survey of adults with ADHD revealed that 25.2% had received any sort of psychological or psychiatric treatment in the previous year, with less than half—only 10.9%—of these adults receiving specialized treatment (Kessler et al., 2006).

The aforementioned data on lack of specialized treatment are unfortunate because ADHD numbers among the more successfully treated disorders, including for adults. Medications, particularly the psychostimulants, stand out as an effective treatment option for patients of all ages (e.g., Tcheremissine & Salazar, 2008; Vitiello, 2009), although adults with ADHD have not been as widely studied as children. However, symptom improvement alone does not necessarily translate into satisfactory functional improvements for many individuals. For example, in a study of children with ADHD who were treated with an effective dose of medications, 61% continued to exhibit significant organizational and planning skills deficits (Abikoff et al., 2009). Likewise, it is recognized that pharmacotherapy alone will be insufficient treatment for many adult patients with ADHD (Gualtieri & Johnson, 2008; Wilens, Spencer, & Biederman, 2000).

There are a variety of adjunctive, nonmedication treatments that have been adapted or developed for the treatment of ADHD, most often delivered in combination with medications (Ramsay, 2010). Most of these nonmedication treatments target common domains of impairment associated with ADHD, such as academic, workplace, interpersonal, and overarching executive functioning problems. In particular, psychosocial treatments adapted to address the needs of adults with ADHD have emerged as the nonmedication treatment with the strongest evidence base for the treatment of adult ADHD. The psychosocial treatments studied thus far fall under the umbrella of cognitive-behavioral therapy (CBT), with behavioral interventions (i.e., implementation of coping strategies to address executive dysfunction) emphasized more so than traditional cognitive

interventions (i.e., challenging distorted thoughts) for this clinical population, although cognitive modification remains an important treatment component.

Most of the early studies of CBT for adult ADHD were pilot or otherwise uncontrolled studies, although they generally produced positive outcomes (Ramsay, 2010). In particular, clinical outcome studies indicated that CBT modified for issues associated with adult ADHD produced improvements on measures of ADHD symptoms as well as measures of coexisting mood, anxiety, or self-esteem in individual (Rostain & Ramsay, 2006) and group formats (Hesslinger et al., 2002; Solanto, Marks, Mitchell, Wasserstein, & Kofman, 2008). More recently, there have been well-designed, randomized controlled trials of treatment programs for adult ADHD in which CBT approaches (delivered to medication-treated adults) have outperformed active treatment controls (e.g., meditation, psychoeducation/support, treatment as usual; Emilsson et al., 2011; Philipson et al., 2007, 2010; Safren et al., 2005, 2010; Solanto et al., 2010).

Psychosocial treatments for adult ADHD are considered adjunctive treatments delivered in combination with medications. In fact, the majority of participants in the clinical outcome studies of CBT for adult ADHD were on stable doses of prescribed medications while receiving psychosocial treatment. However, there were no significant differences reported in comparisons of ADHD adults who received psychosocial treatment without concurrent medications and those who completed treatment on medications in these published outcome studies (Ramsay, 2010). A recent small pilot study of CBT for adults with ADHD who declined medication treatment reported that CBT was associated with improvements on various measures of ADHD symptoms, overall functioning, depression, and anxiety (Ramsay & Rostain, 2011).

The effectiveness of medications lies in their ability to reduce the core symptoms of ADHD. However, these improvements do not necessarily translate into desired improvements in adult role functioning. Moreover, there is a sizable minority of adults with ADHD who may not fully benefit from medications due to partial response, nonresponse, side effects, or medical contraindications that obviate the use of medications. Finally, some adults with ADHD may refuse pharmacotherapy based on personal choice.

CBT for adult ADHD has been found to be an effective adjunctive treatment in cases where individuals experience residual symptoms despite medication treatment. A fruitful area of future clinical research would be providing CBT to individuals who cannot or refuse to take medications for adult ADHD. This sort of research would address a clinical need of individuals for whom the first line of treatment for ADHD is not available to them; from a research standpoint, such studies would provide data on the effects of psychosocial treatments on ADHD.

The purpose of this article is to discuss the case of Brian,¹ an adult diagnosed with ADHD but who could not be treated with medications due to a cardiac condition. He experienced a number of functional problems in his life that led him to seek CBT for adult ADHD. The goal of presenting Brian's case is to illustrate the use of CBT to address the impairments associated with adult ADHD when medication management is not an option insofar as the typical treatment paradigm is to view medications as providing the foundation for treatment of ADHD. Consequently, there has been little clinical discussion of how to structure treatment of adult ADHD without pharmacotherapy.

2 Case Introduction

Brian is a 40-year-old married, Caucasian man who had previously been diagnosed and treated for ADHD by a psychiatrist, having been first identified in adulthood. He had been high functioning but noticed inordinate difficulties keeping up with the demands of his job as the creative director in the advertising department of a midrange retail clothing company. His position involved designing and organizing print and web advertising for the company. Brian enjoyed the creative aspects of his work but struggled with managing organizational demands of the job

(e.g., financial budgets, project deadlines), social demands (e.g., delegating responsibilities, paying attention in meetings), and maintaining a healthy balance between his work and home life.

Brian initially sought out a diagnostic consultation with a psychiatrist based on his increased stress at home and at work. His psychiatrist suspected the presence of ADHD due to Brian's developmental history of similar difficulties dating back to childhood. Although he was able to adequately progress through different levels of education, Brian remembered that the impression of others was that he underperformed and "did not fulfill [his] potential." The psychiatrist performed a competent review of medical history and initiated pharmacotherapy with a long-acting stimulant medication that was approved by the Food and Drug Administration (FDA) for use with adults with ADHD.

However, about 2 weeks into treatment ("the best two weeks of my life," as he would later describe them), Brian experienced multifocal ventricular tachycardia, what the psychiatrist later described as "the most serious cardiac event by a patient" he had experienced. Brian was hospitalized, stabilized, and released with no lingering negative effects. However, his newly recognized condition meant that he would never be able to be treated with medications for ADHD.

When the possibility of pursuing pharmacotherapy with a different medication for adult ADHD was raised, the psychiatrist expressed that the risks outweighed the potential benefits inasmuch as the different medications ran the chance of having similar effects on the cardiovascular system. Brian's cardiologist reportedly held the same views. It should also be noted that Brian's treatment occurred during a time in which there were heightened concerns about the safety of stimulants for children with ADHD (Gould et al., 2009) and there was uncertainty about the potential for adverse effects on adults (Gelperin, 2006). Recent research indicates that there is no evidence of elevated health risk for young adults and adults with ADHD who take prescribed stimulants (Habel et al., 2011). Despite these factors, it is unclear whether Brian would be medically cleared for another trial on stimulants if he were in treatment now.

Subsequently, Brian sought an evaluation at the author's clinical program that specializes in the assessment and treatment of adult ADHD. His goal for seeking the evaluation was to confirm the diagnosis of ADHD but, more importantly, to seek out CBT to address the ongoing difficulties he experienced in living with ADHD and the associated impairments that interfered with his overall well-being, particularly keeping up with demands of his work and family life.

3 Presenting Complaints

Brian sought the previous and current evaluation primarily at the urging of his wife of 14 years, although he noted that he had been considering seeking help for his own sake. She had grown increasingly concerned that Brian was spending more time at the office to the detriment of their family life. According to Brian, his wife was upset that he had to spend so much time at home working on professional projects during evenings and weekends and was not regularly available to attend to duties such as child care of their 3-year-old son and various other home projects. Brian said that as he assumed more responsibilities in his career, he had to work harder to keep pace, which required him to devote time to working from home to make up for his inefficiencies at the office. He said that he noticed increased difficulties managing stress and frustrations at home and at work and felt he was falling behind in both domains of life despite working harder than he ever had, particularly since becoming a father.

4 History

It made sense that Brian's ADHD was not recognized by those who knew him when he was younger because he was able to progress through school without interruption, and he subsequently

earned an advanced degree. His retrospective self-report of childhood symptoms indicated evidence of childhood onset of features of ADHD (e.g., “daydreaming in class,” disorganization) although there was no impairment requiring assessment or intervention when he was younger. Moreover, he was considered a well-behaved child who did not get into trouble at home or at school. However, he noted that he had to “work 10 times harder” than his peers to earn average to slightly more than average grades. He also benefitted from the fact that his mother was a teacher and spent time sitting with him to ensure he completed his homework and helping him organize his written assignments, which was an ongoing problem for him. His teachers and parents considered Brian to be “underperforming” and “not fulfilling his potential,” with his father, an attorney, becoming visibly and verbally frustrated when Brian struggled to understand his schoolwork, had difficulties focusing on it, or lost points on assignments for handing them in late.

Brian was graduated with his class from high school and enrolled in college. He required an extra semester to complete graduation requirements, in small part due to needing an extra class related to a change in his major, he also had to enroll in two other classes he needed to retake after withdrawing from them after falling woefully behind in his work because of disorganization and procrastination. Although he completed most of his classes, Brian said that he had to continue to work harder than peers to keep up with his work, to the detriment of his social life. He struggled with procrastination and had difficulties prioritizing his work and often had to take an incomplete for a class to complete the required work during breaks between semesters. Brian described college as a “struggle,” and he finished with a “mediocre” grade point average.

Among the few college courses he found to be less of a struggle for him were those involving the creative arts, which eventually became his major field of study. After completing his undergraduate degree, he sought a master’s degree in an arts program focused on the use of creative arts in business/advertising. Although he continued to enjoy studying the arts and the use of various computer software programs, he struggled with business classes and with keeping up with assignments and projects. Again, review of his graduate transcript reflects a graduate student who earned average grades and completed the program “on time,” although it does not reflect the excessive time and effort expended to achieve this outcome, including appealing to instructors for extra time to complete his work.

After completing his degree, Brian soon found a job working for a midsize retail clothing company in its advertising department, allowing him to put his training to good use. He started in an entry-level position and described his experience as being akin to being an “apprentice,” having the opportunity to be mentored by the senior-level creative director. Brian found this arrangement helpful insofar as he was able to learn by observing his boss demonstrate various tasks and responsibilities and then gained “hands on” experience executing these tasks under the supervision of his boss. Brian had the benefit of being facile with software that was relatively new to his field, which allowed him to advance quickly in the company during the first few years of his employment. As he assumed higher level positions, he faced new job responsibilities, such as developing and organizing advertising campaigns, websites, and emails and print advertising. Brian was eventually promoted to creative director when his mentor/boss left the company, and he has been in the position since then.

Brian struggled in his position as director because, rather than being able to rely on his mentor for guidance, he now was expected to work independently and, in fact, to provide guidance and direction to his staff. He took on more administrative and supervisory duties, which required organization and follow through, and less time doing “hands on” work on specific projects. Brian found himself staying at the office late to catch up on work and devoting increasing amounts of time working at home to keep up with his job.

Brian started dating the woman who was to become his wife soon after he completed his master’s degree, and they were married about a year later. During the clinical interview, he noted

that a few years ago he considered asking to be “demoted” from his job as creative director to a lower level position, but by then his wife was pregnant and he was concerned about the decrease in income and potential job insecurity during a period of economic uncertainty. As he had throughout his educational life, Brian soldiered on in his work, getting things done on time by regularly staying up late (often 1:00 or 2:00 a.m.) but recognizing that he was underperforming. He noted that he received objective evaluative feedback of his underperformance in the form of performance reviews that cited many domains of his job that “need improvement.”

As Brian added the role of father in his life, he found it increasingly difficult to strike a healthy balance among his many responsibilities. As innovations in advertising (e.g., social media) as well as the marketplace becoming more competitive due to the sluggish economy, Brian had more projects to manage with fewer resources, resulting in even greater demands on him at work. His wife became increasingly frustrated with him because she felt that Brian was not helping out enough in child rearing and general household management. She also complained that he was “not present” when at home and did not listen to her when they had time to talk with each other. Brian noted that he was easily frustrated with child care duties and did not like to be interrupted when working at home because he had difficulties refocusing on what he was doing, which was a central source of conflict with his wife.

Based on these escalating difficulties, Brian sought the initial consultation with his psychiatrist. However, after having the adverse reaction to a stimulant medication and discovering that he could never be prescribed ADHD medications, he sought the current evaluation, with the goal of obtaining CBT for adult ADHD.

5 Assessment

Brian received a comprehensive psychiatric evaluation that included various measures of adult ADHD. In addition to an extensive history-gathering interview, Brian was administered a structured diagnostic interview, the *Brown Attention Deficit Disorder Scale for Adults* (BADD; Brown, 1996), the *Conners' Adult ADHD Rating Scales* (CAARS; Conners, Erhardt, & Sparrow, 1999), the *Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996), the *Beck Anxiety Inventory* (BAI; Beck & Steer, 1990), the *Beck Hopelessness Scale* (BHS; Beck & Steer, 1989), and ADHD symptom checklists for childhood and adult symptoms, including self-report and observer report forms (Barkley & Murphy, 2006). He also completed a background questionnaire pertaining to his developmental, academic, occupational, and relationship experiences.

Brian's self-ratings of his behavior during childhood indicated the presence of symptoms, both inattention and a number of hyperactive and impulsive features, sufficient in number and severity to fulfill diagnostic criteria for childhood emergence of ADHD, although there was no evidence of impairment at that time. However, Brian benefitted from environmental compensations (e.g., mother supervising his homework) that likely masked developmentally inappropriate levels of executive dysfunction. He did not obtain his parents' ratings of his childhood behavior, stating that they patently denied that he could have had ADHD after he shared the diagnosis made by his previous psychiatrist. However, Brian's mother reportedly recalled that teachers often commented on report cards and during parent meetings that he seemed to be distracted, restless, and was not “fulfilling his potential,” although this was attributed to his “not taking (his) studies seriously.” These views were seemingly reinforced after Brian underwent a screening evaluation in sixth grade that reportedly did not reveal any evidence of learning problems.

Ratings of his current symptoms indicated the persistence of symptoms, if not the worsening of symptoms of inattention, in adulthood. Brian's wife completed her ratings of his current functioning, and her observations were very consistent with his self-ratings. Although it would have been ideal to have had greater corroboration of childhood symptoms, Brian seemed to be a

reliable reporter and even his “skeptical” mother noted (according to Brian) that teachers commented on his distractibility, fidgetiness, and underperformance as being issues in school.

The BADDS is a 40-item clinician-administered rating scale of ADHD symptom severity in various life domains. Brian’s BADDS total score was clinically elevated as were his subscale scores for the Activation and Attention subscales, reflecting that he has difficulties getting started on tasks and maintaining focus on various projects.

The CAARS: Long Version is a 66-item self-report instrument that measures a wide variety of symptoms of ADHD in adult patients. Among the subscale scores are three devoted to official diagnostic criteria. Brian’s responses indicated clinical elevations for the subscale of Inattention/Memory Problems as well as *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) Inattentive Symptoms and *DSM-IV* ADHD Symptoms Total.

The structured diagnostic interview did not reveal evidence of the presence of any mood, anxiety, or other psychiatric diagnosis. Brian’s scores on the BDI-II, BAI, and BHS were not particularly elevated, each falling in the minimal range, although his depression and anxiety scores fell at the upper end of this range. These scores were consistent with Brian’s report of relatively brief but disruptive periods of worry and frustration related to various tasks that do not reflect an anxiety or mood disorder. These reactions were considered to be examples of dysfunctional emotional self-regulation (DESR) that play a central (although underappreciated) role in ADHD and reflect another area of executive dysfunction (Barkley, 2010; Kessler et al., 2010).

Taken together, there was sufficient and convergent evidence that Brian’s past and current symptom presentation and impairments reflect a developmental profile consistent with a diagnosis of ADHD—combined type, with the inattentive features predominating but additional evidence of persistent restlessness and impulsivity. More specifically, Brian reported impairments in his workplace functioning as well as at home with his family. These symptoms and difficulties were not better explained by another psychiatric diagnosis, and there was no evidence of a medical condition that would explain these symptoms. His descriptions of emotional frustration that magnify and are magnified by his coping difficulties seem to reflect DESR consistent with ADHD.

The results of the assessment were reviewed with Brian in a feedback session. In addition to providing initial and personalized psychoeducation about the effects of ADHD on his functioning, time was spent discussing his goals for a course of CBT for adult ADHD (i.e., Ramsay & Rostain, 2008), which would follow the format developed at the treating facility.

6 Case Conceptualization

Brian’s case could be considered a mild-to-moderate case of ADHD with relatively circumscribed symptoms and impairments. That is, although struggling at work, he was completing projects, and his employment status was not at risk. Similarly, although struggling to keep up with the demands of his home life, his marriage and household situations were generally stable. That being said, Brian was spending very long hours to keep up with the demands on him at work and less time attending to his family. He experienced emotional distress and frustration, and his difficulties were apparent to observers, namely, his employer and his spouse.

It should also be noted that Brian evidenced many personal strengths. He has a strong work ethic, doing what needs to be done to finish a project by a deadline, although he might not work efficiently or be satisfied with the finished product. He also is a likable person who gets along well with others. That is, his frustration is often self-directed and does not manifest as anger directed toward others, which may have allowed Brian to “smooth over” any negative effects of his inefficiencies at work. He reported having to “work hard to hold it together at work,” and he

tended to “let down” at home, where his wife may witness his frustrations. Overall, he was motivated to engage in CBT to find ways to better manage his ADHD.

As was discussed earlier, pharmacotherapy was not a treatment option for Brian. On the advice of his psychiatrist and under the supervision of his physician, he took an omega-3 fatty acid supplement, for which there is some evidence that it may help improve symptoms of ADHD in children (Bloch & Qawasmi, 2011), and said that he experienced some mild symptomatic improvements but not enough to appreciably improve functioning.

Brian’s case presented a relatively straightforward, uncomplicated case of ADHD in a high-functioning adult. That is, his difficulties at work and home were clearly tied with the common domains of executive dysfunction and were not complicated by comorbid psychiatric conditions. Although the primary emphasis of CBT for adult ADHD focuses on the consistent use of behavioral skills, cognitive modification remains an essential component of psychosocial treatment. Brian exhibited some pessimism about his ability to manage the effects of ADHD on his life, particularly having had the experience of improved functioning for the 2 weeks before he experienced the adverse cardiac event. He also assumed that he was disappointing his coworkers and his wife, which contributed to the emotional distress he experienced in response to his coping difficulties. Overall, Brian viewed himself as a competent, well-intentioned person, but this positive self-view was periodically undermined by his coping difficulties, which led to maladaptive self-doubt and self-criticism. It would be important for these cognitions to be addressed in CBT, as they could create barriers to the consistent implementation of effective coping strategies for ADHD.

The use of implementation intention strategies (Gawrilow & Gollwitzer, 2008) represents an important addition to CBT to adapt it for use with adults with ADHD (Ramsay & Rostain, 2008). Individuals with ADHD often know what coping strategies they need to perform but have a hard time performing or “implementing” these skills. Consequently, implementation strategies aim to delegate “action control to prespecified environmental cues” (Gawrilow & Gollwitzer, 2008, p. 263). In effect, the goal is to “outsource” the executive functions to the environmental context in which coping skills are needed. This “outsourcing” is achieved by setting out clear behavioral plans for the execution of coping skills and anticipating the potential barriers for implementation in a particular setting. Consequently, the various factors associated with this setting will serve as cues/reminders for adaptive coping (i.e., if-then scenarios) to increase the likelihood of success, as will be illustrated in the next section.

7 Course of Treatment and Assessment of Progress

Brian’s initial priority for treatment was to improve his coping at home. More specifically, he said that he had difficulties performing chores and other helpful tasks at home. Using straightforward problem-solving strategies, we defined the specific problem to be addressed as difficulties identifying and prioritizing a chore. Brian said that he often has the sense he “should be doing something” but cannot quickly identify a specific task, which ends up with him doing a task related to his job. Hence, we reviewed options for how he could identify and develop a “to do” list of home tasks.

Brian concluded that it made sense to collaboratively develop this list with his wife. In addition to gaining consensus on the tasks and their relative priority, Brian recognized that he and his wife did not spend much, if any, time coordinating their household efforts in an organized manner. Consequently, these “planning meetings” with his wife would serve a pragmatic purpose of defining “home tasks” and serve a relationship enhancement purpose of making sure Brian and his wife explicitly coordinated spending time together.

Implementation strategies were used to identify the potential barriers to follow through on setting up such a meeting, including environmental distractions (e.g., phone call from work),

internal distractions (e.g., negative anticipations ["I will not be able to meet her expectations.,"], emotions ["This feels awkward."]), and interactional barriers (e.g., "We will end up arguing"). Plans were made for how to handle each of these potential barriers to introduce coping skills and to cognitively rehearse the use of these skills (e.g., schedule a specific day/time/place for the meeting with your wife, turn off/ignore the phone, give the plan a try, and be proactive in negotiating a realistic task and expectation).

Brian reported that the meeting with his wife went well. They selected tasks that were realistic to complete in 10 to 15 min or less. He and his wife came up with the idea to put each individual task on an index card and to place the cards in a decorative box that sat in the middle of their kitchen table. Thus, when Brian had some free time, he would take a card from the box and perform the task.

We reviewed Brian's positive experience with this coping approach and ways it could be improved for long-term maintenance of this strategy. Implementation strategies were used to anticipate potential difficulties that could be encountered in the near future that could be misinterpreted as "this does not work" as opposed to the likelihood that there will be "coping drift" that could be identified and rectified. It was useful to start with a discrete, behavioral coping task that allowed Brian to experience an initial positive result. This initial success provided evidence that medications might not be "essential" to his ability to make progress.

Brian's next treatment priority was a little more complicated. He said that he was sensitive to having his concentration interrupted when working, either a task for work or involvement in a task of personal interest to him. Brian noted that the main source of interruption was his wife asking for help on a task, such as helping care for their son or some other reasonable request. Brian said that he was reluctant to stop his work out of concern that he would be unable to refocus on it after the interruption. Consequently, he commonly delayed attending to his wife ("just a few more minutes"), which triggered her anger and ended in mutual frustration: His wife was upset by feeling that her requests were ignored and Brian was upset that he had lost his focus.

This issue was considered somewhat more difficult to manage from a psychosocial standpoint because it involved poor sustained concentration. Medications are very effective for improving attention vigilance for tasks such as reading or sustaining focus on tasks, such as writing reports that are important for the individual, but may not be particularly interesting or immediately salient. However, seeing as medications were not an option for Brian, we spent time reviewing and enhancing his commitment to addressing this goal using psychosocial approaches.

More specifically, motivational interviewing strategies (Prochaska & Norcross, 2001) were used to elaborate his rationale for taking on the challenge of being more available to help his wife (e.g., "Her requests are reasonable. I want to be able to support my wife by helping her when she asks for help, particularly when it involves caring for my son"). In executive function terms, "motivation" can be considered the ability to generate emotions about a task related to long-term outcomes in the absence of immediate reinforcement (Barkley, 1997). Hence, we spent time identifying short-term "payoffs" for being more available as well as his longer range objectives to make them more emotionally "salient."

When developing specific coping strategies, we started with a detailed behavioral analysis of the common sequence of behaviors and reactions that occurred when Brian was "interrupted" by his wife. Brian said that engaging in work was stressful for him and described an emotional reaction of "frustration" paired with the thought, "I just got into this and now I have to stop and will not be able to get refocused" when he was asked to help his wife. He would try to get as much done as he could before finding a "good stopping point," recognizing his wife was growing angry as she repeated her requests. When he eventually left his computer to help his wife, both of them were annoyed with the other. After helping his wife, which rarely required more than a few minutes, Brian described feeling somewhat "scattered and unfocused," concluding that he could not

attempt to resume the work task and ended up filling his time with inconsequential activities. While acknowledging his attention difficulties and sensitivity to interruptions, we decided to augment his goal of being more responsive to his wife's request for help with the personal goal of attempting to reengage in his task afterward.

Much of Brian's frustration came from the expectation that he would not and should not be interrupted when doing work at home. The reality was that his professional responsibilities required that he do some work at home. Hence, his frustration/anger was associated with the thought that interruptions were "unfair." Instead, we discussed the benefit of volunteering to take on some tasks and to proactively define with his wife predetermined times to devote to helping her and then plan his professional work around these times to reduce conflicts.

Brian taped an index card filled with coping reminders to the computer on which he did his work to externalize and keep salient his goals to help him be available to assist his wife. The goal was for Brian to respond to his wife's initial request for help. The specific steps for him to follow were to acknowledge the request and then type or write a brief note with the next step he planned to take on the task when he returned (to help him reengage in the task more effectively). To shift from "work mode" to "husband/father mode," he used a coping card reminding him of his goal, to "take a deep breath," and refocus on the benefits of helping his wife. Brian developed a few adaptive cognitions for times when he noticed himself feeling annoyed to keep him on track for his goal (e.g., "My wife is working hard, too. I don't have to be 100% in the mood to be a good helper").

The more difficult issue for Brian was switching back into "work mode." He described feeling distracted and frustrated by interruptions, at home and at the office, concluding, "I have lost my focus" and "I cannot work anymore." Brian realized he, in fact, rarely actually attempted to resume his work, reaching an overgeneralized conclusion that "I cannot do it" because he assumed he could not. That being said, adults with ADHD tend to have greater difficulties than their non-ADHD peers handling distractions and interruptions.

We again constructed a step-by-step plan for reengaging in work, the first step being to return to his computer and to sit down in front of it with his work open on the screen. The second step was to review the paragraph or section on which he had been working before helping his wife, including the reminder to himself of the next step he planned to take on the task before he stepped away. Third, Brian agreed to an experiment of working on the task for at least 10 min (an honest 600 s) after which he could make an evidence-based determination of whether to keep working or to stop—either way having done so without avoidance.

In addition to the behavioral steps, we normalized that Brian might face some frustration and discomfort while attempting to reestablish his concentration on a task. He developed some adaptive, task-oriented thoughts (e.g., "I do not have to be 100% focused to get some work done. I can last for 10 min even if I experience some distractibility and stress while doing my work"). A summary list of coping thoughts and his goals were taped to his computer to provide an external reminder of his coping plan.

Brian found the behavioral plan helpful in terms of being more responsive to requests for help and reported that his wife recognized his improvement. Equally satisfying was that Brian learned that he was better able to reengage in tasks than he thought he was. He acknowledged that it was not easy and that there were times that he reverted to old avoidant habits out of frustration. More often, he found that the combination of "acceptance of discomfort" and breaking a task down into its component behavioral steps helped him learn that he could reapproach his work, principles he also employed at the office.

Subsequent sessions focused on the maintenance of these coping skills and their utility in other contexts. A common automatic thought that arose whenever Brian encountered coping drift or "setbacks" was "CBT will not work because I am not able to take medications," reflecting his

worry that he would eventually “hit a wall,” representing his expectation that his efforts to manage ADHD would ultimately fail without medications. On the one hand, he acknowledged that his response to medications had been very positive, and he found life easier to manage while taking them. On the other hand, Brian recognized that while on medications he had not attempted to change the behaviors that were causing life difficulties for him and that were now the focus of CBT. Hence, he accepted that, though requiring ongoing diligence and consistency in their use, his coping behaviors (and ability to recognize when he strayed from their use) had become more habitual and did not require as much effort to maintain as he had originally anticipated. The author used the metaphor of an airplane flight. There is a great deal of effort and fuel expended during take-off, but once the aircraft reaches cruising altitude, there is less effort to maintain the flight path. This metaphor was apt for individual tasks (“Once I get engaged, I’m more likely to get things done”) and overall coping efforts. Extending the metaphor, we discussed examples of “turbulence” that could complicate his coping efforts, but that these instances signaled the need for a “course adjustment” rather than a “crash landing.”

One of the goals of CBT for adult ADHD is to make treatment “sticky”; that is, clinicians working with adults with ADHD want the coping strategies to come “online” for patients at the “point of performance” in their daily lives. A central benefit of medications for ADHD is that, while they are active in a patient’s system, they will treat symptoms and improve functioning. One of the challenges in CBT for adult ADHD is to ensure that the skills and interventions reviewed in sessions are portable to and implemented in real-life situations. Externalized reminders (e.g., coping cards, using alarm systems on cell phones, daily planner) and overlearned coping reminders (e.g., “Write it down in my planner right away”) are a useful way to externalize the executive functions. The use of evocative metaphors, such as the airplane metaphor used previously, is another strategy for increasing to help patients remember to implement their coping skills. Even in situations in which, for whatever reason, individuals may not use their skills, these reminders provide a reference point to help figure out what may have gone wrong. This offers a crucial reframe from personalizing the mistake (“How could I have done that? I must just be stupid”) to being able to focus on taking steps to improve coping (“How could I have done that? I did not take the time to write it in my planner”).

Brian made steady progress throughout CBT and was enthused by how much he was able to accomplish without the aid of medications. Moreover, he was able to improve areas of functioning that had not been addressed during his brief trial on medications. Although requiring more concerted effort than when on medications, once Brian’s coping regimens became routinized, the effort required to maintain them was reasonable and reinforced by the positive outcomes.

As Brian moved to extended booster sessions, an ongoing issue for him was his frustration and self-criticism regarding mastering various tasks involved in caring for his 3-year-old son. Brian made a lot of progress in being more available to help his wife and to assume a greater role in the care and supervision of their son. However, minor mistakes or well-intentioned suggestions from his wife triggered self-directed frustration and issues related to Brian’s sense of inadequacy as a father. Having been an only child in a small family with no extended family living nearby, Brian was inexperienced in child rearing. Hence, his wife provided guidance in appropriate clothing selection, choosing outerwear for different weather conditions, food preparation, making sure toys were safe and appropriate for their son’s age, and so on. His thoughts were that he “should” know these things or be able to figure them out. We identified a recurring pattern that he tended to be extremely self-critical of himself until he gained a degree of mastery of the requisite coping skills. The “benefit” that maintained this cognitive pattern was verbalized as, “If I am hard on myself, maybe others will be less critical of me.” The issue of child care was a different one from the other tasks we had faced in CBT insofar as it involved learning a new and unfamiliar set of skills.

In terms of pragmatic coping strategies, Brian identified that the easiest to implement and most effective option was collaborating with and learning from his wife regarding different elements of caring for a small child, which also could serve to enhance their relationship. He could also gather information from parenting books and other reputable sources.

However, Brian continued to report having visceral, emotional reactions to “not knowing what to do,” comparing himself with other fathers who appeared more competent, and concluding that he was “flawed” as a father. Brian was encouraged to monitor his reactions when frustrated in a parenting role and to reflect on similarities with other frustrations he had encountered when learning something new. We reviewed the implications of a chain of automatic thoughts that arose when he felt frustrated while caring for his son. The purpose of this exercise was to identify the underlying belief associated with his frustration through a series of questions about his cognitions (e.g., “Assuming for the moment that you will not be able to master these child care skills, what is the implication of that for you?”).

Through his self-observation and identifying his underlying sense of inadequacy (“I am not able to do things as well as others. I will be discovered to be a fraud when people see the real me”), he remembered how frustrated his father became with him when Brian was younger. That is, his father, whom Brian thought probably manifested undiagnosed ADHD, was quick to anger when Brian had difficulties completing homework or understanding a topic while his father was helping him. His father was disturbed by Brian’s underperformance throughout his education and voiced concerns about his future prospects. Although Brian cited many examples of his competence, these critical messages reinforced his personal sense of inconsistency in and doubt about his performance in school. He developed a sense of mastery in his job that buffered his sense of inadequacy to a degree, but facing his lack of knowledge about child care reactivated his inadequacy.

Anecdotal clinical accounts suggest that core beliefs of inadequacy/incompetence and self-mistrust are common among adults with ADHD (Ramsay & Rostain, 2008), although this has not been empirically studied. Brian found the conceptualization of his inadequacy belief helpful to understand and manage the vulnerability he felt when learning something new. He worked to recognize and accept his emotional discomfort, to differentiate his past experience from his current situation, and to continue to learn how to care for his son to develop a sense of competence. He also identified other factors involved in being a good father.

8 Complicating Factors

The primary complicating factor in Brian’s case was that medications for ADHD were not an option in his treatment plan due to medical contraindications, leaving CBT as the primary intervention. In cases of adult ADHD without medication treatment, the requisite coping strategies and approaches are the same as would be used in cases with concurrent pharmacotherapy. However, more attention is paid to enhancing the motivation for engaging in the CBT process, developing externalized motivational reminders, and normalizing that the acquisition of coping skills will take time (as it also does for individuals taking medications), and to focus on the implementation of coping strategies. In effect, in cases without concurrent medication, psycho-social treatment could be considered “extended release” CBT for adult ADHD insofar as more time and effort may be required to address implementation issues.

Brian was highly motivated, had relatively circumscribed symptoms and impairments, and his relationship and occupational circumstances were stable, which are conditions in which CBT alone may be an efficacious option for adults with ADHD, factors that are associated to a positive response to CBT without medications (Ramsay & Rostain, 2011). He was able to experience successes early in treatment that likely enhanced his motivation and hopefulness. Moreover,

these positive experiences helped him to tolerate the short-term discomfort involved in developing coping skills as he faced more difficult coping challenges.

Another complicating factor was the impact of Brian's coping difficulties on his relationship with his wife, in terms of sharing parenting responsibilities and in their interactions. A primary reason he sought treatment for adult ADHD was to address stressors in his marriage. In fact, available evidence suggests that the executive function problems that create difficulties for individual functioning, not surprisingly, are a central source of conflict in marriages in which one spouse has ADHD (Robin & Payson, 2002). Brian's marriage was otherwise on solid ground. His responses on the initial background questionnaire indicated that he had a positive view of his wife and their relationship but that he was frustrated by his difficulties balancing competing demands of marriage, parenthood, and work. His wife added comments in the margins of the observer inventories she completed, noting that she loved her husband and knew he "meant well" but that his underfunctioning at home was creating stress in the marriage.

Research on ADHD in marriages has indicated that when one spouse has ADHD, the non-ADHD spouse often assumes the role of stepping in and compensating for the coping skills difficulties of the ADHD spouse (Eakin et al., 2004). Moreover, the limited available data indicate that non-ADHD wives often support and over function on behalf of their ADHD husbands (Robin & Payson, 2002). In the case of Brian and his wife, whatever compensatory balance they had established in their relationship was upset through the combination of his difficulties keeping up with mounting work demands and the significant change that came with parenthood. Seeing as the common thread of his presenting issues was related to executive functioning problems at home and at work, targeting these issues in CBT seemed appropriate. However, it is often useful to have the patient's significant other attend at least one session to gain an understanding of how adult ADHD manifests itself as well as to provide observations of the patient's functioning. In addition to gathering some information of Brian's progress, including his wife in a session was also clinically appropriate to discuss how they could work together to adjust to the various changes and stresses they had been facing as a couple in recent years.

Before one of his booster sessions, Brian contacted the author to ask whether his wife could attend the next session to address marital issues. Brian's wife, Karen, started the meeting by acknowledging that things had improved at home in the very domains targeted during his course of CBT. However, Karen became tearful as she said that she felt as though she was forced to be a "nag" to ensure that he followed through on tasks. She also noted that she felt their marital relationship had become overwhelmed by issues related to parenting and the effort required by Brian to manage his job.

When reviewing specific examples of "nagging," Karen seemed surprised when she recognized that Brian had actually been doing much better in terms of task completion. However, there were examples of tasks in which Karen was quick to give Brian repetitive reminders about chores around the house. Brian shared that in most cases, he was either in the process of working on the identified chore or had set it aside to work on a more pressing child care request from Karen. She said that unless she interpreted Brian as working on the task she had in mind, she assumed that he had forgotten or was ignoring her, hence falling into a "nagging" role (which we operationalized as telling Brian that a task was incomplete). Brian said that he felt frustrated that he was not given a reasonable chance to complete a task or that his rationale for switching tasks was viewed as an "excuse" and, moreover, his positive coping efforts were discounted. That is, Karen was engaged in "selective abstraction," noticing examples consistent with her view that "Brian is not reliable" and minimizing his improved task completion. We discussed that it made sense that Karen would react this way, based on her past experiences, and that both of them were in the process of becoming familiar with and trusting Brian's changes.

Karen liked the reframe that she could “ask” her husband for help (rather than “nag”) and, by doing so, give him an opportunity to be a helpful husband, which was a goal of his. She also realized that incomplete tasks may not necessarily be the result of procrastination. Brian, however, developed the reframe that Karen might ask for an update, but it did not mean that she was “nagging.” Moreover, he could share any difficulties he was having and they could work them out together, rather than hiding his problems or being defensive.

Finally, we discussed the common marital issue of finding time to attend to their relationship while trying to balance work, child rearing, and so on. Brian and Karen were encouraged to schedule regular check-in times with each other throughout the week, engage in shared activities after their son was asleep, and maintain other relationship-enhancing activities.

9 Access and Barriers to Care

It was not an issue for Brian, but access to providers experienced in the diagnostic assessment and treatment of ADHD can be difficult for individuals seeking specialized services. Although there are many clinicians experienced in CBT, there are relatively few experienced in the unique clinical issues involved in treating adults with ADHD, not to mention clinicians experienced in the assessment and treatment of ADHD. Some geographic regions may simply not have clinicians experienced in the assessment and treatment of ADHD. There are several evidence-supported treatment manuals for CBT for adult ADHD that are available to help clinicians (Ramsay & Rostain, 2008; Safren, Perlman, Sprich, & Otto, 2005; Solanto, 2011).

10 Follow-Up

Brian participated in 23 sessions of outpatient CBT over a year, with 17 being scheduled in the first 6 months and the other 6 sessions scheduled or used on an “as needed” basis the subsequent 6 months, including the session with Karen.

Brian reported throughout CBT that he found the sessions and the coping skills to be helpful and relevant for his daily life. Karen corroborated that he was doing better and striking a better balance between his home and work lives. Finally, Brian completed posttreatment measures comprising various clinical inventories administered during his diagnostic evaluation as another assessment of his response to treatment.

As is illustrated in Table 1, Brian reported improvements in most symptom and functional domains assessed. His pretreatment BDI-II, BAI, and BHS scores already fell in the minimal range, although his posttreatment scores indicated relative improvements on these scales. He also exhibited improvements on many measures of ADHD.

Interestingly, his scores on the BADDS Attention and Memory subscales improved by a few points and would not be considered elevated by the end of treatment. However, these changes were minimal and may represent symptom domains typically treated by medications. Conversely, notable improvements in the Activation and Effort subscales are consistent with outcomes obtained from CBT for adult ADHD insofar as these factors are emphasized in the treatment (Ramsay & Rostain, 2008, 2011). Of course, the true test of a treatment is persistence of gains over time, and studies of CBT for adult ADHD that have included extended follow-up measures have reported maintenance of therapeutic gains (Ramsay, 2010; Safren et al., 2010).

11 Treatment Implications of the Case

Most of the clinical outcome studies of CBT for adult ADHD have involved concurrent, stabilized medication management. However, in studies in which there were participants completing

Table 1. Brian's Pre- and Posttreatment Clinical Scores

Clinical inventory	Pretreatment	Posttreatment
BDI-II	13	2
BAI	10	1
BHS	2	2
CAARS (<i>T</i> -scores: <i>M</i> = 50, <i>SD</i> = 10)		
Inattention/Memory	83 ^a	41
Hyperactivity/Restlessness	51	41
Impulsivity/Emotional Lability	43	39
Problems with Self-Concept	59	38
<i>DSM-IV</i> Inattentive	90 ^a	53
<i>DSM-IV</i> Hyperactive	55	43
<i>DSM-IV</i> Total	76 ^a	48
ADHD Index	56	51
BADDS (<i>T</i> -scores: <i>M</i> = 50, <i>SD</i> = 10)		
Activation	65 ^a	51
Attention	66 ^a	62
Effort	63	50
Affect	55	58
Memory	62	58
Total	65 ^a	56

Note: BDI-II = Beck Depression Inventory-II; BAI = Beck Anxiety Inventory; BHS = Beck Hopelessness Scale; CAARS = Conners' Adult ADHD Rating Scale; *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); BADDS = Brown Attention Deficit Disorder Scale for Adults.

^aClinical elevated (*T*-score ≥ 65).

psychosocial treatment without being on medications, the results for these individuals were not significantly different from those from unmedicated participants (Ramsay, 2010).

The twofold implications of Brian's case are (a) to emphasize the importance of psychosocial treatment, namely, CBT in the treatment of adult ADHD and (b) that there may be cases in which CBT without medications is helpful for adults with ADHD, whether medications are declined or there are medical contraindications for their use. Whereas medications are effective in reducing the symptoms of ADHD, pharmacotherapy alone may be insufficient to address functional impairments. Moreover, some adults with ADHD may be unwilling or unable to take medications, and CBT will be the primary treatment for ADHD. Targeting these groups of adults with ADHD for clinical outcome research would provide useful data on the effects of psychosocial treatments provided without concurrent medications.

12 Recommendations to Clinicians and Students

Adult ADHD ranks among the most underrecognized and undertreated disorders (Kessler et al., 2006), which is particularly disturbing because there are many effective treatments (Ramsay, 2010). Psychosocial treatments, namely CBT, rank alongside medications as the primary evidence-supported interventions for adult ADHD. CBT for ADHD may be underutilized by this clinical population due to the scarcity of providers who are familiar with the unique clinical challenges involved in treating ADHD and the modification of CBT to address the executive dysfunctions that define ADHD and its impairments.

There is a subset of adults with ADHD who may seek out CBT as their primary treatment without concurrent medication treatment. Some of these individuals may be skeptical of medications and wish to start with CBT and defer the decision of whether to add medications until they have a chance to assess their progress. Other adults with ADHD may have medical profiles that obviate the use of medications for ADHD, may not respond to medications, or cannot tolerate their side effects. It is useful for clinicians and clinicians-in-training to be able to screen for adult ADHD and be familiar with evidence-supported psychosocial treatments. Even if these clinicians do not treat adult ADHD, appropriate referrals for assessment and treatment can be made, and better outcomes for adults with ADHD can be achieved.

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Bio

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