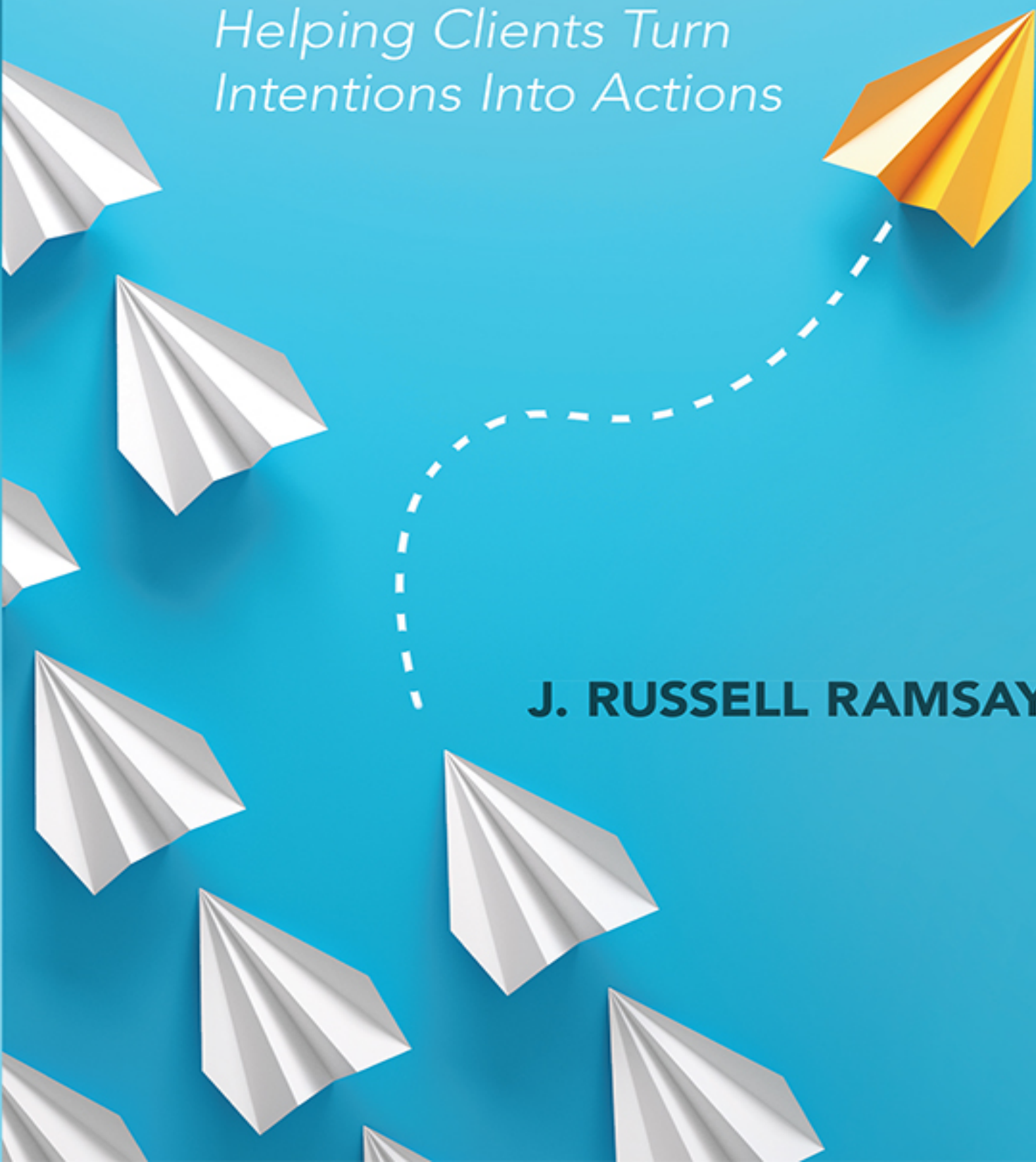


Rethinking Adult ADHD

*Helping Clients Turn
Intentions Into Actions*

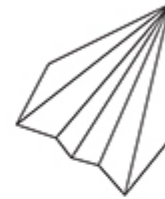
J. RUSSELL RAMSAY



Rethinking Adult ADHD

Rethinking Adult ADHD

*Helping Clients Turn
Intentions Into Actions*



J. RUSSELL RAMSAY



AMERICAN PSYCHOLOGICAL ASSOCIATION
Washington, DC

Copyright © 2020 by the American Psychological Association. All rights reserved. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, including, but not limited to, the process of scanning and digitization, or stored in a database or retrieval system, without the prior written permission of the publisher.

Electronic edition published 2020.

ISBN: 978-1-4338-3156-0 (electronic edition).

The opinions and statements published are the responsibility of the authors, and such opinions and statements do not necessarily represent the policies of the American Psychological Association.

Published by
American Psychological Association
750 First Street, NE
Washington, DC 20002
<https://www.apa.org>

Order Department
<https://www.apa.org/pubs/books>
order@apa.org

In the U.K., Europe, Africa, and the Middle East, copies may be ordered from Eurospan
<https://www.eurospanbookstore.com/apa>
info@eurospangroup.com

Cover Designer: Anne C. Kerns, Anne Likes Red, Inc., Silver Spring, MD

Library of Congress Cataloging-in-Publication Data

Names: Ramsay, J. Russell, author.

Title: Rethinking adult ADHD : helping clients turn intentions into actions / by J. Russell Ramsay.

Description: Washington, DC : American Psychological Association, [2020] | Includes bibliographical references.

Identifiers: LCCN 2019023431 (print) | LCCN 2019023432 (ebook) | ISBN 9781433831560 (ebook) | ISBN 9781433831508 (pbk.)

Subjects: LCSH: Attention-deficit-disordered adults.

Classification: LCC RJ506.H9 (ebook) | LCC RJ506.H9 R359 2020 (print) | DDC 618.92/8589—dc23

LC record available at <https://lcn.loc.gov/2019023431>

LC ebook record available at <https://lcn.loc.gov/2019023432>

<http://dx.doi.org/10.1037/0000158-000>

10 9 8 7 6 5 4 3 2 1

*This book is dedicated, as always, to my daughters, Abigail
and Brynn, and to the memories of their beloved
grandmother—my mother, Mary Ann Ramsay (1941–2015)—
and their aunt—my sister, Jennifer Ramsay (1970–2019).*

CONTENTS

Acknowledgments

Introduction

1. Introduction to Adult ADHD

Contemporary Formulation of Adult ADHD

ADHD Within a Unified Theory of Psychology

*Prevalence, Persistence, and Comorbidity and Impairments of
Adult ADHD*

Conclusion

Key Clinical Points

2. Clinical Outcome Research for Adult ADHD

Treatments for Adult ADHD

*Research Relevant to the Cognitive Behavior Therapy Model of
Adult ADHD*

Conclusion

Key Clinical Points

3. Cognitive Behavior Therapy Model of Adult ADHD

Cognitive Behavior Therapy Case Conceptualization

The Generic Cognitive Model and Its Relevance for Adult ADHD

Primary Cognitive Theme of Adult ADHD

Cognitive Behavior Therapy Model for Adult ADHD

Conclusion

Key Clinical Points

4. Cognitive Interventions Adapted to Adult ADHD

Identifying Thoughts and Their Effects

Cognitive Modification: Retaining Your Defense Attorney

Cognitive Defusion

Cognitive Framing and Reframing

Cognitive Modification for Common Distortions

Other Cognitive Change Tactics

Conclusion

Key Clinical Points

5. Cognitive Interventions in Action: Common Issues in Cognitive Behavior Therapy for Adult ADHD

Engaging in Treatment

Procrastivity and Adult ADHD

Managing Procrastination: How You Don't Do Things

Time Management Challenges

Attitudes About Organization

Emotional Management Difficulties

Tolerating Discomfort: Taming the Ugh

Reining in Impulsivity

Manufacturing Motivation and the Valuation of Tasks

Assertiveness as an ADHD Coping Strategy: Define Your Role

Using Coping Strategies and Handling Setbacks

Changing Maladaptive Schemas/Core Beliefs

Conclusion

Key Clinical Points

6. Additional Clinical Issues in Cognitive Behavior Therapy for Adult ADHD

Medications

Emerging Adults With ADHD

Comorbid Anxiety, Depression, and Substance Use

Sleep Problems

Technology

Relationships

Senior Adults With ADHD

Suicidality

Managing Oppositional Behavior

Therapist Reactions/Misconceptions

Conclusion

Key Clinical Points

7. Case Examples

Grace-Ann

Evan

Kurt

Conclusion

Final Thoughts

Appendix. Credible Sources of Information About Adult ADHD

References

About the Author

ACKNOWLEDGMENTS

First and foremost, I want to acknowledge the adults with attention-deficit/hyperactivity disorder (ADHD) whom the University of Pennsylvania's Adult ADHD Treatment and Research Program has been privileged to serve. I have heard scores of personal accounts of life with ADHD and the related struggles, as well as stories of muddling through, managing, and eventually transcending these struggles, in whatever fashion, and these accounts and the irrepressibly hopeful, gritty attitudes that promote these efforts have been a central inspiration for this book. My hope is to give other clinicians a glimpse into these frames of mind as best as I can from having sat across from countless adults with ADHD, listened to them, and hopefully and most importantly "got it," thereby being able to offer some measure of help as they aimed to better their lives.

I owe a deep debt of gratitude to the many clinicians, trainees, and staff who have been a part of this program since its inception in 1999. The program has grown from a two-person operation to a full roster of psychiatry residents and advanced doctoral students in clinical psychology who complete year-long, supervised trainings in the assessment and treatment of adult ADHD. We have also benefitted from many individuals who have helped out in various roles (e.g., intake coordinators, testers, research assistants) and many colleagues involved in the business and operations of our department, including our past and present department chairs, Dr. Dwight Evans and Dr. Maria Oquendo, respectively.

Of course, the Penn Adult ADHD program would not have been the focal point of my career but for Dr. Anthony Rostain, who is psychiatrist, colleague, and friend extraordinaire. I am one of those individuals whose specialty found him in the form of being invited by Dr. Rostain to join with

him to set up a clinical program targeting the needs of adults with ADHD. Over countless face-to-face meetings, we shared ideas about the direction of our program; would-be projects; timely issues in our field; and various ways to develop, hone, advance, and distill assessment and treatment strategies that hold the promise of offering real-world benefits in the lives of adults with ADHD. Our conversations are as lively and invigorating, if not more so, than when we started.

Over the past several years, Lisa Joy Tuttle, who has developed a Mindful Self-Management group program for executive functioning skills, has become an integral part of our ADHD program. She has been a valued collaborator with unique perspectives who, along with Dr. Rostain and me, constitutes the three-legged stool of leadership at the Penn Adult ADHD program.

I would also like to thank two of my mentors, Dr. Leonard I. Jacobson and Dr. Anita L. Greene, my undergraduate and graduate advisors, respectively. I sought out each of them because they had reputations for being challenging, even intimidating, insofar as they were known to have high standards for their students. These reputations were accurate but incomplete; each was a committed teacher, mentor, and source of support. Neither of them would allow me to avoid a challenge that I was ready to tackle; but neither one would force me into a role I was not ready to assume. I rounded out my formalized training with a predoctoral internship at CPC Behavioral Healthcare in Red Bank, New Jersey, and a postdoctoral fellowship at the Center for Cognitive Therapy at the University of Pennsylvania, where I am still a senior staff clinician.

A special word of thanks goes out to everyone at Broad Street Grind, a coffee shop in Souderton, Pennsylvania, that was my workstation for this book. Almost every Saturday morning I was at the door when it opened. The owner, Phil Shade, the baristas, and everyone else there were always friendly and accommodating, and kept up with my progress on the book. (Of note, my previous two books were written at Main Street Java, not far from where Broad Street Grind is located, which sadly closed for good just weeks before their release. I do not believe in jinxes or superstitions, but I hope Broad Street Grind does not suffer the same fate.)

I wish to thank American Psychological Association Books, Acquisitions Editor Susan Reynolds, and Development Editor Kristen Knight. From the

first mention of this book (among a few other ideas), Susan advocated for it as a worthwhile project. As with a previous book I published with the American Psychological Association for which Susan was editor, she allowed me to produce a work with which I was pleased and then handed me off to Kristen and her team, who guided me through the editing and publication process to end up with a book to which I am proud to affix my name. The final product was made so very much better by the thorough and astute suggestions made by Drs. Brad Rosenfield, John Mitchell, and Laura Knouse, each an expert on this topic in their own right. I am grateful for the time and effort they took from their busy schedules to do so; each one is a valued colleague.

My parents, the late Mary Ann Ramsay and the late J. Roger Ramsay, were unending sources of support, and I will forever count myself lucky to have been their son. They each conveyed a modest, unassuming, but purposeful approach to life in which one works hard, tries to do the right thing, and quietly tries to make the world a better place in the process. My sister, Jennifer Ramsay, who sadly died during the final edits of this book, was a source of inspiration by the spirit with which she approached her all-too-brief life.

My biggest debt of gratitude goes to my wife, Amy, and my daughters, Abigail and Brynn. Abby and Brynn are strong-willed young women with an independent streak, each in her own way, that is driving them down unique paths in life. I am immensely proud of them. Amy and I have been together for more years than not by this point in our lives. Whether we are doing something or doing nothing much at all, I still enjoy hanging out with my wife.

Rethinking Adult ADHD

Introduction

The seed for this book was planted in Catania, Sicily, in 2002 at the Vulcanica Mente (Volcanic Mind) conference during a workshop I conducted with my colleague, collaborator, and friend, Dr. Anthony Rostain. We were presenting an early iteration of our integrated cognitive behavior therapy (CBT) and medical approach to treating adults with attention-deficit/hyperactivity disorder (ADHD). It was this sparsely attended workshop that led me to quip that these early days of our work suffered from “attendance deficit.”

During a question-and-answer session with a small but enthusiastic group of attendees, Dr. Dominic Lam, an expert in CBT for bipolar disorder, asked a very reasonable question: “What is the main cognitive theme in adult ADHD?” He noted that other disorders (e.g., depression, anxiety) that fit within the overarching CBT model display cognitive specificity and distinctive themes in the thoughts of those with a particular diagnosis, and this can guide interventions. Indeed, a tenet of the cognitive component of CBT is that information processing problems play a central role in the vulnerability for, onset of, and persistence of many psychiatric disorders and other forms of emotional distress, even if they do not play a direct etiologic role. At that point in the evolution of CBT for adult ADHD, this question had not yet been addressed by us or our colleagues specializing in the

psychosocial treatment of this clinical population. Low self-esteem and maladaptive thinking patterns were observed in adults with ADHD, but no central theme was put forth by anyone. After watching me stumble over observations about the common thinking errors seen in adults with ADHD, Dr. Arthur Freeman, an authority in CBT, leapt to my rescue and noted that CBT and the common distortions offer a model that can be flexibly applied to a variety of disorders. The matter seemed to be settled.

In the intervening years, every workshop I led and every journal article or chapter I authored on CBT for adult ADHD included a disclaimer that ADHD is not the result of negative thinking; it creates life problems that create maladaptive thoughts. Even though CBT approaches have since been well adapted to adult ADHD, as demonstrated in many outcome studies and meta-analyses, the role and relevance of cognitive interventions for adult ADHD has been questioned over the years (Ramsay, 2017b). ADHD can be understood as a performance or implementation problem of difficulties organizing and following through on viable actions and plans (Ramsay & Rostain, 2016a). CBT interventions promote skill-based compensations, coping strategies, and other workarounds for the core difficulties associated with the disorder (e.g., time management, organizational skills, procrastination). There are no “trade secrets” about how to manage ADHD. These behavioral skills, when used, will most definitely improve coping and functioning; and cognitive interventions are helpful as ADHD coexists with mood and anxiety issues and low self-esteem, which are matters within the scope of CBT but that do not necessarily offer distinctive and targeted interventions for ADHD.

THE COGNITIVE THEME IN ADULT ADHD

So, what is the use of a book-length discussion on the role of thoughts and beliefs in the understanding and treatment of adult ADHD? It seems that the issue was decided by my meager response to Dr. Lam’s query nearly 2 decades earlier and a circumscribed role for the cognitive domain of CBT for adult ADHD, mainly for cases with coexisting anxiety and depression.

However, the issue is more complex than that. I fully subscribe to the fact that the chief aim of CBT for adult ADHD and its main outcome measure is

behavioral; clients can improve functioning and well-being using known coping skills. The cognitive domain, however, provides an essential mediating ligament between the intention and the action in adult ADHD, especially (but not exclusively) for these behavioral coping strategies. Cognitive interventions operate by targeting the implementation deficit that is a defining characteristic of the disorder. It is maladaptive cognitions that often interfere with the deployment of necessary coping strategies for addressing the self-regulatory problems characteristic of ADHD that then set off the cascade of life problems and impairments that necessitate treatment.

A lifetime diagnosis of ADHD is associated with an increased risk for impairments in most domains of life (e.g., school, work, health and well-being, relationships) and, on the basis of recent data, an increased risk of shortened life expectancy. In addition to the day-to-day stress that comes by way of living with ADHD, these domains represent the spheres of life from which one derives a sense of self and belonging. The thoughts, beliefs, and attitudes that develop when clients face these recurring difficulties can affect their identity, perceived opportunities, and sense of effectiveness and hope, all of which stem from the “consistent inconsistency” in the ability to organize behavior across time, which is a recurring theme in the lives of adults with ADHD.

Apart from making the case that the cognitive domain in CBT for adult ADHD is an essential one (though not sufficient) for fostering improvements in clients, a goal of this book is to offer a much-delayed answer to Dr. Lam’s question and propose that, indeed, there is a central cognitive theme in adult ADHD. This theme relates to a facet of self-efficacy (i.e., self-regulatory efficacy; Bandura, 1997), which is a circumscribed, relatively unsung factor that is a footnote nestled within the broader self-efficacy construct. Impaired self-regulatory efficacy in the cognitions of adults with ADHD sheds light on the cognitive domain as an important mediator of the behavioral strategies by its focus on their implementation, which enables clients to convert intentions into actions, particularly with their proneness for escape–avoidance.

Procrastination is one of the most common problems for adults with ADHD. When recounting examples of missed deadlines or last-minute work binges to beat the clock, adults with ADHD describe knowing full well how to manage such tasks. Maladaptive negative thoughts about a task (or maladaptive positive thoughts) are part of a sequence that gives rise to

avoidance despite this know-how, whether it is at the planning stage, how tasks are defined, or the mind-set about the various factors involved in actual engagement and follow-through. These and similar “pivot points” provide high-yield junctures for intervention where the cognitive domain of CBT plays an acutely important role in the use of coping skills for effectively managing and living with ADHD.

INTENDED READERSHIP

This book is written for practicing mental health professionals, clinician–researchers, and clinicians-in-training who are seeking credible and clinically useful approaches that deliver demonstrable improvements in lives of clients with adult ADHD. Related professionals (e.g., educators, advisors, counselors) working with college students with ADHD or ADHD coaches may also find insights and tips helpful to their work. I hope this book is written in a manner such that interested lay readers will also find helpful insights for managing ADHD.

The focus on the cognitive domain of treatment offers a heretofore unique adjunct to and support of the useful coping strategies in existing treatment manuals, client workbooks and guidebooks, and popular self-help approaches. Although this book will deal with adult ADHD through the prism of the cognitive domain, its relevance for behavioral and other interventions is evident throughout the chapters and case examples. The overarching goal is to “see the world through the eyes—and mind-sets—of our clients” to guide and personalize treatment to make it optimally effective.

OVERVIEW OF THE BOOK

Each chapter of this book is devoted to the understanding of an aspect of the role of the thoughts and beliefs observed in adults with ADHD. This understanding is used to inform targets for therapeutic interventions, illustrated with case examples. [Chapters 1](#) through [6](#) offer a Key Clinical Points section that provides useful notes for therapists and models the types of externalized coping reminders provided to adults with ADHD that increase the use of skills outside the session.

Because most therapists have limited knowledge of the ins and outs of ADHD, [Chapter 1](#) provides a therapist-friendly review of the contemporary understanding of ADHD in adulthood. This primer goes beyond diagnostic symptoms and criteria, underscoring ADHD as a neurodevelopmental syndrome of self-dysregulation. Facets of a broader, unified theory of psychology are introduced that are consistent with and reinforce this contemporary view of ADHD, and these facets shed light on other underlying difficulties faced by adults with ADHD. This foundation provides a way for therapists to better understand and discern the manifestation of ADHD in their clients' experiences—to “see” ADHD—and better understand their struggles. Research summaries of the prevalence, persistence, and impairments of ADHD in adulthood underscore the need for treatment. More specifically, CBT for adult ADHD is better understood as targeting and operating at the level of the functional impairments than as directly treating the core symptoms.

[Chapter 2](#) outlines the research relevant to CBT for adult ADHD, including cognitions and beliefs typically encountered in clinical practice. The chapter starts with a review of evidence-supported medical and psychosocial treatments, which are focused on outcome studies of CBT for adult ADHD. Recent research on cognitive distortions and maladaptive schemas in samples of adults with ADHD that support a CBT model of adult ADHD and its constituent interventions are then reviewed.

The overarching CBT model for the conceptualization and treatment of adult ADHD is presented in [Chapter 3](#). The CBT case conceptualization is discussed first, which itself is a clinically informed synopsis of the overarching CBT model of psychotherapy. The discussion of the adaptation of this model to adult ADHD, particularly the cognitive domain, is achieved through the introduction of the contemporary generic cognitive model of emotional disorders. This introduction highlights recent modifications to the generic model pertinent to (though not mentioning) ADHD and clarification of points where CBT specifically designed for adult ADHD has been adapted to the unique features of this clinical population. This chapter will draw on the aforementioned models and research to introduce the ways in which cognitions and beliefs are clinically relevant in the psychosocial treatment of adult ADHD, including the proposal of self-regulatory efficacy as the central cognitive theme followed by an outline of the premises about

adult ADHD that inform a set of premises about psychosocial treatment of adult ADHD.

[Chapter 4](#) takes this adapted CBT model and self-regulatory efficacy cognitive theme and reviews the cognitive interventions within CBT for adult ADHD. This chapter uses classic cognitive interventions that are tailored for use with adults with ADHD. In addition to assessing and modifying the cognitive patterns and distortions of adults with ADHD, the role of these approaches to frame/reframe tasks, promote implementation and follow-through on behaviors, and deal with maladaptive positive thoughts are among the clinical topics.

Building on this, [Chapter 5](#) illustrates these cognitive interventions “in action” to provide therapists with frameworks for helping clients who have difficulties organizing behavior over time and deploying tried-and-true coping strategies that improve functioning. CBT for adult ADHD can be considered extended release CBT or implementation-focused insofar as the goal is to make interventions portable or “sticky”; the aim is to increase the use of these strategies by clients outside the consulting room at the time and place when they are needed most. Topics in this chapter include helping clients address the common presenting issues of procrastination, time management problems, and disorganization as well as dealing with ambivalence about starting treatment, handling setbacks, and other essential coping issues for adults with ADHD.

[Chapter 6](#) covers several miscellaneous “special case” clinical issues relevant for therapists. Topics include managing comorbid mood and anxiety problems (and suicidality), excessive technology use, phase of life problems for young adults and older adults with ADHD, attitudes about medications, and others. The thoughts and beliefs of loved ones and other stakeholders in the lives of adults with ADHD are also reviewed, including reactions by therapists when working with adults with ADHD.

Although case examples are used to illustrate interventions and principles throughout the book, [Chapter 7](#) provides three extended case examples to give readers a sense of how everything fits together.¹ Common issues are discussed related to procrastination, implementation of coping skills, emotion regulation and comorbidities (including substance use), and

automatic thoughts and core beliefs, among others, and therapist commentary is interspersed throughout the case examples.

In addition to the various sources cited throughout the book, the reference list provides interested readers with manuals and client guidebooks for CBT for adult ADHD, which are denoted with an asterisk. The [Appendix](#) provides a list of additional credible resources, including client- and therapist-oriented websites and organizations.

CONCLUSION

ADHD is a uniquely and disturbingly mystifying condition for those affected by it. It is not a knowledge deficit. Advising clients struggling with procrastination to “start earlier” is like telling people with depression to “cheer up.” ADHD is an implementation problem—a problem efficiently organizing and carrying out viable actions toward desired, viable, but deferred goals. An insidious aspect of ADHD is that the very problems for which clients seek help are the ones that could undermine psychosocial treatment—poor follow-through on coping skills and use of the skills outside the consulting room.

The model reviewed in this book is designed to help adults with ADHD define and navigate small, achievable pivot points for taking small behavioral steps with which to implement their skills and plans. This model also provides a template with which they can understand their setbacks in behavioral terms (“I did not break down that task into small enough steps”) rather than in characterological terms (“I’m a failure”). This template turns coping with ADHD into something actionable clients can “do.”

I hope that practicing clinicians who read this book will come away with a similarly useful template with which to “see” the challenges faced by their clients with adult ADHD, “hear” the inner self-talk of cognitions and beliefs, and collaborate with clients to establish specific therapeutic skills and strategies that they can “do” to good effect in their lives.² These approaches, often used in combination with coping tools and strategies developed and disseminated by many professionals in the specialty of adult ADHD, hold the promise of helping clients achieve newfound improvements and outlooks about their worlds, their futures, and themselves.

¹All clinical case material has been altered to protect client confidentiality.

²For a clinical demonstration of many of the ideas described in this book, see *Adults With ADHD*, an American Psychological Association video now available at <https://www.apa.org/pubs/videos/4310004.html>.

Introduction to Adult ADHD

Before the role of thoughts and beliefs in the experience and treatment of adults with attention-deficit/hyperactivity disorder (ADHD) is addressed, it is important to establish a shared foundation of the contemporary view of ADHD. This step is necessary to grasp what adults with ADHD have faced in their lives and what is being targeted in treatment. Unlike mood and anxiety disorders, which are staples of clinical training for mental health professionals, most clinicians and clinicians-in-training have had scant, if any, exposure to adult ADHD (Willer, 2017).

The goal of this chapter is to provide a clinician-friendly overview of the current state of the field in terms of understanding ADHD, its etiologies, and how this translates into clinical presentations and difficulties faced by adults seeking help. The first section of this chapter reviews the modern-day view of ADHD as a neurodevelopmental disorder of impaired self-regulation. This definition moves beyond the symptom criteria listed in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5*; American Psychiatric Association, 2013) and other classification systems and instead focuses on sound models that are more clinically useful in terms of recognizing the central features of ADHD. These models help therapists better detect or “see” ADHD and its effects on functioning rather than merely try to determine whether a client’s attention, hyperactivity, and/or impulsivity reflect levels that are too much, too little, or just right. Within this

framework, therapists are better equipped to understand and treat adult ADHD more effectively. Interacting neurobiological systems that underly these self-regulation difficulties are introduced to provide a sense of what drives the symptoms and downstream functional impairments. The relevance of these aspects of self-regulation will also be examined through the lens of a broader, similarly evolution-based theory of psychology to further illustrate the effects of self-regulation deficits characteristic of ADHD on some important behavioral, social, and cognitive psychological mechanisms.

After reviewing the nature of the disorder, the discussion moves to the real-world effects of ADHD on “free range humans”—individuals who seek treatment for the life difficulties presented in these last sections. Information is presented about the prevalence and persistence of ADHD into adulthood and factors most germane to this population. In particular, the common life problems faced by adults with ADHD are reviewed, as these are the sources of distress that lead most people to seek help. Indeed, it is these struggles that shape and are shaped by the thoughts and beliefs observed when helping adults with ADHD.

CONTEMPORARY FORMULATION OF ADULT ADHD

ADHD has gone through several name changes over the years, and the assumptions about the essence and etiologies of this disorder also have changed (see Barkley, 2015a, for a review of this history). Although the official symptoms comprising a diagnosis have been relatively stable, there is now a broader understanding of the clinical features, the underlying mechanisms driving these features, and their relevance for the functioning and well-being of adults with ADHD. This discussion begins with the current diagnostic criteria for ADHD.

Symptom Definition

The *DSM–5* (American Psychiatric Association, 2013) places ADHD in the Neurodevelopmental Disorders section. The diagnosis is defined by a list of 18 symptoms evenly divided between the hyperactive/impulsive and inattentive domains, with *symptom* defined as developmentally inappropriate

levels of any features that individually and cumulatively create impairments. The two symptom domains yield three possible presentations of ADHD: predominantly hyperactive/impulsive presentation, predominantly inattentive presentation, and combined presentation.

There have been some changes in the *DSM-5* relevant to the diagnosis in adults. The symptom threshold for diagnosing ADHD in adults has been lowered. Previous criteria required the presence of six of nine symptoms in either of the symptom domains as the diagnostic threshold for clients of all ages, which remains the threshold for children and adolescents. The cutoff for adults has been lowered to five of nine symptoms because some symptoms are less applicable to adults, and a lowered threshold is a better marker of developmental deviance in adults (Barkley, Fischer, Smallish, & Fletcher, 2002).

In addition, a long-awaited change to the age-of-onset criterion was made, now requires several symptoms be present before 12 years old rather than 7 years old. Full diagnostic criteria in childhood is not required for a diagnosis in adulthood, rather it is the emergence and persistence of symptoms that have been observed in childhood. Several studies indicate that an age of onset by late adolescence is adequate (Barkley, Murphy, & Fischer, 2008; Polanczyk et al., 2010), as there is no clinical difference between adults diagnosed with ADHD and those who fulfill all other diagnostic criteria except for age-of-onset (Faraone et al., 2006).

There is no separate symptom list for adult ADHD as the existing symptom criteria is unchanged since the fourth edition of the *DSM* (*DSM-IV*; American Psychiatric Association, 1994). The recently updated 11th edition of the *International Classification of Diseases* (ICD-11; World Health Organization, 2018) uses the term ADHD as well as the same three presentation types and age-of-onset criteria as the *DSM-5*.

Several recent studies have cited the phenomenon of adult-onset ADHD (Agnew-Blais et al., 2016; Caye et al., 2016; Moffitt et al., 2015), which are cases in which diagnostic levels of symptoms and impairments arrive de novo in adulthood with no previous evidence of any signs of ADHD. Typical adult ADHD represents either individuals diagnosed in childhood who continue to manifest symptoms in adulthood or individuals not identified with ADHD until adulthood but for whom retrospective review establishes the

earlier emergence of symptoms, which is considered standard practice in the evaluation of ADHD (Ramsay, 2017a).

The notion of adult-onset ADHD stems from studies using retrospective assessment of childhood symptoms along with assessment of current symptoms and documenting the presence of ADHD in adults who did not show symptoms in childhood. In a couple of studies (Agnew-Blais et al., 2016; Caye et al., 2016), the adult samples comprised 18- and 19-year-olds, which represents a blurry developmental line between adolescence and adulthood (Faraone & Biederman, 2016). However, another study (Moffitt et al., 2015) comprised developmentally mature adults and provided preliminary data that call into question the age-of-onset criterion.

On the other hand, a study with rigorous, repeated evaluations of children (those with ADHD and those without ADHD) tracked into young adulthood indicated that adult-onset cases were the result of ADHD-like symptoms associated with other clinical factors (e.g., the effects of substance use, a comorbid disorder, cognitive fluctuations that were not deemed impairing) and not ADHD itself (Sibley et al., 2018). A more recent study failed to find evidence supporting adult-onset ADHD in a longitudinal sample of women with similar alternative explanations for emerging attention deficits (Ahmad, Owens, & Hinshaw, 2019). The practice standard continues to be a thorough review of the timing of symptom onset and persistence in all adult cases, including retrospective accounts of prominent subthreshold symptoms of ADHD or difficulties in childhood for which treatment was not sought until adulthood because of attenuating factors (e.g., intelligence, dismissive attitudes toward diagnosis; Kooij et al., 2019; Mitchell et al., 2019; Ramsay, 2017a). These cases are better referred to as late identified rather than adult onset.

With the advent of these modifications, there is now a corresponding adult ADHD module included in the Structured Clinical Interview for DSM–5 (First, Williams, Karg, & Spitzer, 2016). There are several other structured interviews, symptom checklists, and norm-based adult ADHD inventories that include *DSM* symptoms but cast a wider net to cover a range of symptom and functional issues experienced by adults with ADHD. Use of structured interviews, inventories, and assessment for and ruling out other psychiatric and medical conditions that could mimic symptoms of ADHD remains the diagnostic standard. The notion of neuropsychological testing as a central

means for assessing ADHD and impairments is appealing but poses a risk for false negative cases insofar as time-limited, office-based tests do not capture the temporal challenges of organizing and managing the affairs of daily life. (See Barkley, 2019; Mapou, 2019; Ramsay, 2015, 2017a, for reviews of issues related to the assessment of adult ADHD.)

The diagnostic category and acronym of ADHD is well-established and will likely not soon change. However, futile arguments over the attention and hyperactivity aspects get in the way of distinguishing the essential nature of the condition. Characterizing ADHD based solely on the current list of symptoms is akin to branding panic disorder as a “tachycardia disorder” (Ramsay & Rostain, 2015b) or autism as an “eye-gaze disorder” (R. A. Barkley, personal communication, June 5, 2019) as these views reflect discrete features of each disorder but do not embody their essence. The next section moves beyond *DSM* symptoms to review the prevailing view of the essence of the ADHD syndrome.

ADHD as a Neurodevelopmental Disorder of Impaired Self-Regulation

A parsimonious description of the contemporary view of ADHD is that it is a neurodevelopmental disorder of impaired self-regulation—a chronic, persistent delay in the acquisition of various normative and interacting self-control and self-management faculties in age-appropriate roles and settings and a corresponding deficit in the operation of these faculties. ADHD reflects a quantitative rather than a qualitative difference in course and presentation compared with other conditions (R. A. Barkley, personal communication, September 30, 2017).

ADHD is a dimensional disorder in that its symptoms, features, and impairments fall at the disordered end of a normative continuum of self-regulation and functioning (Asherson & Trzaskowski, 2015; Katzman, Bilkey, Chokka, Fallu, & Klassen, 2017). By definition (American Psychiatric Association, 2013), adults diagnosed with ADHD experience more symptoms with a greater degree of severity and magnitude of interference than adults who encounter typical, fleeting, circumscribed fluctuations in self-regulation. A thought disorder or a manic episode, by comparison,

represent a qualitatively different thought process or mood state, respectively, each signifying dysfunction in an otherwise adaptive neurologic system and process.

A framework that has emerged over the past few decades for understanding the different facets of self-regulation in adult ADHD has been centered on the executive function (EF) construct. Definitions of EFs cluster around the ability to persist on goal-directed plans by which clients choreograph higher-order cognitive skills of planning, problem-solving, and information management and orchestrating thoughts, emotions, and behaviors to achieve these ends (Barkley, 2001, 2012; Goldstein & Naglieri, 2014). These capacities are considered as top-down regulatory skills needed to manage or override automatic, competing inclinations in order to persist on deferred, valued goals and benefits. There is a bidirectional link of these sort of top-down, self-directed actions and bottom-up processes, such as alertness/detection (which allows humans to orient to key signals in the environment) and information filtering/accumulation (which allows for the processing and sorting of these signals and data); this information is used to determine which actions are appropriate (Nigg, 2018a). The operations of these processes are further influenced by personal experience (Barkley, 2016; Blair, 2016).

An elegantly simple description of EFs and other operations of the frontal cortex (where EFs reside) is that they are what “makes you do the harder thing when it’s the right thing to do” (Sapolsky, 2017, p. 45). This depiction captures how a history of ADHD and related frustrations create negative outlooks and, conversely, how cognitions can be marshalled to foster implementation of strategies designed to promote adaptive change for adults with ADHD. The next section reviews EFs and their relevance to ADHD with attention paid to their effects on the cognitions of adults with ADHD. This discussion is followed by a therapist-friendly review of prominent underlying etiologic factors for EFs and other features of ADHD.

Executive Functions

EFs have been particularly relevant to the evolving conceptualization of ADHD (Barkley, 1997, 2012, 2016; Brown, 2013, 2017; Kooij et al., 2019);

in fact, ADHD is often viewed as an executive dysfunction disorder. EFs are defined as self-regulation in the form of self-directed behaviors used to specify and organize goal-directed plans; to implement and sustain actions over time toward these goals; to achieve the personally salient outcomes that will benefit individuals by requiring interaction with others and social or cultural institutions; and for which there is deferred outcome or reward and, very often, short-term costs (Barkley, 2012). This definition encompasses the presenting complaints of most individuals with ADHD.

EFs emerged as the most reliable diagnostic factor in adult ADHD, followed by inattention/hyperactivity and impulsivity when using *DSM-IV* criteria (Kessler et al., 2010). A study using *DSM-5* criteria again found that EFs (now coupled with inattention) emerged as the most discriminating factor ahead of hyperactivity, impulsivity, and emotional dyscontrol (Adler et al., 2017). EFs are highly correlated with *DSM-5* symptoms (Silverstein et al., 2018), although they do not appear in the diagnostic criteria. More to the point of clinical practice, the EF model provides a useful lens through which to detect and target ADHD and its effects.

Everyone has EFs—it is a distinctively human feature (other social animals, particularly the more social ones, such as dolphins, chimpanzees, and some species of monkeys also show rudimentary EFs; Barkley, 2012). People who experience a depressive episode, deal with the effects of a concussion, or are sick with influenza will experience diminished executive functioning. The issue at hand for adults with ADHD is that they face a persistent, unremitting lag in the development, maturity, and application of these skills compared with same-age peers.

There is a developmental progression of the unfolding of EFs that is beyond the purview of this book (see Antshel, Hier, & Barkley, 2014; Barkley, 1997, 2012, 2016, for extended discussions). However, aspects of these distinct EF domains are reviewed next (in the order of their developmental unfolding; Barkley, 1997) to highlight their relevance for cognitive behavior therapy (CBT) for adult ADHD, particularly the cognitive domain.

Behavioral Inhibition

The ability to stop responding to the environment is the first EF to emerge (after an awareness of self; Antshel et al., 2014; Barkley, 2016). This pause in the flow of experience and action creates a space in which individuals can act proactively with intention, rather than reactively to prepotent stimuli, which represent compelling, habitual urges. This pause allows for a prolongation of a moment, which provides an opportunity for the companion operations of reflection, the mental review of the sequence of events, and *proflection*, or envisioning different action scenarios or simulations to achieve a desired future outcome.

For children with ADHD, behavioral disinhibition manifests in difficulties managing observable behaviors. Although motoric inhibition generally improves with age (and brain maturation), adults with ADHD still often struggle with other forms of disinhibition, such as impulsive spending, excessive or inappropriate verbal behavior (e.g., saying the wrong thing at the wrong time), and an internal sense of restlessness (e.g., a constantly bouncing foot). The adaptive nature of self-inhibition for coordinating intentions and actions was captured by Friedman (2016): “When you press the pause button on a machine, it stops. But when you press the pause button on human beings they start” (p. 4).

From a standpoint of CBT, behavioral inhibition is needed to organize said intentions and actions, including interrupting a behavioral sequence to switch to another one. As mentioned previously, this mental and behavioral space provides an opportunity to act with a directed purpose. The inhibitory step of the prolongation of this time and mental space is a necessary one to identify and assess thoughts and behaviors and their relationship to future-focused intentions. CBT sessions serve an inhibitory function, which creates a space in time for clients to reflect and proflect to coordinate their thoughts, feelings, and behaviors with desired outcomes, rather than succumbing to impulsivity. This process is an aspect of strategic metacognition, developing and externalizing skills and plans to increase the likelihood they will be implemented at the point of performance.

Nonverbal Working Memory

Nonverbal working memory (NVWM) is the capacity to hold events in mind in the form of visual images, like a video replay of events. NVWM is

essential for the organization of behavior and synchronizing it with time (Barkley, 1997, 2016). This capacity allows individuals to hold and process different possible scenarios in their minds and fix a desired course of action rather than relying solely on trial-and-error learning. NVWM supports cognitive-imaginal rehearsal of potential future actions, which is helpful for anticipating, practicing, and ultimately handling potential difficulties, such as mentally preparing for a job interview, or keeping in mind a goal to guide action toward it.

Visual images fall within the realm of cognitions in CBT. For example, when a client describes putting off a monthly report for work, her thought about it may appear as an image of herself “sitting there for an hour, stuck, frustrated, and unable to get anything done.” This image contains a wealth of information that provides targets for intervention, including reenvisioning her ability to handle the task backed up with a personalized action plan for doing it.

Verbal Working Memory

Verbal working memory (VWM) reflects internalized speech or self-talk that guides behavior, including automatic thoughts. The VWM model, as outlined in Barkley’s (1997, 2016) hybrid model of the EFs for ADHD draws on a Skinner’s (1957) behavioral model of the internalization of speech. What starts out as babble and baby talk in infancy progresses through phases of overt commentary on what a child sees or does to semicovert, self-guided instruction such as talking through the steps of learning to tie shoes (“The bunny goes through the hole and then pull the ears tight”). This commentary ultimately matures into fully internalized and privatized self-talk in adolescence such as an adolescent mentally cursing out his or her parents while remaining stone-faced as he or she is grounded. Cognition in this view is treated as a verbal behavior derived from individuals’ conditioning history, the same as any overt behavior, and is modified in the same manner as any other behavior.

This Skinnerian (1957) model of self-directed speech is useful for understanding the internalization of speech across development and its role in rule-governed behavior and cognition (see Hayes, Blackledge, & Barnes-Holmes, 2002, for a modern behavioral view of language and cognition).

Critiques of this model (Chomsky, 1959) and cognitivist frameworks (A. T. Beck, 1976; Mahoney, 1974; Meichenbaum, 1977) pose internal meaning-making and justification processes as emergent features from this base. Cognitivist models move beyond a strict conditioning model and impart an inventive, creative, and constructive influence of cognitions as valued goals that guide behaviors.

Suffice it to say, VWM extends to rule-governed behaviors and cognitions, and is a facet of self-regulation. These cognitions affect how adults with ADHD view their endeavors and themselves and thereby inform cognitive interventions.

Emotion Regulation

Emotions have never been mentioned in the criteria for ADHD in any edition of the *DSM*, *ICD*, or other classification system. However, clinical observations that inform ongoing research have established emotional dyscontrol as a core feature (Adler et al., 2017; Barkley, 2015b; Kooij et al., 2019).

The emotional features characteristic of adult ADHD are not those of disordered mood or anxiety, which may coexist with ADHD. Rather, emotional dyscontrol seen in clinic-referred adults with ADHD represents maladaptive reactions to the same emotionally charged triggers that affect everyone (Barkley, 2015b). The triggering events (external or internal), however, are more distracting and disruptive for adults with ADHD and it takes them longer to tone down these feelings (positive or negative). This dyscontrol reflects deficient top-down regulatory skills for managing and modifying bottom-up emotional reactions that are typically encountered in the course of managing adult life. This usually manifests in adults with ADHD as repeated instances of overreacting to relatively minor stressors, with the consequences of these reactions often magnifying or adding to the original stressor.

Emotion regulation is also tied to motivation, which is relevant to ADHD. An EF definition of motivation is the ability to generate an emotion about a task in the absence of an immediate consequence (Barkley, 1997). This is the knack of being able to change an emotional state by shifting attention, conjuring up images, thoughts, and other behavior-facilitating drives to

perform an action. This is the emotional skill used by students to make them “feel enough” like studying 3 days before an exam rather than waiting until the night before when the motivating emotion is panic.

Emotion regulation is important for CBT, as the ability to modify emotions is an overarching therapeutic component. A more specific issue in CBT for adult ADHD is manufacturing motivation for various tasks (Ramsay & Rostain, 2015a). Task demands often trigger visceral feelings of discomfort, even subtle ones. These are often described as gut feelings distinct from sadness or worry, but rather the sense of “I know I have to do this but I do not want to do this,” which can be potent enough to provoke escape-avoidance. An essential facet of motivation and overcoming procrastination is to deal with an individual’s thoughts about tasks, including the relationship with emotions and discomfort. Indeed, procrastination and other forms of disengagement are often fueled by feelings of demoralization that originate from past failures and setbacks.

Reconstitution

The last EF to emerge is reconstitution, which derives from the childhood capacity to play and explore. What starts as play in the form of discovering how things work (e.g., taking things apart and putting them back together) or role-playing cultivates a capacity to analyze, deconstruct, and synthesize information and adopt different perspectives. This skill provides a platform for innovation and problem-solving such as drawing from past experiences that approximate newly encountered challenges (Barkley, 1997, 2016).

Reconstitution is relevant for cognitive interventions in CBT as it involves recognizing and analyzing clients’ responses to events and synthesizing alternative interpretations, reframes, and plans. Combined with NVWM and VWM, these skills are used to anticipate situations and engage in prospective problem-solving. This is particularly relevant for breaking down tasks into discrete steps and fostering the execution of these steps over time. Again, the ultimate outcome is behavioral (i.e., goal-directed behaviors), but cognitions play an important mediational role in the process. Task-promoting thoughts (and mitigating task-demoting thoughts) foster the application of coping strategies and behavioral follow-through that furnish

adults with ADHD with novel experiences, improved well-being, and new outlooks.

Summary

Each successive EF draws on the foundation established by the previous one. Relative deficits and delays in EF skills have effects on subsequent skill acquisition and execution. In addition to their direct role in functional problems, EF deficits have secondary effects on the ongoing acquisition and use of coping skills, including compensatory skills for ADHD (see Barkley, 2012).

ADHD is increasingly viewed as an EF-deficit disorder, but with an assortment of processes underlying these executive skills (Castellanos & Proal, 2012; Kooij et al., 2019; Sonuga-Barke, 2010). Although tethered by common and overlapping symptoms and self-regulation difficulties, there are other factors at work in self-regulation and the observable features of ADHD, which are summarized next.

Etiologic Models of Self-Regulation and ADHD

Genetic research consistently shows that heredity, on average, accounts for about 80% of individual differences in ADHD symptoms, including studies of identical twins reared together versus those reared apart and adopted children's environment versus the traits of birth parents (Barkley, 2015a; Brainstorm Consortium, 2018; Demontis et al., 2019; Faraone & Larsson, 2019). ADHD and its features cluster within families, both immediate and extended. ADHD is one of the most highly heritable conditions seen in clinical psychiatry and psychology, though this fact only establishes a propensity or relative risk for manifesting symptoms or the full disorder. Genetic unfolding most definitely interacts with environmental or epigenetic factors (see Neuman et al., 2007; Nigg, 2018a, 2018b) and a recent genome-wide meta-analysis (Demontis et al., 2019) has yielded a specific set of genetic risk factors for ADHD.

Similarly, *neuroimaging research* offers compelling details about neurobiological underpinnings of ADHD (see Barkley, 2015a; Bush, 2010; Cortese & Coghill, 2018; Konrad & Eickhoff, 2010; Kooij et al., 2019;

Purper-Ouakil, Ramoz, Lepagnol-Bestel, Gorwood, & Simonneau, 2011 for reviews). Inefficiencies in the prefrontal cortex and anterior cingulate are familiar leading players, but structural studies have also implicated alterations in the basal ganglia and subcortical reward networks. From a functional standpoint, hypoactivity in the frontoparietal and ventral attention networks has been documented in studies of ADHD, as has hyperactivity in the default mode network and the visual network. Studies have shed light on differences in the growth, size, and volume of different brain regions (Proal et al., 2011; Shaw et al., 2007, 2012, 2018), comparing individuals with ADHD with individuals without ADHD and, among individuals with ADHD, comparing those with better function with those with worse functioning (Mackie et al., 2007). This line of research helps explain the heterogeneity of ADHD cases as some individuals experience symptom reduction or remission by adulthood, whereas others have persistent symptoms (e.g., Barkley et al., 2008).

Dopamine deficiency models are based on studies of dopamine availability in the subcortical reward networks of the brain, with less availability (fewer dopamine receptors and transporters) seen in imaging studies of adults with ADHD compared with adults without ADHD (Volkow et al., 2009, 2011). Dopamine availability correlates with self-reported ADHD symptoms and self-ratings of trait motivation, with low dopamine associated with higher ADHD symptom ratings and lower trait motivation ratings. This finding is relevant to clinical issues of procrastination and poor task initiation, as well as proneness for addictive behaviors, including excessive gaming and technology use. In fact, the dopamine reward system is as much, if not more about the anticipation of a reward as its pursuit and attainment (Sapolsky, 2017), which is directly relevant to adult ADHD and cognitions about task plans and coping strategies versus succumbing to distractions and avoidance.

The dopamine deficiency model is consistent with wider ranging *reward-deficiency* models of ADHD (Sonuga-Barke, 2010, 2011; Willcutt, 2015), which may be more precisely viewed as differences in responsiveness to typical rewards and their presentations among adults with ADHD, such as stimulus seeking and greater sensitivity (irritability) to reduction in rewards. Tied to reduced reward signals in the ventral striatum, such reward deficiency manifests as problems orienting to sources of rewards and being

less responsive to rewards that are sufficiently reinforcing for nonclinical groups; these factors present as delay aversion, proneness to boredom, and temporal discounting (i.e., impulsivity in chasing more immediate rewards over more valued but deferred rewards). These factors all undermine typically advisable behavioral interventions if not modified for ADHD. Individuals with ADHD require more timely, frequent, salient, and stronger rewards to shape behavior.

The *default mode network* (DMN) is in the precuneus, a structure buried deep in the brain that is the seat of resting-brain activity (Utevsky, Smith, & Huettel, 2014). The DMN plays a crucial role in the attention difficulties seen in adult ADHD. The DMN refers to the resting mental state and task-irrelevant mental processes of the brain in an idling mode, such as mind-wandering (Franklin et al., 2017). Problems in ADHD occur when the brain must shift out of this resting state. This shifting process requires that the default network be suppressed while the brain engages in concentrated attention. The requisite degree of suppression (default mode deactivation) is positively associated with the difficulty of a task at hand (McKiernan, Kaufman, Kucera-Thompson, & Binder, 2003). Default-mode interference when shifting modes is likely a key source of attention problems and inconsistent reaction times for adults with ADHD (Castellanos et al., 2008; Sonuga-Barke & Castellanos, 2007). Connectivity patterns between the DMN, saliency network (bilateral insula and anterior cingulate cortex), and the twofold dorsal and ventral attention networks (the *where* and *to what* an individual attends, respectively) may play a central role in the proneness for distractibility and mind-wandering problems seen in ADHD (Bozhilova, Michelini, Kuntsi, & Asherson, 2018; Sidlauskaite, Sonuga-Barke, Roeyers, & Wiersema, 2016; Silberstein, Pipingas, Farrow, Levy, & Stough, 2016).

ADHD has many strong genetic and neurobiological underpinnings (interacting with epigenetic factors) that are associated with the operations of a variety of interrelated brain networks. These networks have downstream effects on functioning in daily life; aspects of life that those without ADHD may take for granted become much more difficult for individuals with ADHD. In real time, these neurobiological inefficiencies conspire to interfere with initiating and shifting between tasks that is made even more difficult by an impaired ability to motivate and sustain effort toward a

deferred goal, particularly in the face of dissuading factors competing for time, attention, and effort.

Before examining the prevalence of adult ADHD and specific domains of impairment in the modern world, the self-regulation/EF view of ADHD is reviewed within a broader theory of psychology to examine the effects of ADHD on some relevant psychological mechanisms. Advances in understanding ADHD have come from adopting a wider scope that includes neurobiological and evolutionary models (Barkley, 2001, 2012). The next section will use the unified theory of psychology (Henriques, 2011) as a theoretical context for understanding the relevance of ADHD to some broader psychological mechanisms, which will also have implications for later discussions of the CBT model of and treatment for adult ADHD.

ADHD WITHIN A UNIFIED THEORY OF PSYCHOLOGY

Coming from a background in the study and practice of professional clinical psychology, Henriques (2011) took on the ambitious task of proposing a unified theory of psychology comprising four broad facets: First, human psychology derives from an evolutionary context. This facet is consistent with advances in understanding EFs as an example of an extended phenotype or how certain behaviors are genetically maintained in a species by their advantageous effects on an organism's environment (Barkley, 2001, 2012; Dawkins, 1982/1999). The remaining three facets of the unified theory of psychology include the behavioral investment theory, the influence matrix, and the justification hypothesis. These facets are relevant for further understanding and appreciating the effects of ADHD and EF deficits on functioning, namely, their effects on behavior, relationships, and cognitions, which correspond with different domains of CBT for adult ADHD.

Behavioral Investment Theory

Within behavioral investment theory, the nervous system treats behavior as commerce or an investment (Henriques, 2011). There is a largely nonconscious cost-benefit calculation of the time, effort, and energy costs associated with any particular action. This calculation is associated with

innate propensities toward certain stimuli as well as those tied to individual issues of heredity and experience, like behavioral selection (Skinner, 1981).

The primary relevance of behavioral investment theory is the effect of ADHD on these cost–benefit calculations of intentions/actions, which operate as a sort of behavioral loan officer. The EF deficits associated with ADHD make many pursuits and endeavors in life more difficult to manage for adults with ADHD. There are many endeavors, including those highly valued and otherwise deemed as “good” investments from a logical standpoint, for which the nonconscious cost–benefit of the investment of time, effort, and energy expenses by adults with ADHD yield reflexive conclusions that they are “bad” investments. This ambivalence, the battle between logically knowing what needs to be done and a nonconscious calculation of it as untenable because of EF deficits, represents a difficulty voiced by most adults with ADHD, the maddening, seemingly self-defeating escape–avoidance, procrastination, and disengagement seen in ADHD despite valued intentions. The repeated fatigue and demoralizations from this tug-of-war between the rationally defined good investments and the visceral, emotionally defined bad investments set the stage for negative cognitions and emotional frustrations. These cognitive and emotional factors (and untreated EF deficits), in turn, further magnify problems with such cost–benefit analyses. Consequently, there is an important mediating cognitive element for adults with ADHD that affects these calculations of plans (intentions) and efforts to reconcile them with individuals’ values and goals (actions).

The Influence Matrix

The influence matrix (Henriques, 2011) extends behavioral investment theory to the social world where most ADHD difficulties occur. The social context represents its own commerce of social capital that affects human motivation, emotion, behavior, and cognition. From an evolutionary view, the gamut of social relationships and transactions are themselves resources and raw materials for survival.

The ability to wield social capital, such as to influence others in accordance with personal interests, is a key skill, which includes reciprocity and a balance between generating and spending this capital. There are

several distinct but interrelated vectors of social influence. These include *social rank* in terms of useful contributions that benefit the group; altruism, cooperation, and other forms of *self-sacrifice* as means to build status and collateral with others; and *self-sufficiency*, which is a balance between autonomy and interdependence, being able to manage alone but still nurturing a standing with the group. Each of these facets represent a relative ratio that is constantly recalibrated, including striking the right balance of self-to-other-focus.

The relevance of the influence matrix is that the difficulties faced by adults with ADHD have a social, public element to them. Adults with ADHD are prone to inconsistency and poor follow-through on plans and promises, which have ripple effects on social capital and social standing for self and others. The interpersonal effects of poor follow-through often are described by adults with ADHD in emotional terms of guilt and shame, and thoughts that others are frustrated and disappointed with them, not to mention accounts of relationship disruptions. These issues are relevant in CBT for adult ADHD, which focuses on clients' social functioning as well as the role of a strong therapeutic alliance that provides a safe, supportive place to address these issues.

The Justification Hypothesis

The justification hypothesis is a framework for a meaning-making aspect of cognition as self- and other-directed explanation of what happens and why it happens. The hypothesis is that this idea proposes a structure and function of the coevolution of self-consciousness and culture (Henriques, 2011). The evolution of human consciousness provided humans with a distinct sense of a self apart from others, the foundational EF (Barkley, 2016) providing a self to regulate. The cognitive, narrating capacity to account for the *what* feature of events and the associated causal *why* of events also includes the self and other justification of an individual's actions or inactions. These internal dialogues have a private component in terms of sense of self and identity and a public component of the presentation and explanation of the self to others.

Considered through the lens of the justification hypothesis, cognitions serve an explanatory function which, at least partly, can be viewed as

justifications for actions and inactions, consistent with facets of CBT (A. T. Beck, 1976; Dobson, Poole, & Beck, 2018; see [Chapter 3](#), this volume). This cognitive, explanatory function ties together the behaviors to be explained (behavioral investment theory), the explanations communicated to stakeholders in an individual's life to maintain social standing (influence matrix), and the internal processing and sense-making of events in the context of an individual's identity (or sense of self) and other cognitive factors, including risk for cognitive distortions. In fact, adults with ADHD often report being unable to make sense of their consistent inconsistency themselves, much less being able to explain it to others (“How can I ask the professor for another extension on the same assignment?”).

This review highlights the deep-seated nature of self-regulation and the complex behavioral, social, and cognitive mechanisms that affect human functioning. The effects of ADHD and EF deficits cut deeply through each of these facets and, in turn, through the roles, relationships, and domains of life for adults with ADHD in a persistent and wide-ranging manner. Although this overview is a far cry from some of the typical clinical material encountered with adults with ADHD (“Yes, very interesting for the early humans, but I cannot find my keys and I’m already late for work”), these insights highlight the recurring struggles and their effects on this population.

PREVALENCE, PERSISTENCE, AND COMORBIDITY AND IMPAIRMENTS OF ADULT ADHD

As ADHD is a neurodevelopmental syndrome, there are many questions related to its manifestation, appearance, and effects at different points along the developmental trajectory. More specifically, it can be confusing to sort through various reports on the numbers of individuals with ADHD in different age groups and the degree to which children and adolescents grow out of it. From a clinical standpoint, it is important to appreciate the complexity of coexisting factors faced by clinic-referred adults with ADHD and the life problems they face that necessitate treatment. Reviews of each of these factors are provided below.

Prevalence of ADHD

The diagnostic prevalence for ADHD cited in the *DSM–5* on the basis of expert consensus derived from the literature is 5% of children and 2.5% of adults (American Psychiatric Association, 2013). The international prevalence of childhood ADHD is estimated at 6.5% (Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007).

Comprehensive surveys conducted in the United States and in international samples provide corroborative support for *DSM–5* prevalence rates. Adult ADHD rates in the United States are 4.4% and among international samples (Americas, Europe, and the Middle East) are 3.4% (Fayyad et al., 2007; Kessler et al., 2006). A secondary analysis of the U.S. sample that examined adult ADHD in the workforce yielded a prevalence of 4.2% (Kessler, Adler, Ames, et al., 2005). These prevalence rates translate to about 8 to 10 million adults in the United States are affected by ADHD. There are published reports of increased rates of diagnosis, which are based on diverse ways in which a diagnosis was determined, including health care providers simply stating a child or adolescent had ADHD (Visser et al., 2014). These are important issues, but these prevalence rates are generally accepted (Kooij et al., 2019).

Persistence of ADHD

Persistence rates of childhood ADHD into adulthood can range from 4% to 77% depending on the manner in which ADHD is assessed in adulthood (Sibley, Mitchell, & Becker, 2016). Most estimates of persistence fall around 50%, though the persistence of residual symptoms that cause some form of functional impairment often falls in the range of 65% to 85% (Barkley et al., 2008; Biederman, Petty, Clarke, Lomedico, & Faraone, 2011; Biederman, Petty, Evans, Small, & Faraone, 2010; Sibley et al., 2016; Volkow & Swanson, 2013). A national comorbidity survey indicated that 36.3% of respondents who had met *DSM–IV* (American Psychiatric Association, 1994) criteria for ADHD in childhood continued to meet strict diagnostic criteria in adulthood on the basis of self-report (Kessler, Adler, Barkley, et al., 2005). Because of limitations of *DSM–IV* criteria for adults, namely the lack of EF items and age-of-onset criterion of 7 years old at the time, this

rate is likely an under estimation. A review of studies indicated persistence rates as low as 4% when full diagnostic criteria were used (including strict age-of-onset criterion). When defining persistence as clinically significant symptoms of ADHD or partial remission, rates were between 36% and 86% (Faraone et al., 2006).

Psychiatric Comorbidity, Functional Impairments, and Adult ADHD

Psychiatric comorbidity is the rule rather than the exception in clinic-referred adults with ADHD. Upward of 80% of adults diagnosed with ADHD will have at least one comorbid diagnosis (Barbarese et al., 2013; Barkley et al., 2008; Biederman et al., 2012; Brook, Brook, Zhang, Seltzer, & Finch, 2013; Faraone et al., 2015; Kessler, Adler, Barkley, et al., 2005; Kessler et al., 2006; Klein et al., 2012; Kooij et al., 2019).

The most common co-occurring disorders seen in adults with ADHD, in descending order of prevalence, are anxiety, depression, and substance use disorders (Barkley, 2015c; Kessler et al., 2006; see also [Chapter 6](#), this volume). Nicotine (cigarettes), alcohol, and marijuana are the most common substances of abuse for adults with ADHD (Upadhyaya & Carpenter, 2008) with substance use disorders occurring in ADHD samples at twice the rates seen in the general population (Barkley, 2015c).

Adults with ADHD, compared with adults without ADHD, experience academic difficulties (e.g., increased educational disruption and lower academic attainment), occupational problems (e.g., lower levels of employment, more frequent job changes, lower salaries, poorer job performance ratings), relationship difficulties (e.g., lower relationship satisfaction, higher marital discord), and higher risk for psychiatric and substance use diagnoses. There are various other functional difficulties that affect health and well-being, such as sleep problems, poorer driving records, financial difficulties, and higher rates of injuries and various sexual and health risks, including unplanned pregnancy and obesity (see Barbarese et al., 2013; Barkley et al., 2008; Biederman et al., 2006; Brook et al., 2013; Cortese, Faraone, Bernardi, Wang, & Blanco, 2013; Galéra et al., 2012; Klein et al., 2012; Kooij et al., 2019; Nigg, 2013). Recent evidence indicates

that health and lifestyle patterns associated with a childhood history of ADHD persisting into adulthood predicts shorter life expectancy (by up to 13 years) on the basis of actuarial calculations of health-related variables measured at 27 years old (Barkley & Fischer, 2019).

There is virtually no area of adult life that is immune to the effects of ADHD. Data on life impairments derived from longitudinal and cross-sectional studies on adult ADHD land it near the top of the list of the most impairing conditions seen in outpatient clinical psychology and psychiatry. It is likely that these life frustrations and disruptions play a formative role in the common maladaptive thoughts and beliefs held by adults with ADHD and other psychological effects.

Psychological Effects of ADHD

A lifetime diagnosis of ADHD has negative effects on sense of identity, satisfaction, perceived life options, and self-esteem (Cook, Knight, Hume, & Qureshi, 2014; Harpin, Mazzone, Raynaud, Kahle, & Hodgkins, 2016; Newark, Elsässer, & Stieglitz, 2016). When recalling childhood and adolescent experiences, adults with ADHD (compared with adults without ADHD) rated themselves as less likely to have engaged in common academic, extracurricular, social, and family activities (Biederman et al., 2006). Among adults with ADHD, 72% reported that their symptoms have had lifelong effects on them and endorsed current work and relationship impairments. Lastly, adults with ADHD were significantly more negative in their outlooks on life and endorsed lower ratings of self-acceptance than adults without ADHD.

A review of studies of self-esteem indicates that this is a significant therapeutic factor for adults with ADHD (Cook et al., 2014). Self-esteem ratings are inversely correlated with symptomatology and, in one study, with overall psychological distress; there were no gender differences or differences by ADHD presentation. Self-esteem may be a mediating factor between ADHD symptoms and functioning in various life domains. It is increasingly clear that ADHD has corrosive effects on functioning and sense of self.

CONCLUSION

The essence of ADHD as a problem of self-regulation, and what is so insidious about its effects, is that it impairs and inhibits self-expression and self-determination by repeatedly punctuating and fracturing an individual's sense of agency—it unduly limits viable options for how adults with ADHD elect to “spend themselves” in their lives. Indeed, although such endeavors can be defined in behavioral, actionable, and achievable terms, the catalytic role of outlooks, thoughts, and beliefs is necessary (but not sufficient) to turn intentions into actions, as argued in the following chapters.

Although ADHD is among the conditions that cause the most impairment, it is among the most treatable. The [next chapter](#) provides a brief review of medication and psychosocial treatments, focused on outcome studies of CBT for adult ADHD. Research on the relevance of cognitive distortions and maladaptive schema in understanding ADHD is also presented.

KEY CLINICAL POINTS

- **The age-of-onset criteria for diagnosing adults with ADHD using the *DSM–5* has been adjusted to 12 years old and the symptom threshold has been adjusted to require five of nine symptoms from either domain; the 18 symptoms themselves are unchanged.**
- **The contemporary view of ADHD is that it is a neurodevelopmental disorder of impaired self-regulation.** The executive function model of ADHD provides a framework for understanding the core difficulties associated with ADHD along with closely aligned models of self-dysregulation (e.g., default mode network), the role of dopamine and reward-deficiency, and findings from genetic and neuroimaging research.
- **Various issues related to the self-dysregulation model of ADHD are consistent with features of a unified theory of**

psychology (Henriques, 2011). Specific facets of this model relate to nonconscious factors that affect behavioral selection, factors that gain and wield social capital, and the role of cognition as self- and other-justification for action or inaction.

- **Rates of childhood ADHD fall at about 5% and rates of adult ADHD at about 4%.** About 66% of children with ADHD continue to exhibit the full diagnosis into adulthood, though those with residual symptoms may still have clinical difficulties. So called late-identified adults who meet current criteria for ADHD are established retrospectively with emergence in childhood but were not diagnosed in childhood.
- **The coexistence of other conditions with ADHD is the rule rather than the exception.** Anxiety, depression, and substance use problems (e.g., nicotine, alcohol, marijuana) are the most common coexisting diagnoses
- **Studies of the impairments associated with a lifetime history of ADHD indicate that they may occur in virtually any category of adult functioning, most notably work, academics, relationships, health and well-being, driving, and financial status, though there are many others.**
- **A lifetime history of ADHD also has potentially negative effects on psychological functioning, including sense of identity, satisfaction (past and present), perceived life options, and self-esteem.**

Clinical Outcome Research for Adult ADHD

Despite the wide-ranging impairments outlined in [Chapter 1](#), adult ADHD is a condition for which there are effective treatments. Cognitive behavior therapy (CBT) is an evidence-supported psychosocial treatment for adult ADHD, often provided in combination with medications. Emerging research has shed light on the bearing of maladaptive cognitions and beliefs for this clinical population.

The goal of this chapter is to summarize the status of clinical outcome research on CBT for adult ADHD. A brief overview of medications for adult ADHD provides basic information on this important, often essential treatment option. This review of CBT also summarizes the extant outcome research and highlights recent novel studies. Finally, current research on cognitions and beliefs and adult ADHD are presented, which will set the stage for discussions of the adapted CBT model for adult ADHD and interventions in the following chapters.

TREATMENTS FOR ADULT ADHD

ADHD has potentially wide-ranging effects on most domains of life. The severity of symptoms and impairments can range from mild and

circumscribed to severe and pervasive with a range of complicating factors. To date, medications and CBT are the two most established treatment options for adults with ADHD. These treatments are reviewed next with summaries of outcome research supporting their efficacy.

Medications

Pharmacotherapy is a first line of treatment for ADHD symptoms across all age groups, most notably the use of stimulant medications (e.g., methylphenidate or amphetamine-based compounds) but also many effective nonstimulant preparations (e.g., atomoxetine, guanfacine, clonidine). The most frequently prescribed and effective class of medications in the treatment of ADHD is psychostimulants. Various reviews of the efficacy and effectiveness of medications for ADHD indicate that stimulant medications (short- and long-acting preparations) achieve large effect sizes (Cortese et al., 2018; Faraone et al., 2015; Kooij et al., 2019; Prince, Wilens, Spencer, & Biederman, 2015). These medications are associated with symptom improvements; methylphenidate for children and adolescents and amphetamines for adults have emerged as the most effective options, respectively (Cortese et al., 2018). Stimulants as a group are generally well-tolerated and safe when taken as prescribed.

There are nonstimulant medications approved for individuals with ADHD, which can be used straightaway as first-line agents when indicated (e.g., cases of past stimulant misuse or abuse) to augment already prescribed stimulants or as backup options in cases when clients do not respond to or cannot tolerate stimulants (Cortese et al., 2018; Prince et al., 2015). These medications, the most noted of which is atomoxetine, have demonstrated moderate effect sizes in reducing core symptoms.

A benefit of stimulants is that when taken as prescribed and active in individuals' systems, clients will experience positive therapeutic effects. A combination of long- and short-acting preparations is sometimes used to extend coverage, as in the case of a college student with ADHD who needs to focus in class during the day and on studying in the evening. A benefit of nonstimulant medications is that they can be taken daily and provide 24-hour symptom coverage.

A range of FDA-approved medications is available for treating symptoms of ADHD and can provide options to clients who do not respond to a particular medication. There are medications that have been found to be helpful in treating adult ADHD but that are FDA-approved for other conditions. For example, bupropion is a viable option in cases of concurrent ADHD and depressed mood. These medications can be prescribed as *off-label* treatments and have often produced positive results in studies of adult ADHD. In cases of increasing clinical complexity, such as coexisting mood and anxiety disorders, multiple medications may be prescribed to address diverse symptom clusters. Adequate treatment of ADHD symptoms often improves concurrent mood and anxiety, as ADHD-related stressors may have triggered these symptoms in the first place.

Despite impressive outcomes and effect sizes, not every adult with ADHD will respond to medications or experience improved functioning with medications alone. Some adults with ADHD experience intolerable side effects, have a partial response with persistent residual symptoms, or might simply not respond to medication. In rare cases, there may be medical conditions, risks, or other factors (e.g., during pregnancy or while breastfeeding) that obviate the use of medications.

Medications are a “broad-band” treatment for ADHD (Faraone & Antshel, 2014), which means they target core symptoms and in doing so also improve functioning as an added benefit. For this reason, medications alone are a sufficiently effective treatment for many adults with ADHD. Medications are not as effective at treating executive function and motivational deficits as they are at treating core symptoms (Biederman et al., 2015). Symptom reduction does not inexorably translate into real-world gains, such as tackling disorganization, procrastination, or managing diverse adult roles (e.g., “the skills are not in the pills”). In fact, adults with ADHD very often will need some sort of adjunctive psychosocial treatment, ADHD coaching, or academic support to address difficulties in specific life domains. The next section reviews the research on CBT for adult ADHD. Other nonpharmacological options for adult ADHD vary in terms of the availability and quality of empirical evidence for their efficacy but that are beyond the focus of this book and have been reviewed elsewhere (see De Crescenzo, Cortese, Adamo, & Janiri, 2017; Faraone & Antshel, 2014; Ramsay, 2010b).

Summary of Cognitive Behavior Therapy for Adult ADHD: Clinical Studies and Manuals

CBT emerged as a logical choice for a psychosocial approach for adult ADHD on the basis of its session structure and emphasis on problem-solving, activity scheduling, graded tasks, and other skills relevant to ADHD (Ramsay, 2010b). An all-too-brief synopsis of CBT as a model of psychotherapy is that it focuses on the interplay of cognitions, behaviors, and emotions in understanding psychiatric disorders, with an emphasis on cognitions (thoughts, images, beliefs) in the change process (A. T. Beck, 1976). It is based on a cognitive model of psychopathology and highlights the role of information processing (e.g., cognitions) on the development and maintenance of psychiatric disorders as well as on other aspects of human functioning (J. S. Beck, 2011; Dobson, Poole, & Beck, 2018). The clinical application of CBT involves helping clients to recognize, evaluate, and modify their existing cognitive and behavioral patterns to promote improved functioning and well-being. [Chapter 3](#) of this book provides a detailed review of the cognitive model and its adaptation to adult ADHD.

Initial psychosocial approaches for adult ADHD were arrived at by independent groups of clinician–researchers. Most, if not all, of these early approaches fell under the umbrella of being CBT-oriented with descriptors like “thoughts–feelings–actions” or “cognitive remediation,” but all were adapted to address ADHD (see Knouse, 2015; Ramsay, 2010b, 2011a; Ramsay & Rostain, 2015b). Clinical outcome studies on CBT for adult ADHD emerged in the late 1990s and early 2000s and have grown exponentially, including recent randomized controlled trials that compared CBT with active treatments (e.g., relaxation training) and with standard community care (e.g., treatment-as-usual [TAU], nonspecialized community counseling).

The research basis of CBT for adult ADHD ranges from open studies to randomized controlled trials (for reviews, see Knouse, 2015; Knouse & Safren, 2010; Manos, 2013; Mongia & Hechtman, 2012; Ramsay, 2010b, 2011a; Ramsay & Rostain, 2015b) and evaluation by meta-analyses (see De Crescenzo et al., 2017; Jensen, Amdisen, Jørgensen, & Arnfred, 2016; Knouse, Teller, & Brooks, 2017; Lopez et al., 2018; López-Pinar, Martínez-Sanchís, Carbonell-Vayá, Fenollar-Cortés, & Sánchez-Meca, 2018;

Moriyama, Polanczyk, Terzi, Faria, & Rohde, 2013). Published case studies provide additional clinical guidance for these approaches (Mitchell, Nelson-Gray, & Anastopoulos, 2008; Puente & Mitchell, 2016; Ramsay, 2011a, 2012, 2016b; Ramsay & Rostain, 2005b, 2008, 2015b; Rosenfield, Ramsay, & Rostain, 2008; Willer, 2017).

Overall, results indicate that (individual and group) CBT is associated with significant improvements on measures of ADHD symptoms and other common features with baseline scores compared with results at end of treatment and at follow-up. The outcome measures are based on self-report, other report (in some studies), and increasingly on blind ratings. Effect sizes generally fall in the moderate to large range (Jensen et al., 2016; Knouse et al., 2017; Lopez et al., 2018; Manos, 2013). Most but not all studies also report improvements on measures of comorbid conditions and other factors (e.g., self-esteem).

A recent critique of outcome studies (Lopez et al., 2018) concluded that there is evidence that CBT for adult ADHD is beneficial in the short term, but the evidence is “low quality.” Of the studies reviewed, clinician-rated and self-reported core symptom improvements ranged in effect size from -0.16 to -1.22 . The relative lack of follow-up data, the heterogeneity of outcome measures, and the restricted geographical location of extant studies are cited as limitations on the generalizability of results. Across reviews and meta-analyses, the stricter the experimental controls (use of blind ratings, active control treatments), the lower the reported effect sizes.

There has been an increase in well-designed randomized controlled studies, including those that compared manualized CBT protocols for ADHD with active control treatments, such as relaxation training (Safren et al., 2010), computerized cognitive training (Virta et al., 2010), supportive group therapy (group validation and psychoeducation; Solanto et al., 2010), and psychoeducation (Vidal et al., 2013). In three of these studies (Safren et al., 2010; Solanto et al., 2010; Virta et al., 2010), treatments for ADHD achieved better outcomes than the active control treatments, though some active control treatments also achieved gains from baseline. The Vidal et al. (2013) study comparing a psychoeducation group and a CBT group for adult ADHD indicated that both produced improvements from baseline but with no difference between groups.

When comparing participants either on or off of prescribed ADHD medications during these trials, there are no significant differences in treatment response on the basis of medication status; it should be cautioned, though, that participants who were not taking medications likely had milder, more circumscribed symptoms and impairments. Practicing therapists will often be asked by clients whether they should try medications first, CBT first, or both. There may be logistical factors behind clients' inquiries such as whether therapists accept insurance and the availability of nearby therapists able and willing to treat ADHD. The case for concurrent CBT and pharmacotherapy with research supporting this view is presented below. However, such questions may reflect lack of knowledge about options or ambivalence or reticence for some clients. Psychoeducation about different approaches and addressing misgivings can help clients make informed decisions. Therapists can emphasize that it is not a one-off, irrevocable treatment decision. If someone starts with medications but finds more help is needed to address functioning, an adjunctive treatment can be added and vice versa. Some recent studies have prospectively examined response to CBT by adults with ADHD either on or off medications.

Philipsen and colleagues (2015) conducted the largest ever treatment study of adult ADHD. This multisite study compared 1 year of concurrent psychosocial and medication treatments for ADHD with the specialized treatment for ADHD being group dialectical behavior therapy (DBT; Linehan, 1993) adapted for adult ADHD (Hesslinger, Philipsen, & Richter, 2004). A sample of 419 German adults with ADHD were randomly assigned to either methylphenidate or placebo within the medication arm of the study; and to either specialized group DBT or individual clinical management within the psychosocial arm. Psychosocial treatment consisted of 12 weekly sessions, then monthly follow-up visits.

After 3 months of treatment and at the 1-year endpoint, medication outperformed placebo, and surprisingly, there were no differences between group DBT and individual clinical management, which both achieved better outcomes when combined with medications (versus placebo). These findings recall those obtained in the MTA study of 579 children with ADHD (7–9.9 years old) randomized to behavior therapy, medications, or combined treatment (MTA Cooperative Group, 1999), in which medications alone and

combined treatment achieved the best outcomes (although ongoing follow-up analyses provided more clinically nuanced results).

More recently, Groß and colleagues (2019) compared participant self-ratings on the benefits of the respective psychosocial treatments within the larger study reviewed above (Philipsen et al., 2015). Significantly, though moderately more participants rated the DBT group as more helpful than individual clinical management at the end of treatment. At 6-month follow-up, this difference only emerged for those on placebo who received either of the psychosocial treatments; there was no difference between DBT+placebo and individual clinical management+stimulant with DBT group therapists rated as the most helpful treatment component.

A conjecture about the surprising results in the larger study is that although group DBT was tailored to adult ADHD and had achieved positive results in previous studies, the control TAU was individual- rather than group-administered. The personalization of individual treatment, even if not specialized, may provide some differential benefit, though this is speculation.

A randomized controlled study (Cherkasova et al., 2016) of adults with ADHD compared those who completed a 12-session course of CBT while either on an established medication regimen for ADHD or unmedicated. The CBT+medication group achieved significantly better outcomes at the end of treatment than the CBT-only group. However, the CBT-only group showed continued gains at posttreatment follow-up assessments whereas the CBT+medication group's gains were maintained. The CBT-only group "caught up" by the 3- and 6-month follow-up, at which times were no significant group differences in outcomes.

Another novel study examined 10 adults with ADHD who completed a 12-session course of manualized CBT (Safren, Perlman, et al., 2005) compared with 12 matched, healthy control participants on resting-state functional magnetic resonance imaging (r-fMRI) scans at pre- and posttreatment (Wang et al., 2016). In addition to the predicted improvements achieved by adults with ADHD on an ADHD symptom measure, there was a post-CBT increase on the functional connectivity strength in the frontoparietal network and cerebellar regions as measured by r-fMRI. These brain regions are the same in which effects occur in studies of ADHD medications, suggesting a common brain mechanism, though not reaching a

point of normalization in this study (Q. Cao, personal communication, October 6, 2018).

Some CBT approaches, although consisting of the same intervention domains and coping skills as modularized approaches, adapt a case conceptualization or problem-focused approach, and tailor strategies to the presentation of each client (Ramsay & Rostain, 2011; Rostain & Ramsay, 2006; Weiss et al., 2012). A recent randomized study compared such an approach for adult ADHD with TAU (Dittner, Hodsoll, Rimes, Russell, & Chalder, 2018). Results indicated that the conceptualization approach achieved significantly greater improvements than TAU, with strong effect sizes on symptom, functioning, and secondary symptom measures.

Results from clinical outcome studies have produced mostly moderate-to-strong effect sizes, which places CBT for adult ADHD alongside medications as an evidence-supported treatment for adult ADHD. CBT for adult ADHD is considered to have “strong” research support as set out by the Society of Clinical Psychology (Division 12 of the American Psychological Association; Emilsson et al., 2011; Safren, Otto, et al., 2005; Safren et al., 2010; Solanto et al., 2010). Whereas medications are a broad-band treatment for ADHD, CBT is a “narrow band” treatment (Faraone & Antshel, 2014) that targets a specific subset of symptoms, behaviors, or impairments.

There are several manualized, English-language CBT programs for adult ADHD to guide practicing clinicians, including a few with companion client workbooks or materials (see Ramsay & Rostain, 2015a, 2015b; Safren, Sprich, Perlman, & Otto, 2017a, 2017b; Solanto, 2011; S. Young & Bramham, 2012). Manualized approaches also are available in German, Swedish, and Finnish (Hesslinger et al., 2004, 2010; Hirvikoski, Waaler, Carlsson, Helldén, & Lindström, 2013a, 2013b; Leskelä et al., 2007; Virta et al., 2009). All of them have been the subject of some degree of outcome research.

To date, outcome studies have been based on treatment packages. There have been reviews of proposed mechanisms of action and essential therapeutic components of these packages (Knouse, 2015; Knouse & Safren, 2010; Ramsay, 2010a) and potential side effects (Knouse & Ramsay, 2018); dismantling studies of these mechanisms or identifying empirically supported principles of change (Rosen & Davison, 2003) have not yet been conducted. There is a consensus for the requisite coping skills for managing ADHD and

its features: time management skills, use of a daily planner, organizational skills, strategies for breaking down tasks, dealing with procrastination, self-esteem, stress and emotions, and psychoeducation about the effects of ADHD.

A point of discussion has been the relative bearing of cognitive interventions within CBT for adult ADHD. It is the consistent use of the essential coping skills that is deemed the key mechanism of change in CBT for adult ADHD (Knouse, 2015; Knouse & Safren, 2010). This behavioral focus rightly targets the areas of impairment for which individuals seek treatment. Maladaptive thinking does not play a causal role in the ADHD syndrome and its characteristic symptoms and self-regulation deficits.

Seeing ADHD as a performance or implementation problem (Ramsay & Rostain, 2016a), it makes sense that the central emphasis in CBT is on the use of the prescribed coping strategies in real-world roles and settings. Used consistently, these strategies will lead to improved functioning and well-being, which is the ultimate target and measure of its effectiveness. Thus, in terms of the relative ratio of constituent interventions in its moniker, CBT for adult ADHD could be represented by a lowercase *c* and an uppercase *B* (Ramsay, 2017b; Ramsay & Rostain, 2016a).

Emerging research reveals a somewhat different, though still important role cognitions play in adult ADHD when compared with more traditional disorders targeted by CBT. This research may shed new light on ways that CBT must be adapted to the unique needs of adults with ADHD.

RESEARCH RELEVANT TO THE COGNITIVE BEHAVIOR THERAPY MODEL OF ADULT ADHD

The studies reviewed next provide a justification for the continued use of an uppercase *C* in CBT for adult ADHD and the role of cognition in the functioning of adults with ADHD. Collectively, these studies illustrate the mediating role of cognitions in the life problems faced by adults with ADHD and how these mind-sets interfere with coping, which dictates cognitive interventions adapted to this clinical group.

Negative Thinking in Childhood and Adolescent ADHD

The psychosocial treatments for ADHD in children and teenagers are mostly behavioral, focused on parent- and teacher-training, school-home communication, and modifying the environment. Upward extensions of childhood treatments for ADHD in teenagers generally have not been found to be effective, though there are novel programs for middle- and high-school students with ADHD (Langberg et al., 2018; Sibley et al., 2014); downward extensions of CBT for adult ADHD adapted for use with teenagers have yielded initial positive results (Antshel & Olszewski, 2014; Sprich, Burbridge, Lerner, & Safren, 2015). There are studies of negative thinking in children and adolescents with ADHD that are relevant to adults.

A prospective study comparing children with ADHD on a measure of negative thoughts found that children with the combined presentation endorsed more themes of failure and hostile intent than those with the inattentive presentation (Castagna, Calamia, & Davis III, 2017). The findings were moderated by anxiety, as children with the combined presentation and anxiety endorsed the highest level of negative thoughts.

Most individuals with ADHD struggle at work, so the vocational identities of high school students with ADHD were examined, including a measure of career thoughts and attitudes (Dipeolu, Sniatecki, Storlie, & Hargrave, 2013). Students with ADHD endorsed higher dysfunctional attitudes and lower career readiness, which predicted their significantly below average vocational identities compared with scale norms.

Retrospective accounts of childhood and adolescent experiences were obtained in a telephone survey of adults endorsing ADHD and compared with those of adults without ADHD (Biederman et al., 2006). When rating their current outlooks, adults with ADHD endorsed significantly lower levels of self-acceptance, were less likely to describe their futures as *bright*, and were more likely to endorse angry, negative thoughts; dysphoria; impulsivity; and social mistakes.

When recalling their experiences as school-age children, the adult ADHD group reported significantly fewer educational/cultural activities outside of school, less connection with the community, fewer hobbies or extracurricular activities, and less free time spent with family and friends. Their responses indicated a lowered sense of preparedness for adult life and that their

developmental experiences were worse than their peers' experiences, which were endorsed as having continued negative effects on their outlooks.

With ongoing cognitive development, children start to make sense of the world and their personalized rules for navigating through it. These outlooks consolidate during adolescence and have greater influence on their reciprocal exchanges with various settings, people, and roles they assume. The next section reviews the studies on cognitions in adults with ADHD.

Studies on Cognitive Distortions and Adult ADHD

Only recently have investigators specifically targeted cognitive distortions and maladaptive beliefs in adults with ADHD. Negative attitudes and beliefs could be discerned from previous longitudinal and outcome studies that included various measures of self-perception and self-esteem. However, dysfunctional thoughts and beliefs in adults with ADHD have been the chief focus of recent studies.

Measures of dysfunctional beliefs and coping style were collected from a sample of adults with ADHD to assess the relative contribution of cognitions and behavioral coping style to coexisting depressed mood (Knouse, Zvorsky, & Safren, 2013). Dysfunctional attitudes and cognitive-behavioral avoidance were each found to make a unique and overlapping contribution to depression. Negative thoughts and avoidance in adults with ADHD partially mediated each other for the number of depressive symptoms endorsed and full depression diagnoses.

These findings are consistent with clinically derived conceptualizations of adult ADHD and negative outlooks as cognitive behavioral factors create a vicious cycle (Knouse et al., 2013). The experience of living with ADHD increases the likelihood that adults with this condition will face more failure experiences than adults without the condition; in turn, these failure experiences engender negative schemas (or patterns of thought) and create an expectation of failure that promotes preemptive avoidance of endeavors seen as risks for failure. This avoidance interferes with various life pursuits and creates more disappointments, which reinforces failure schemas; it is an insidious, cyclical pattern worsened by depressive symptoms.

A separate study examined the interaction of cognitive, behavioral, and emotional factors in coping styles in adults with ADHD (Torrente et al., 2014). These adults were compared with clinical (but non-ADHD) and nonclinical control participants on measures of ADHD symptoms, dysfunctional thoughts, mood and anxiety, and life impairment. The adult ADHD group endorsed higher ratings of dysfunctional thoughts than did the nonclinical group and were on par with ratings by the clinical group, suggesting that dysfunctional cognitions are relevant in adult ADHD and commensurate with the degree seen in other diagnoses. Dysfunctional thoughts were strongly associated with emotionality for adults with ADHD. The combination of ADHD symptoms, dysfunctional thoughts, and emotionality predicted life impairments.

Considering the high coexistence rates of adult ADHD, depression, and anxiety (including subthreshold presentations), and the role of emotional dyscontrol as an aspect of ADHD (Barkley, 2015b), therapists specializing in adult ADHD consider these studies to support the CBT model (e.g., the interaction of ADHD and its role in life frustrations, subsequent outlooks, the need for adapted cognitive interventions in treatment). A case could be made, though, that the dysfunctional cognitions in these studies result from coexisting mood and anxiety issues and are not specific to ADHD. To address this point, studies have examined cognitions in adults with ADHD with and without coexisting mood and anxiety factors or when controlling for these factors.

Young adults with ADHD but without comorbidities were compared with nonclinical control participants on a measure of distressing thoughts (Abramovitch & Schweiger, 2009). The ADHD group endorsed significantly higher ratings on measures of intrusive and worrisome thoughts when compared with the control group. The two most discriminating factors between the groups were the frequency of worrisome thoughts and removal difficulty. Young adults with ADHD in this sample exhibited difficulties inhibiting intrusive thoughts and had more difficulties refocusing on more adaptive thoughts—their negative thoughts were more virulent, taking hold more readily, and were tougher to modify, or “stickier,” once taking root.

Another study involved two groups of adults diagnosed with ADHD (a group with comorbid depression and a group without depression) and a nonclinical control group (Mitchell, Benson, Knouse, Kimbrel, &

Anastopoulos, 2013). The three groups were compared on measures of negative thinking. Unsurprisingly, the ADHD+depression group endorsed the highest level of negative thinking; the results were significantly higher than either of the other two groups. However, the adult ADHD without depression group endorsed significantly higher levels of negative thinking than the nonclinical control group. This result provides initial evidence of the presence and relevance of distorted thoughts in cases of a primary diagnosis of ADHD, at least without depression.

Similarly, a chart review study was conducted on a sample of clinic-referred adults with ADHD who completed measures of ADHD symptoms, depression, anxiety, and cognitive distortions in the evaluation process (Strohmeier, Rosenfield, DiTomasso, & Ramsay, 2016). There was a statistically significant positive, low correlation of cognitive distortions and ADHD symptoms when controlling for mood and anxiety, providing further evidence of a direct connection of ADHD and negative thoughts.

However, the connection of ADHD, impairments, comorbidities, and negative thinking is a complex one. A similar chart review study of these factors in a sample of adults with ADHD (Serine et al., 2019) indicated that ADHD was highly and positively associated with depression ratings and the Big Five personality factor of neuroticism and negatively associated with the Big Five personality factor of conscientiousness, which is consistent with previous research on ADHD and personality (see Ramsay, Rosenfield, & Harris, 2011, for a review). Anxiety was not significant, which is inconsistent with past research. However, anxiety was measured by the Beck Anxiety Inventory (A. T. Beck & Steer, 1990), which includes many somatic symptoms and may underestimate the degree of worry and apprehension. Depression and neuroticism were the factors most predictive of cognitive distortions, which is consistent with findings in non-ADHD clinical populations.

Although comorbidities emerged as the seeming culprit for cognitive distortions, comorbidities are not necessarily distinct from the unique aspects of ADHD. Instead, the conceptual pathway outlined in CBT models of adult ADHD is that this group is vulnerable to persistent distress and impairment from the core features of ADHD. This distress and impairment dispose them to failure experiences and related cognitive-behavioral avoidance that coalesce into negative attitudes and beliefs, which further magnify

impairments via increased disengagement. These factors recursively magnify and are magnified by one another (Knouse et al., 2013; Ramsay & Rostain, 2015b; Safren et al., 2017b; Solanto, 2011; S. Young & Bramham, 2012).

Results from a longitudinal study of college students with ADHD who were tracked for an academic year provided support for such ADHD-mediated pathways (Eddy et al., 2015). The findings indicated that negative self-concept and depression fully mediated the association between past academic functioning and self-report of overall functioning at follow-up. Negative self-concept was an important precursor to depression, which itself originated from the experience of living with ADHD. What is more, in a separate study, adults who have extensive treatment histories for ADHD endorse lower levels of ruminative thinking patterns and report less cognitive-behavioral avoidance. This less ruminative, less avoidant group was more resilient to an ADHD+depression comorbidity than adults with ADHD without these protective factors (Oddo, Knouse, Surman, & Safren, 2018).

This section has been dominated by “negative” terminology of dysfunctional and maladaptive thoughts, which connotes a view of negativity and undue pessimism. Such language plays a specific conceptual role in understanding and communicating constructs. However, it should be noted that positive thoughts can also be distorted, maladaptive, and unhelpful (e.g., gamblers who ignore the laws of statistical probability).

The ADHD Cognitions Scale (ACS; Knouse, Mitchell, Kimbrel, & Anastopoulos, 2019) is a seven-item, self-report scale scored on a 5-point Likert scale that focuses on “incautious optimism” (Knouse & Mitchell, 2015) or maladaptive positive thinking that gives rise to avoidance. The ACS exhibited good reliability, factor structure, and validity across two community samples. Inventories used to measure cognitions in the studies reviewed thus far used conventional measures of maladaptive thoughts that may not capture the unique thought processes of adults with ADHD. Thus, the ACS makes a unique and important contribution to the study and assessment of cognitions in adult ADHD. The incautiously optimistic, positive thoughts that compose the ACS are highly correlated with measures of negative thoughts, which show that the central idea for cognitive interventions is to foster adaptive, flexible thinking.

Although not a traditional study of cognitions, Guntuku, Ramsay, Merchant, and Ungar (2019) examined social media posts on Twitter by 1,399 adults who self-identified with ADHD. When compared with posts by matched control participants, tweets by the adults with ADHD indicated personality factors that were significantly more open and less agreeable. Linguistic analysis of word use in tweets by adults with ADHD indicated significantly more negation, hedging-uncertainty, intention-failure themes, and lower self-efficacy. Thematic analysis showed more prominent themes of emotionality; self-criticism; substance use; and mental, physical, and emotional exhaustion. Although not capturing distortions per se, the results provide accounts of life with ADHD and cognitive themes.

A component of the traditional CBT model is the connection of distorted automatic thoughts with underlying maladaptive schemas and core beliefs. Recent preliminary research has started to uncover the relevance of these deeper cognitive domains and themes in the experience of adults with ADHD.

Studies on Early Maladaptive Schemas and Adult ADHD

Recent studies have examined maladaptive schemas suspected to arise from the common, long-standing difficulties faced by clinic-referred adults with ADHD. Covered in detail in [Chapter 3](#), schemas represent mental categories for assessing, interpreting, and consequently storing information from experience for future use. This is an adaptive capacity, though developmental stressors may result in beliefs that are maladaptive (unhelpful, distorted, or inflexible outlooks; J. E. Young, 1999).

Miklósi, Máté, Somogyi, and Szabó (2016) administered a screening measure for adult ADHD to a nonclinical group of adults. Of this sample, 7.4% screened positive for ADHD (approximating established prevalence rates); the remainder of the sample served as the control group. All participants completed the Young Schema Questionnaire (J. E. Young, 1999), a measure of early maladaptive schemas (EMS). A clinically derived subset of schemas was selected for the study: social isolation, defectiveness/shame, failure, and insufficient self-control/self-discipline. Measures of perceived stress and emotional well-being were also obtained.

The participants with ADHD endorsed significantly higher ratings on all four schema categories and total EMS score, with moderate effect sizes for each category and a large effect size for total EMS. More ADHD symptoms, even in this nonclinical screening sample, were associated with higher levels of perceived stress and lower levels of emotional well-being. There were two identified pathways linking ADHD symptoms and emotional well-being: (a) severity of ADHD symptoms was associated with more stress leading to reduced well-being and (b) a strong association of the severity of ADHD symptoms and EMS resulted in higher perceived stress.

Philipsen et al. (2017) used the Young Schema Questionnaire in a clinical sample of adults with ADHD whose diagnosis had been established by thorough evaluations. The ADHD group was compared with a non-ADHD control group. Most participants in the ADHD group (89.7%) had at least one coexisting psychiatric diagnosis. The ADHD group had significantly higher mean scores on 18 of 19 schema domains. Large effects sizes were obtained for the following EMS (in descending order): failure, defectiveness/shame, emotional deprivation, subjugation, mistrust/abuse, negativity, and dependence/incompetence. These results were deemed consistent with the low self-esteem and feelings of shame commonly observed in clinic-referred adults with ADHD, which suggest that such schemas are an important aspect of psychosocial treatment for adult ADHD (Lücke, Lam, Müller, & Philipsen, 2017).

The issue likely driving these schemas and other maladaptive cognitions is that adults with ADHD have repeatedly experienced a frustrated sense of cause-and-effect because of punctuated follow-through on valued endeavors. The core features of ADHD play a direct and causal role in various setbacks and “failures” that thereby manifest in the form of self-doubts, maladaptive schemas, and other negative thoughts that magnify (and are magnified by) existing self-regulation deficits inherent in ADHD.

An early trade book on adult ADHD was titled *You Mean I’m Not Lazy, Stupid, or Crazy?* (Kelly & Ramundo, 1993). The reason this title resonates with readers is that it captures the self-attributions of so many adults with ADHD. The self-reproaching, trait-based view in the title mimics the conclusion arrived at by many adults with ADHD in the wake of innumerable, confounding setbacks in the pursuit of viable goals—“I’m the common factor; I’m the problem.”

In fact, an accurate diagnosis is the first cognitive intervention in CBT for adult ADHD because it provides a new frame for understanding the problems that had previously been moral failings (Ramsay & Rostain, 2015b). This cognitive shift also provides genuine hope for change. However, ADHD is not a knowledge deficit, and simply knowing what to do to change is not enough. Cognitive change in a broad sense is an essential go-between in the process of transforming behavior goals into behavior change, turning intentions into actions, and implementing the coping skills for managing adult ADHD.

CONCLUSION

This chapter provided a synopsis of the current state of clinical outcome research for adult ADHD, including CBT, and its standing as an evidence-supported psychosocial treatment for adults with ADHD. Recent research has examined with greater specificity the role of maladaptive thoughts and schemas, providing support for the existing CBT for adult ADHD approach. The [next chapter](#) will review the current CBT model for adult ADHD. This model is compared with the CBT case conceptualization, which also serves as a synopsis of the generic CBT model for psychopathology. The emphasis is on how the model has been adapted to the needs of adults with ADHD, including a proposed central cognitive theme for adult ADHD.

KEY CLINICAL POINTS

- **Medications are an effective, evidence-supported treatment for individuals with ADHD of all ages.** Psychostimulants are the most effective, with amphetamine-based compounds most effective for adults. Medications are a broad-band treatment, meaning that they target symptoms and improve functioning, though many adults with ADHD may have functional difficulties despite symptom improvements.

- **There are a growing number of clinical outcome studies of CBT for adult ADHD, including increasingly rigorous designs.** As a group, these studies have indicated positive outcomes with moderate-to-strong effect sizes.
- **CBT is a narrow-band treatment that targets impairments by fostering the consistent use of self-regulatory coping skills.**
- **Recent research into maladaptive cognitions and schemas has provided support for the cognitive domain of adult ADHD.** There is evidence of negative thinking in children, high school students, and retrospective accounts of adults with ADHD of lower self-acceptance and more negative outlooks about their future.
- **Studies of adults with ADHD indicate that they endorse more cognitive distortions than control participants in cases of comorbid depression, uncomplicated ADHD, and when controlling for comorbidities.** There is also evidence that adults with ADHD endorse more maladaptive schema domains and at a greater severity level.

Cognitive Behavior Therapy

Model of Adult ADHD

This chapter presents a cognitive behavior therapy (CBT) model adapted to adult attention-deficit/hyperactivity disorder (ADHD), including a proposed central cognitive theme derived from this model. This theoretical review takes the research on maladaptive cognitions and schemas (discussed in [Chapter 2](#)) and the contemporary view of ADHD as a neurodevelopmental disorder of impaired self-regulation (discussed in [Chapter 1](#)) and integrates them using the CBT model for conceptualization and psychosocial treatment of adults with ADHD. Adaptations of the basic model are necessary to meet the needs of clinic-referred adults with ADHD, which are important for the clinical interventions that comprise the remaining chapters of this book.

This chapter starts with the introduction of the CBT case conceptualization, which represents a clinically geared synopsis of the fundamental elements of the basic CBT model (J. S. Beck, 2011; Dobson, Poole, & Beck, 2018). The conceptualization provides a blueprint for understanding clients' presenting difficulties and a corresponding guide for change. This review sets the stage for a narrowed focus on the generic cognitive model (GCM) of psychopathology, which emphasizes the cognitive domain (i.e., the C in CBT). The review targets the elements of the GCM most relevant to adult ADHD as they require some customization to better fit

the unique features of ADHD. A proposed CBT model for adult ADHD is then discussed, including the basic premises about ADHD in adults on which this model is based and the premises of the CBT approach for adult ADHD that guides interventions outlined in the remaining chapters of this book.

COGNITIVE BEHAVIOR THERAPY CASE CONCEPTUALIZATION

The CBT case conceptualization is a framework used to organize and understand the difficulties for which clients seek help (J. S. Beck, 2011; Dobson et al., 2018). It includes developmental experiences and how these influence cognitions, emotions, and behaviors associated with existing problems. This conceptual scaffold helps clinicians to think like a CBT therapist (Wenzel, 2019) and assimilate and make sense of new information, including the effects of past experiences.

Key developmental experiences are important because these life events and lessons are the raw materials from which people make sense of their world and form the rules, schemas, and beliefs needed to navigate it. These developmental experiences can run the gamut from powerful, stand-alone events to protracted ones and from healthy, positive events to those with adverse, traumatic effects. It is how these events are viewed, felt, and encoded in a client's meaning-making system that is relevant to CBT.

Developmental experiences, particularly those childhood events that are associated with strong emotions, form deep, visceral beliefs and rules about how the world is constructed, which color the lenses through which an individual sees the world. These deep beliefs are defined as the schemas and core beliefs. Although often used interchangeably, *schemas* are mental structures or categories for assessing, interpreting, and storing information from past experiences for future use (Dobson et al., 2018). This meaning-making propensity is adaptive because it allows experiences to be catalogued for future use rather than relying on trial-and-error learning. Schemas that are adaptive in one context can be maladaptive in others. It is this dissonance that leads to functional difficulties and distress. *Core beliefs* are the personalized expressions of generic schemas that form an individual's personal rules for life. These nonconscious beliefs, rules, and

schemas are often revealed from clients' descriptions of thoughts that seem to cluster around recurring themes (Wenzel, 2019).

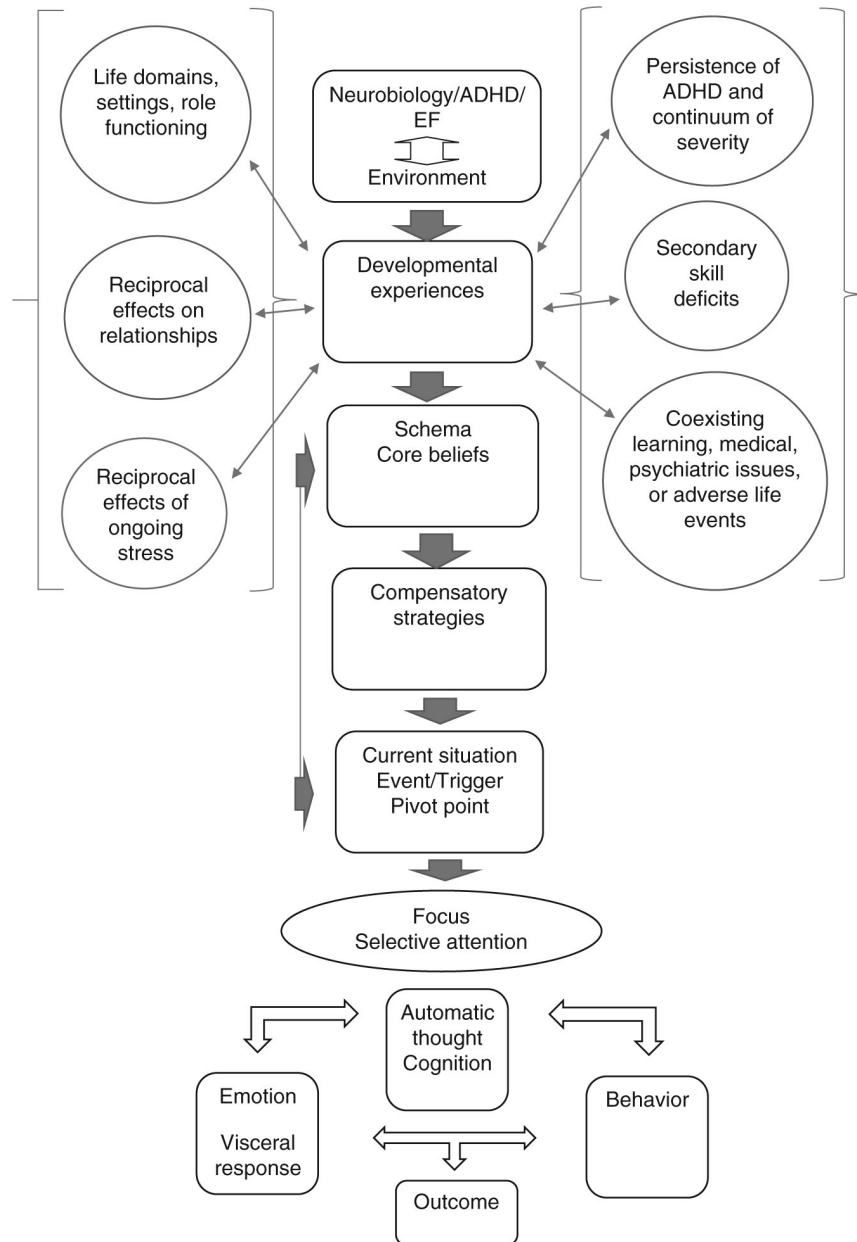
Ultimately, these schemas and core beliefs guide an individual's outlook on and functioning in various roles, situations, and relationships across time and settings. There are many adaptive and helpful beliefs that promote good functioning and healthy responses to situations. Maladaptive schemas and core beliefs, on the other hand, engender compensatory strategies, a key behavioral component of the CBT conceptualization. *Compensatory strategies* are schema-influenced reactions that seem adaptive but which maintain maladaptive beliefs. They can also be thought of as self-defeating or self-handicapping behaviors, although when viewed through a conceptualization of the operative belief system (and their function in the environment in which they developed), they often make sense.

Consider a client whose personal history is rife with abuse by a relative, which has resulted in a mistrust schema and belief that "those who say they care for you the most will hurt you the most." In the abusive environment in which this schema developed, it was an adaptive survival strategy. Years later, however, it becomes maladaptive when in a healthy dating relationship, the client overreacts to a trivial dating snafu by threatening a break-up. This compensatory reaction makes sense on the basis of the client's history and the activated schema (and strong affect) of the core mistrust of others, especially in intimate relationships. Failure and defectiveness/shame are the two most common schemas endorsed in preliminary studies of adults with ADHD (Miklósi, Máté, Somogyi, & Szabó, 2016; Philipsen et al., 2017). The failure schema represents the belief that an individual has not achieved as much or performed as well as peers or otherwise met expectations, which can leave the individual feeling inept. The defectiveness/shame schema can be viewed as a personalization of failure (i.e., the sense of being basically flawed as a person). Avoidance and disengagement are the most common compensatory strategies in adults with ADHD stemming from studies on negative thoughts (see [Chapter 2](#), this volume).

CBT is a here-and-now therapy because it emphasizes distress relief by targeting immediately relevant life problems. It does not ignore the role of personal histories, but emphasizes how their conceptualization informs treatment to enhance a client's current and future coping and well-being.

A focus on managing specific problematic events and situations tied to therapy goals is central to CBT sessions, particularly for adults with ADHD. Schemas and core beliefs (including those shaped by living with ADHD) set the stage for a client's reactions to and interpretations of the events in their day-to-day life, in either adaptive or maladaptive ways. Consequently, it is the reviews of such reactions that elicit negative automatic thoughts (Dobson et al., 2018). *Automatic thoughts* are the quick interpretations of events interposed between an event and a reaction. Most events in life elicit thoughts that are neutral and fleeting, if not positive. Understanding that these automatic thoughts can be distorted or otherwise unhelpful provides a means to consider other ways to make sense of problematic situations, including those that require behavior change to effectively manage (e.g., using coping strategies for ADHD). Adaptively modified thoughts have effects on the chain of other thoughts, emotions, behaviors, and physical reactions (and changes in any of these domains reciprocally help modify thoughts). [Figure 3.1](#) depicts a case conceptualization diagram with modifications to highlight issues particularly relevant for adults with ADHD.

FIGURE 3.1. Case Conceptualization Diagram Modified for Adult Attention-Deficit/Hyperactivity Disorder (ADHD)



EF = executive function.

ADHD does not result from maladaptive cognitions, but life with ADHD and experiences colored by its related frustrations and impairments can result in such maladaptive thoughts and schemas (see [Chapter 2](#), this

volume). Many aspects of the behavioral domain of CBT have been adapted to address the characteristic executive function (EF) deficits seen in adults with ADHD. The cognitive domain plays a crucial mediating role in fostering the implementation of these essential behavioral coping strategies.

The role of cognitions in treating adult ADHD requires adapting the CBT model, and more specifically, thinking differently about cognitions. The next section focuses on the cognitive domain and reviews the updated cognitive model of psychopathology. Points of convergence and divergence of this model with issues most relevant to adults with ADHD are highlighted, which is necessary for the consideration of an adapted model for adult ADHD.

THE GENERIC COGNITIVE MODEL AND ITS RELEVANCE FOR ADULT ADHD

Although earlier accounts of the cognitive model did not claim that distorted cognitions played a causal role in depression or other emotional conditions, it was implied (see A. T. Beck, 1967/1972). While still emphasizing a central role of information processing on clinical conditions, A. T. Beck and colleagues have recently updated the GCM and how it continues to adapt to new insights about various conditions, most notably but not limited to depression and anxiety (A. T. Beck & Bredemeier, 2016; A. T. Beck & Haigh, 2014; Clark & Beck, 2010). These fine tunings reflect the GCM's ongoing assimilation of and accommodation to scientific findings and other complexities involved in understanding and treating psychiatric disorders and other forms of human distress and functioning. These developments include conditions that several years ago would have seemed unsuited for treatment with CBT.

The GCM evolved from an initial model for depression (A. T. Beck, 1967/1972) in which cognitions play a central role with downstream effects on the emotional and behavioral aspects of depressive syndromes. This model was expanded to account for the array of emotional disorders, which are distinguished by distinctive cognitive themes (A. T. Beck, 1976), and to inform interventions for depression and anxiety disorders (A. T. Beck & Bredemeier, 2016; A. T. Beck & Haigh, 2014; Clark & Beck, 2010).

At its core, the applied GCM asserts that psychopathology is set off and maintained when schema-activated factors (e.g., maladaptive beliefs, selective focus, maladaptive behavior) are triggered by stimuli and interact (A. T. Beck & Haigh, 2014). Once triggered, the schemas sway subsequent information processing; the analogy of colored lenses is often used to illustrate this effect. Schema activation has cascading effects on subsequent cognitions, selective (biased) attention/focus, behaviors, and emotions (see [Figure 3.1](#)). Triggers may be internal or external. Moreover, these schema-activated factors may generalize to other situations that are similar to the original triggering events.

A central concept in the GCM is that of schemas and how they influence the assimilation of new information (i.e., learning). Maladaptive schemas run the risk of being either too rigid and fixed or too permeable, both of which result in a disorganized, volatile meaning-making system. In terms of schema accommodation (i.e., the capacity of schemas to be modified), schemas that are repeatedly activated tend to be less open to change. In fact, the prospect and pressure of change triggers schema activation, at which time the schema becomes energized and dominates information processing, bringing about psychological distress, effectively “hijacking” functioning. Adaptively modified schemas, on the other hand, can deactivate or override dysfunctional schemas.

Consider the analogy of the software on a computer that requires updating. Activated maladaptive schemas are like the current programs running on a computer that must be closed before updates can be installed. Helping clients reprocess emotional experiences (e.g., close open programs) and modify schemas (or at least notice, accept, and work around them) is an essential part of the change process (e.g., updates). In the case of adult ADHD, managing emotional dyscontrol and escape–avoidance is essential for coping with EF deficits and targeting schema activation that may interfere with these steps.

Several elements of the updated GCM are relevant to adult ADHD and pertain to the role of cognitions: information processing biases, different types of information processing, and the role of attentional focus and goal-oriented behavior.

Information Processing Biases

The updated GCM (A. T. Beck & Haigh, 2014) continues to treat differences between adaptive and maladaptive states as linked to information processing with little concern about direction (e.g., whether depression causes distorted thoughts or vice versa). Emotional disorders are accompanied by cognitive biases, either negative (perceived misfortune or loss in depression) or positive (potential reward from expansive action in mania), falling on a continuum from adaptive to maladaptive. The capacity to feel sadness is adaptive with survival benefits in certain settings (e.g., a grief reaction), but when taken to an extreme (e.g., hopelessness, suicide risk), it is tantamount to an impairing mood disorder (A. T. Beck & Bredemeier, 2016). These distinctive biases reflect the cognitive specificity of disorders, the predominant themes of thoughts that differentiate disorders from one another.

At an information processing level, a case could be made that adults with ADHD accurately perceive difficulties and setbacks from their EF deficits and other symptoms. The chronic delay in EFs to some degree creates a different baseline of functioning. Clients with ADHD are comparatively late in their development of EFs and self-control. This *consistent inconsistency* establishes a baseline of functioning that makes ADHD a vexing condition. Many adults with ADHD have self-judgments about what they “should” be doing (e.g., life choices or day-to-day coping based on comparisons with adults without ADHD or societal standards). These are commonsense benchmarks, but adults with ADHD see them as markers of failure if they are poor fits, and they can create letdowns.

The notion that there is a degree of accurate perception of difficulties inherent in managing ADHD should not be read as implying that the information processing assumption is not relevant. Rather, in the case of adult ADHD there are maladaptive negative thoughts that interfere with modifying and implementing coping strategies, as well as maladaptive positive thoughts that promote avoidance or poor decision making (underlying apparent risky choices; Dekkers et al., 2018). Managing ADHD requires an adjustment of a client’s mind-set as managing EF deficits require different coping skills and different ways of using them. In fact, because it is a neurodevelopmental syndrome cutting across most life domains and roles, the information

processing difficulties for adults with ADHD may be more wide-ranging when compared with other conditions.

Types of Information Processing

Within the GCM, a distinction is made between automatic and reflective information processing. The former represents in-the-moment reactions to events that require quick categorization, a response that is prone to distortion; the latter style is more deliberative and more taxing in terms of its cognitive load when sorting out the nuanced factors relevant to an event. This distinction is consistent with the dual processes of a reactive, reflexive, and nonconscious rapid response and a separate, deliberative, and effortful metacognitive analysis and synthesis of events—the respective fast and slow thinking modes (Kahneman, 2011).

In terms of adult ADHD, this distinction parallels but overlaps with the bifurcation of the EFs into hot and cool groupings (Barkley, 2012; Peterson & Welsh, 2014; Tsermentseli & Poland, 2016). *Hot EFs* refer to the skills to manage events that need an immediate response, which draw on capacities for impulse control, emotion regulation, and motivation to quickly initiate or inhibit a course of action. *Cool EFs*, on the other hand, refer to planning, time management, and other metacognitive skills with which to handle problems and coordinate goal-directed actions over time.

The fast–slow information processing domains in the GCM overlap with the hot–cool EFs for adults with ADHD. EF deficits create the downstream life impairments, which are the events and targets for psychosocial treatment. When information processing is affected by cognitive distortions, these negative thoughts (and corresponding emotions) often worsen EF deficits or at least interfere with coping efforts, including therapeutic strategies. Thus, these overlapping deficits may trigger and be triggered by one another.

The interaction of information processing and EF difficulties plays a significant role in the maintenance of impairments and their moderation. For example, adults with ADHD have problems inhibiting worrisome thoughts and refocusing on more adaptive thoughts (Abramovitch & Schweiger, 2009); they have trouble handling “hot” intrusive thoughts and using the

“cool” system to modify them. These represent distinct challenges within CBT for adult ADHD.

Attentional Focus and Goal-Oriented Behavior

The view of the stimulus–response network in the GCM goes beyond a linear, stimulus–behavioral response mode, advocating a coinciding, proactive view where goals, drives, and other conceptual motivations themselves are stimuli that arouse, inspire, and initiate actions. This is similar to the discussion in [Chapter 1](#) of this volume about the difference between a strict behavioral view of language and cognition and the cognitivist view that extends the behavioral foundation and asserts that thoughts, beliefs, and concepts represent aspirations and goals that are influential and are targets for cognitive modification.

Attentional focus is a central issue in this process, as selective attention to stimuli (e.g., conceptual goals) is an activating event, which can trigger either adaptive or maladaptive beliefs and behaviors (A. T. Beck & Haigh, 2014). When disordered, such as in anxiety disorders, there is an involuntary focus on signs of sympathetic nervous system arousal (e.g., panic disorder) or uncertainty (e.g., generalized anxiety). Such hyperactivated states of otherwise adaptive systems trigger and are triggered by schemas and related beliefs tied to anxiety themes of vulnerability and risk.

The very notion of difficulties directing and sustaining attention and efforts toward goal-attainment gets at the heart of the matter in adult ADHD. By definition, EF deficits, including nonverbal and verbal working memory deficits (Barkley, 1997) and their role in thoughts and beliefs, punctuate goal-oriented endeavors selected by individuals (Barkley, 2012)—they have “skin in the game.” Attentional focus plays a somewhat different, arguably more prominent and impairing role in adult ADHD than outlined in the GCM. A core problem area in adult ADHD is erratic attention, distractibility, and/or poor sustained focus, which undermine engagement and follow-through.

This leads to an important consideration for the CBT model for ADHD. The GCM describes disorder-specific vulnerabilities for specific kinds of triggers that bias attention. For example, panic disorder is associated with

selectively attending to bodily symptoms, which are tied to activated schemas of vulnerability (A. T. Beck & Haigh, 2014). For adult ADHD, on the other hand, it is the symptomatic proneness to distraction that commandeers attention from priority tasks. These tasks are themselves triggers for maladaptive schemas (e.g., failure schema) related to the ability to perform them in the first place, which further influences selective attention and focus (see [Figure 3.1](#)). These respective external and internal vulnerabilities (e.g., triggers) are tied directly to the core EF deficits that further complicate and are complicated by in-the-moment information processing biases (maladaptive thinking) in real-life situations. There is not the same singular thematic coherence between attention bias and goal-oriented behavior in ADHD that exists in other disorders, as attention problems in ADHD cut across all settings and roles. This situation may have heretofore defied attempts to specify a cognitive theme.

Summary of the Generic Cognitive Model and Adult ADHD

The overarching GCM has relevance for adults with ADHD and CBT as a psychosocial treatment, though there are features of the GCM (e.g., attentional biases) that are especially and differently relevant for adults with ADHD, as these are dispositional features of ADHD itself. Even when distilling the GCM down to its use in treatment to target specific situations, the common factors of an event, belief, and behavior are now joined by the issue of attentional focus (see A. T. Beck & Haigh, 2014), which is already a central, defining issue affecting the experience of adults with ADHD.

There also are aspects of information processing for adults with ADHD that require some adjustment from the GCM to adequately address in clinical settings, including an assumed baseline of functioning. For most episodic disorders, progress, and ultimately remission, is determined by a return to premorbid functioning, whatever that might be. A frustration faced by adults with ADHD is that they are striving to return to a baseline that has never actually been established, at least in a stable, dependable manner. In fact, some clients note that their symptoms had increasingly marked effects on functioning as they grew up and faced greater demands and expectations for

intact self-regulation at different points in life—the targets at which individuals with ADHD were aiming kept changing.

The goal of a return to baseline functioning reflects a *rehabilitation* model of treatment designed to restore a previous level of functioning. *Habilitation* models, instead, aim to adapt to and optimize a client's style of functioning, which includes customizing and routinizing coping strategies tailored to their needs, such as those for ADHD. At its best, CBT for adult ADHD operates as an *abilitation* approach. It helps individuals establish newfound levels of consistent functioning through effective coping (often with medications) from which to nurture aptitudes and talents that may be tramped down by ADHD (Ramsay & Rostain, 2015b).

A parallel to the situation for adult ADHD is seen in Grant, Huh, Perivoliotis, Stolar, and Beck's (2012) recovery-oriented model of cognitive therapy for schizophrenia. Defeatist beliefs have been established as the cognitive theme in schizophrenia and treated through a person-oriented (rather than symptom-oriented) approach, promoting functional improvements by targeting clients' interests and strengths. There is no causal role ascribed to these beliefs in schizophrenia, but adapted CBT has produced gains in social functioning, independence, and productivity (Grant et al., 2012).

A hallmark of the GCM and CBT over the decades is this sort of cognitive specificity, the distinctive cognitive fingerprints that differentiate psychological disorders. For ADHD, there is not this same direct and distinct line between cognitive themes and specific symptoms. ADHD is not an emotional disorder that yields a predominant emotional theme or valence. Moreover, there is not a central domain of experience that defines ADHD in the same way as it is defined in other disorders that are not fundamentally emotional (e.g., distorted assessment of body image in body dysmorphic disorder, addictive beliefs in addictions). ADHD is all over the place in its effects on experience and functioning. The next section introduces a proposed cognitive theme that distinguishes adult ADHD. This sets the stage for a review of the CBT model adapted for adult ADHD.

PRIMARY COGNITIVE THEME OF ADULT ADHD

A unique element of the CBT model of psychopathology and the GCM is that different psychological disorders are distinguished by distinct, specific cognitive themes. The study of cognitive distortions in understanding and treating ADHD has yielded the innovative ADHD Cognitions Scale for Adults (Knouse, Mitchell, Kimbrel, & Anastopoulos, 2019). This scale is composed of maladaptive positive thoughts and is highly associated with impairment, avoidant coping style, and time management difficulties. The function of the items making up this scale is as permission-giving thoughts that justify task avoidance, though this is detrimental. In fact, Avoidant Thoughts Questionnaire was considered as a name for the scale (L. Knouse, personal communication, October 21, 2018).

This view is consistent with a study in which perfectionism was the most frequently endorsed cognitive distortion (Strohmeier, Rosenfield, DiTomasso, & Ramsay, 2016). The function of perfectionism was viewed (on the basis of clinically informed conjecture) as the need to have circumstances be just right to engage in a task; anything short of that standard would justify escape–avoidance (Ramsay, 2017b), which is a common theme across studies of adult ADHD.

Nevertheless, the question remains: Is there a distinct cognitive theme driving this maladaptive escape–avoidance? The previous examples reflect endpoint justifications or permission-giving beliefs that allow for maladaptive escape–avoidance coping and related impairments for adults with ADHD. These impairments and recurring self-regulatory difficulties characteristic of ADHD create conditions ripe for the development of maladaptive thoughts and failure and defectiveness/shame schemas documented in preliminary studies. It is similar to excessive speeding while driving, which is a unique symptom of ADHD (Barkley, Murphy, & Fischer, 2008). A poor driving record is an outcome (the impairment), and the excessive speeding is the underlying symptom that leads to the outcome. Permission-giving thoughts justify escape–avoidance coping, which is the symptom, and the functional impairment is the outcome.

However, what activates the launch sequence of permission-giving thoughts that result in maladaptive escape–avoidance and the downstream impairments typical of this population? ADHD is a self-regulation problem related to poor organization of behavior over time. Is there a mediational cognitive theme that develops from this core deficit that makes adults with

ADHD more prone to dysfunctional avoidance and subsequent impairments that can be isolated and inform psychosocial treatment, at least at the cognitive level?

Personal Agency and Self-Efficacy

Escape–avoidance cognitions in cases of adults with ADHD can be seen as signifying a sense of impaired personal agency, which is the power an individual has to influence or make things happen by intention in their life. Agency is the broad sense that an individual can improve their circumstances by taking actions to achieve a particular outcome (e.g., seeking education or training in a topic or skill). Perhaps impaired agency is the main theme in adult ADHD.

However, there are settings and conditions in which adults with ADHD exhibit intact personal agency. Even when facing difficulties, adults with ADHD express frustration with an awareness that tasks are within their capability to perform, that they are not fulfilling their potential, though they have difficulties with consistent performance in various roles. Even in cases of problems because of poor decision making or avoidance in which clients may have set themselves up to fail, there is a sense that “I can do better.”

The issue may occur at the level of self-efficacy, the propositional belief in an individual’s ability to organize and execute specific courses of action designed to achieve given outcomes (Bandura, 1997). Self-efficacy takes a satellite view of a map of potential agency and directs it toward a specific destination relevant to an individual’s life. Based on the understanding of ADHD as a self-regulatory deficit, adults with ADHD would seem to doubt their ability to follow through on such goal-directed plans, which would make impaired self-efficacy a possible cognitive theme.

Difficulties turning agency into self-efficacy mirror the notion of ADHD being a problem of implementation or being unable to turn intentions into actions. For example, this can manifest as a client’s belief in the ability to enroll in and complete a specific degree or job certification program to improve employability in the here and now. ADHD most certainly affects self-efficacy at this level, but adults with ADHD typically select reasonable goals for themselves for which they otherwise have the capacity to complete

despite having difficulties consistently doing so. Some adults with ADHD make poor choices (e.g., idealistic or impractical expectations or plans) that may consequently undermine intentions. These choices may have resulted from avoidance of better discernment and planning; however, there are also adults with ADHD whose goals and expectations are simply unrealistic or naive, which is a different clinical matter.

An impaired self-efficacy view of the cognitive theme of ADHD, however, seems no different from arguments that could be made for the effects on efficacy of depression, anxiety, and other conditions. A case could be made that each disorder arrives at low self-efficacy differently and that ADHD arrives at it more directly based on its core self-dysregulation, not to mention that ADHD is a neurodevelopmental delay.

In fact, it seems that the main relevance of this agency/efficacy view for ADHD and its difference from other disorders is better encapsulated by a specific, lesser known facet of self-efficacy. It is at a more fundamental implementation level at which functioning is affected, which sets ADHD apart from other disorders.

Self-Regulatory Efficacy

An overlooked component of self-efficacy is *self-regulatory efficacy*, which is the belief in an individual's ability to organize and carry out the basic steps necessary to effect change (Bandura, 1997). This factor represents the ability to organize, implement, and sustain the essential day-by-day, step-by-step chain of behaviors (and mind-sets) necessary to complete a course of action that will achieve the desired effects. Self-regulatory efficacy is virtually a rewording of the EF deficit model of ADHD, though arrived at independently with no previous mention of ADHD.

Bandura (1997) described self-regulatory efficacy as the capacity “to plan and structure activities, to enlist needed resources; to regulate one's motivation through proximal challenges and self-incentives; and to manage the emotionally and cognitively disruptive effects of obstacles, setbacks, and stressors” (p. 53). These essential building blocks of self-efficacy are the very ones affected by the EF deficits that define ADHD—poor motivation,

delay aversion, distractibility, and other self-regulatory deficits. Bandura also noted that

the activities of everyday life are strewn with frustrating, boring, stressful, and other aversive elements. This is part and parcel of daily living. In many spheres of functioning, people know full well how to perform the needed behavior. Here, the relevant efficacy beliefs concern self-regulatory capacities—can people get themselves to stick with the behavior given the many dissuading conditions they will encounter? . . . Those who distrust their capacities to surmount unpleasant factors have little reason to put themselves through misery. *In familiar activities that must be performed regularly to achieve desired results, it is perceived self-regulatory efficacy, rather than perceived efficacy for the activity per se, that is most relevant.* (emphasis added; pp. 63–64)

These passages do not mention ADHD, though they vividly portray the quintessential challenges faced by adults with ADHD. The construct of self-regulatory efficacy is a relative footnote in the efficacy literature. Mood and anxiety problems are associated with avoidant behaviors, too, but in such cases the basic, baseline self-regulatory skills are assumed to be intact, operative, and available for recruitment in the pursuit of an objective, sapped only by the effects of mood or anxiety symptoms. With ADHD though, persistent impaired self-regulatory efficacy subverts functioning through repeated self-doubts based on chronic implementation problems and consistent inconsistencies inherent to the condition.

It is at the level of self-regulatory efficacy that adults with ADHD experience problems that undermine their goals and create impairments; it is a street-level view of the path to the desired destination rather than a satellite view. Trouble navigating the distractions, dissuasions, and disruptions of requisite acts (e.g., waking up on time, paying attention to lectures and course materials, completing assignments on time) is what undermines efficacy, agency, and the intentions and goals of adults with ADHD. Furthermore, these core problems and cascade of downstream impairments erode the confidence and self-esteem of adults with ADHD, which lead to a greater proneness to justifications and permission-giving beliefs for escape-avoidant

coping. On the basis of preliminary research, this often culminates in failure and defectiveness/shame schemas.

The Impaired Self-Regulatory Efficacy Theme

The primary theme in the thoughts and beliefs of adults with ADHD proposed here is that of impaired self-regulatory efficacy using Bandura's (1997) definition. This theme reflects the information processing biases inherent to adults with ADHD when facing tasks, endeavors, and coping strategies necessary in the pursuit of desired and feasible actions, plans, and goals. This theme develops from recurring, punctuated efforts to organize and follow through on endeavors because of ADHD. The downstream maladaptive cognitions become increasingly entwined with the core features of ADHD and result in permission-giving thoughts that magnify an existing susceptibility to escape-avoidance coping, disengagement, and other barriers to the effective management of ADHD.

Drawing on this overarching theme, at the level of specific cognitions and beliefs, self-distrust is proposed as the primary theme in automatic thoughts and a target for cognitive interventions in CBT for adults with ADHD. A frustration voiced by clients with ADHD is their seemingly indiscriminate follow-through on endeavors, sometimes doing so relatively well, but other times facing significant difficulties. It is these ever-present doubts about a client's ability to effortfully carry out and stick with the everyday, necessary steps that not only reflects the coping difficulties of ADHD, but also undermines attempts to use coping skills.

ADHD, and more specifically the self-distrust ADHD engenders, factors into automatic cost-benefit calculations of behavioral investments and associated cognitive justifications for escape-avoidance (Henriques, 2011). Even adults with ADHD professing adequate self-efficacy in advance of an endeavor waver as the time for action draws near when performance doubts become more salient and result in avoidance (Bandura, 1997), such as the complaint voiced by adults with ADHD that they are good at making realistic plans but not following through on them. These justifications stem from a reflexive impulse (e.g., "I know I'm capable of this task but I'm not sure I

can do this right now”), which reflects the self-distrust cost of ADHD embedded in most tasks and endeavors.

The recurring behavioral inconsistency and its effects on life functioning lead to the failure schema, the most common schema seen in adult ADHD (Miklósi et al., 2016; Philipsen et al., 2017). When adults with ADHD face an overarching pattern of avoidance, it creates the self-mistrust schema (Ramsay & Rostain, 2005a, 2015b). It is this visceral self-mistrust that interferes with engagement and sets the stage for failure experiences and ensuing failure beliefs (e.g., “I cannot count on myself to do what I need to do”), which can also lead to feelings of shame. The terms *distrust* and *mistrust* are often seen as equivalent. However, a nuanced difference is that the former is based on experience and specific concerns and the latter reflects a general unease, suitably differentiating the respective automatic thought and schema levels of information processing.

The classic mistrust schema (J. E. Young, 1999) refers to other-directed mistrust, such as the example of the survivor of abuse discussed earlier in this chapter. In that example, the other-directed mistrust schema was activated in response to a trivial snafu made by the client’s partner, which activated an extreme response in the client because of suspicion about the partner’s trustworthiness. For adults with ADHD, the self-mistrust schema takes the form of self-directed misgivings about their general dependability; they feel they cannot rely on themselves to follow through and perform tasks as expected or desired. Self-mistrust reflects the adverse effects of ADHD on self-regulatory efficacy and thus an individual’s schema, which may lead to a failure and/or related schema.

An immediate objection to this proposal is that self-efficacy is negatively affected by all conditions (e.g., a person with depression doubting his or her ability to complete tasks at work). However, it is the symptoms of depression that interrupt and suspend premorbid, baseline levels of efficacy but not necessarily the levels of self-regulatory efficacy, at which ADHD operates and is defined. These concepts help crystalize the cognitive elements of clients’ accounts of recurring and impairing problems.

Clinical Relevance

So, how does the proposal that the main cognitive theme in adult ADHD is impaired self-regulatory efficacy, self-distrust thoughts, and self-mistrust beliefs help therapists treat adults with ADHD? These are clinically derived conjectures and hypotheses to be tested. There are measures of self-regulatory efficacy designed for and used in isolated studies but none to date have been used with adults with ADHD. However, it is a starting point that is theoretically coherent and a clinically useful heuristic for therapists that informs implementation-focused CBT for adult ADHD, as is illustrated in the following chapters.

The first point regarding the clinical relevance of the cognitive theme is one made at the outset of the book that cognitions about endeavors play a necessary role as a ligament between intention and action, between plan and performance for adults with ADHD. The cognitive domain helps to foster better behavioral engagement, emotional engagement and acceptance of discomfort, and interpersonal self-advocacy, among other manners of reducing escape–avoidance coping. A case can be made that some adults with ADHD struggle with the effects of maladaptive engagement (e.g., errors of commission from impulsivity, emotional overreactions). Therefore, a corollary to the focus on such engagement problems is to foster adaptive disengagement, which includes cognitive interventions for managing impulsivity and emotionality that may be viewed as beyond a client’s control (see [Chapters 4 and 5](#), this volume).

Second, an important element in modifying impaired self-regulatory efficacy is turning managing ADHD into navigating discrete pivot points, which promote self-regulatory efficacy. Pivot points can be viewed as an intervention designed to capture those windows of time and experience in which a client is on the precipice of doing an action or not doing an action, engaging with it or disengaging with it. At these points (and those leading up to them), cognitive interventions are at their most influential in terms of clients engaging in the desired actions and fulfilling their intentions. This implementation-focused approach to CBT is designed to help adults with ADHD define and more effectively navigate these small, achievable joints in daily affairs, where they can use tactics with which to implement strategies and plans (see [Introduction](#), this volume). It is at these junctures that abstract plans and goals are turned into tangible actions and experiences. This is where the cognitive domain of CBT is most immediately relevant for this

behavioral outcome in the form of framing and defining tasks in ways that promote implementation, which is then enhanced by the felt experience of getting things done, thereby reinforcing adaptive thoughts and beliefs. Cognitive approaches are interwoven with behavioral strategies and tactics, and externalized prompts and incentives to promote engagement (owing to reward deficiency and delay aversion).

From this foundation of engagement, another notion for the cognitive domain of CBT comes into focus—ADHD as a self-definition issue. Inevitable life frustrations can result in toxic conclusions about a client's worth, abilities, usefulness, and value. A quick online analysis of the definition of efficacy yielded synonyms like usefulness, worth, value, capability, virtue, and effectiveness, and antonyms like inadequacy, incompetence, ineffectiveness, and failure. These terms serve as a telling reminder that the distrust/mistrust themes seen in clinic-referred adults with ADHD are not merely pesky, short-lived reactions but predominant cognitive themes. Beyond proximate frustrations with tasks, ADHD relentlessly punctuates and disrupts personally valued pursuits and goals, which can be corrosive to and erode an individual's sense of self.

As was noted previously, additional adaptations to a CBT model for adult ADHD are required, including accounting for the influence of thoughts and beliefs and emotions relevant to this clinical group. The next section outlines a CBT model for understanding and treatment of adults with ADHD.

COGNITIVE BEHAVIOR THERAPY MODEL FOR ADULT ADHD

This chapter reviewed the CBT case conceptualization and corresponding GCM that provide the framework for the overarching CBT model of psychopathology and the cognitive, information-processing aspect of CBT, respectively. The adaptations of these approaches that make them relevant to adults with ADHD were outlined, including impaired self-regulatory efficacy as the proposed central cognitive theme in the thoughts and beliefs of adults with ADHD. The next sections summarize the guiding conceptual premises about ADHD that inform the clinical premises that guide psychosocial treatment, namely the CBT model for adult ADHD that guides the interventions discussed in subsequent chapters of this book.

Conceptual Premises About ADHD

This section presents a series of premises about ADHD and its effects that inform the premises of a CBT treatment model for adult ADHD. There are several CBT manuals that provide theoretical models (Ramsay & Rostain, 2015b; Safren, Sprich, Perlman, & Otto, 2017b; Solanto, 2011; S. Young & Bramham, 2012). This book highlights the mediational role of cognitions and cognitive interventions in the implementation of the essential coping strategies for managing adult ADHD. This approach will also illustrate the reach of these coping strategies into the domains of impairment that are often therapeutic targets, many of which have not been typically viewed as having a cognitive component to them. [Exhibit 3.1](#) provides a review of the conceptual premises of the CBT model of adult ADHD.

EXHIBIT 3.1

Conceptual Premises of the Cognitive Behavior Therapy Model of Adult ADHD

1. Attention-deficit/hyperactivity disorder (ADHD) plays an influential role in developmental experiences.
 2. ADHD makes a direct and causal contribution to functional difficulties, with a range of effects on functioning and coexisting difficulties that magnify and are magnified by other life stressors.
 3. ADHD influences the experience of and performance in various life roles and endeavors, disrupting otherwise reasonable personal goals and endeavors, which undermine a sense of agency and efficacy.
 4. ADHD and its functional difficulties influence the reciprocal interaction between affected individuals and their worlds, relationships, and sense of belongingness.
 5. ADHD affects information processing in the form of a client's profile of attributions, meanings, thoughts, and schemas/beliefs, which influence functioning and is a target of psychosocial treatment of adult ADHD.
-

This adapted CBT model is based on several premises about ADHD. The first premise is that affected individuals experience ADHD symptoms along

a continuum of severity and that these symptoms are present, in some form, beginning in childhood or adolescence. These features emerge during the normal course of development and over time become more apparent to the individual with ADHD and to stakeholders (parents, caregivers, teachers) as affecting functioning. Thus, ADHD to some degree shapes an individual's developmental experiences.

The second premise is that ADHD makes a direct and causal contribution to functional difficulties, ranging from interference to impairment (even when not diagnosed in childhood or adolescence). There is variation in the effects and severity of symptoms across time and within and across domains, settings, and activities. There are often secondary skill deficits as EF deficits interfere with the development and use of compensatory skills, including in cases of symptom reduction or remission in adulthood when residual coping difficulties may persist. Coexisting emotional, learning, and/or medical issues as well as adverse life events can further complicate functioning. ADHD creates difficulties that directly create functional difficulties in various domains of life, and these can magnify and be magnified by other life stressors.

The third premise is that ADHD symptoms influence an individual's experience of and performance in various life roles and endeavors. ADHD disrupts otherwise viable personal goals and endeavors because of difficulties consistently and effectively implementing plans and coping strategies. The downstream effects of these difficulties interfere with social standing, well-being, sense of self, and efficacy. This can range from the foundational obligations of life (e.g., health, academics, work, relationship roles) to personally salient endeavors (hobbies or other undertakings that contribute to an individual's self-definition). The difficulties faced by adults with ADHD, separately and cumulatively, undermine their sense of agency, efficacy (and self-regulatory efficacy), and identity in terms of the pursuit of feasible, desired goals, objectives, and endeavors.

This leads to the fourth premise, which is that the features of ADHD and resultant functional difficulties influence the reciprocal interactions between affected individuals and the contexts, settings, and environments in which they live and function, particularly relationships with others. Self-regulatory difficulties affect social capital in social settings and how feedback from the social world influences actions (or inactions) by the individual. These

interactions, settings, activities, and relationships can either magnify or attenuate difficulties, coping, abilities, talents, and sense of belongingness.

Hence the fifth and final premise, the experience of living with ADHD and its characteristic self-regulatory difficulties affect an individual's information processing in the form of the personal cognitive profile of attributions, meanings, thoughts, and schemas/beliefs. These cognitive factors influence how individuals construct their personal stories and justifications, as well as emotional and behavioral experiences. This cognitive-behavioral-emotional system results from reciprocal feedback and experiences compiled over years of living with ADHD. This system, in turn, affects how adults with ADHD manage situations, roles, endeavors, and relationships, which can lead to psychosocial treatment. The stress from the consequences of ADHD-related impairment (e.g., perceived and/or actual devaluation by others, failure experiences) further impairs self-regulatory functioning in a reciprocal manner (B. Rosenfield, personal communication, February 1, 2019). Although treatment targets behavior changes and improved functioning, the cognitive domain plays a distinct, mediational role at specific targets, viewed as high-yield pivot points.

Clinical Premises and Treatment Implications

Based on these understandings of ADHD, the first premise of the CBT model of adult ADHD is that ADHD represents a quantitative difference in degree of symptoms and not a qualitative difference of type of symptoms. Individuals with a diagnosis of ADHD fall at the disordered end of a continuum of normative self-regulation in terms of the number, severity, and impact of symptoms and impairments. [Exhibit 3.2](#) provides a review of the clinical premises of the CBT model of adult ADHD.

EXHIBIT 3.2

Clinical Implications of the Cognitive Behavior Therapy Model of Adult ADHD

1. Attention-deficit/hyperactivity disorder (ADHD) is a quantitative difference in degree of symptoms and not a qualitative difference in type of symptoms.
 2. ADHD is an implementation problem that undermines the necessary skills and strategies needed to effectively manage endeavors.
 3. Implementation problems stem from chronic self-regulation deficits that characterize ADHD, particularly organizing behavior across time.
 4. Self-regulation deficits (and coexisting issues) create a penchant for disengagement and escape–avoidance reactions.
 5. ADHD and related impairments affect different levels of personal experience, including
 - cognitive/justification—modifying impaired self-regulatory efficacy
 - behavioral/investment—fostering adaptive behavioral engagement
 - emotional/experiential—managing and accepting discomfort
 - implementation—transitioning from being off-task to being on-task
 - relationships/social influence—defining and fulfilling roles
 6. The therapeutic alliance provides a foundation of empathy for and understanding of the challenges of living with ADHD and encouragement during the change process.
-

The second premise is that ADHD is primarily an implementation problem of difficulties performing the necessary skills and strategies needed to effectively manage a task, endeavor, role, or situation. It is not a lack of knowledge of what needs to be done or an incapacity to perform the requisite actions.

The third premise is that these implementation problems stem from chronic, underlying self-regulation deficits characterized by difficulties organizing, initiating, and sustaining actions over time to achieve future-focused, deferred objectives that are personally salient and valued by an individual. The self-regulation deficits manifest as problems with

1. procrastination;
2. poor motivation for behavior (initiation and maintenance over time);

3. poor task endurance;
4. difficulties sustaining efforts across time and/or working toward a deferred reward;
5. the tendency to discount deferred rewards, which are experienced as less salient than proximal rewards;
6. corresponding difficulties with initiating and sustaining attention, time-task-effort-energy management, disorganization, poor working memory, poor problem management and decision-making skills, and emotional dysregulation, all of which punctuate experience and efforts; and
7. difficulties executing known and effective coping strategies for managing these and related problem areas.

The fourth premise of the CBT model of adult ADHD is that these difficulties magnify and are magnified by coexisting psychiatric, learning, or other disorders, as well as other issues which contribute to a penchant for “disengagement” from or escape–avoidance of what are otherwise feasible and personally salient tasks, endeavors, roles, duties, goals, or objectives. This disengagement is the central behavioral problem that is targeted in psychosocial treatment; it may stem from one, some, or all of the self-regulation difficulties mentioned in the third premise.

The fifth premise is that these self-regulatory deficits and impairments affect different levels of client experience, each of which are targets for psychosocial interventions, including the following:

1. Cognitive/Justification: This reflects the cognitive domain of treatment, including the modification of cognitive distortions, maladaptive schemas, and other unhelpful explanations or justifications. Cognitive interventions focus on increasing self-regulatory efficacy through improved use of coping modification strategies, fostering task-promoting cognitions and framing, cognitive defusion, and handling barriers and setbacks. The cognitive domain aims to improve the client’s efficacy, agency, and sense of self. Self-regulatory efficacy such as self-distrust thoughts and self-mistrust beliefs is a primary theme of this domain.

2. Behavioral/Investment: This domain reflects the targeted behavioral outcomes of meeting goals and objectives, meeting self-needs, and fulfilling obligations to others. The therapeutic focus is the personalization of coping strategies for managing ADHD to increase their use in real-world settings, including the selection/prioritization of tasks and endeavors. Fostering adaptive behavioral engagement (and adaptive disengagement) and effecting follow-through is the main theme of this domain.
3. Emotional/Experiential: The emotional domain of treatment addresses the flexible up- and downregulation of affect in the pursuit of behavioral goals, managing emotional dyscontrol, and the personal valuation of and manufacturing motivation for tasks. Emotions are relevant to starting, switching between, and persisting on endeavors as well as coping with and accepting the frustrations encountered in day-to-day life that are more distracting and disruptive for adults with ADHD. Accepting and managing discomfort is the main theme in this domain.
4. Implementation: This domain targets the use of specific self-regulatory tactics and strategies designed to promote self-regulatory efficacy through engagement in and persistence on tasks, endeavors, and objectives over time, especially those with deferred outcomes. The main theme of the implementation domain is the transition from being off-task to being on-task at a specific time and place (or other pivot point) and otherwise transforming intentions into actions.
5. Relationships/Social Influence: This domain targets the effects of ADHD on a client's social capital and dealings with others, which has effects on personal role fulfillment and balancing between meeting the needs of the self and supporting the needs of others and obligations in various relationships and group roles. Assertiveness in self-advocacy and defining and fulfilling roles (including self-compassion) is the main theme in this domain.

The sixth and final premise of the CBT model of adult ADHD is that the therapeutic alliance is a vital source of empathy and support in the psychosocial treatment process. ADHD can have negative effects on a client's sense of belongingness and on relationships. Therefore, having a

stable, supportive therapeutic relationship with a therapist or other helping professional who understands the challenges of living with ADHD and those inherent in the change process provides an essential base.

Adults with ADHD will require extra time, attention, personalization, support, and empathy to use these steps, which is why the therapeutic alliance is so important. Their ability to gather the mettle to pursue CBT after coming to terms with an initial diagnosis or after previous frustrated change efforts is poignant and inspiring. The CBT model of adult ADHD aims to conceptualize the full picture of each adult with ADHD, target the difficulties encountered in their day-to-day lives, and provide an actionable framework to improve functioning, overall well-being, and a strong sense of self.

CONCLUSION

The goal of this chapter was to present a CBT model of adult ADHD and how it derives from the classic CBT model and GCM with modifications. Different intervention domains and central targets for each domain were presented to address the wide-ranging effects of ADHD. [Chapter 4](#) emphasizes classic cognitive interventions informed by this model and how they are adapted to help adults with ADHD.

KEY CLINICAL POINTS

- **The CBT case conceptualization is a useful clinical framework that represents a synopsis of the larger GCM.** The conceptualization helps therapists to synthesize clients' developmental histories, how these histories inform schemas and core beliefs relevant to presentation, including compensatory strategies that represent self-defeating attempts to work around schemas, and the downstream connection of thoughts, emotions, and behaviors associated with specific events.

- **The updated GCM includes several recent elaborations relevant to adult ADHD.** These include information processing biases and the understanding that most adults with ADHD have faced more than their fair share of frustrations and setbacks. The hot and cool types of information processing are akin to the hot and cool EF systems that are a core issue for individuals with ADHD. Attentional focus is closely aligned with goal-oriented behavior in the GCM, and these attention processes are used in CBT for cognitive, emotional, and behavioral modification, though these processes are extant problems for adults with ADHD.
- **The conceptual premises on which the CBT model for adult ADHD is based were outlined, as well as the clinical premises and their implications for treatment.** Impaired self-regulatory efficacy was proposed as the core cognitive theme in ADHD, characterized by self-distrust thoughts and self-mistrust schema.

Cognitive Interventions Adapted to Adult ADHD

The goal of this chapter is to apply the adapted cognitive behavior therapy (CBT) model to the standard cognitive interventions for adult attention-deficit/hyperactivity disorder (ADHD). The underlying theories related to the executive functions (EFs) and other factors that contribute to the functional impairments experienced by adults with ADHD and the CBT model modified for adult ADHD provide means for understanding these problems and creating a blueprint for change. The challenge for clinicians is to use and adapt this blueprint to clinic-referred adults with ADHD, with particular attention paid to the role of cognitions in adult ADHD.

CBT and associated therapeutic strategies aim to help adults develop and use coping skills with which to offset functional difficulties related to the core features of ADHD. Most cognitive interventions for ADHD are designed to help clients use strategies with which to engage in and follow through on various plans and endeavors and work toward realizing improved functioning and well-being. The interventions presented in this chapter will be used in specific contexts in the remaining chapters of this book.

Gloria was diagnosed with ADHD in college. Her struggles with time management, disorganization, and procrastination had led to dropped and failed courses, a voluntary semester off to regroup, and eventually, a delayed

graduation date. More than a decade later, she is now facing similar problems with her quarterly productivity report at work. She knows full well that it makes sense to get started early and work on it in small chunks, but nevertheless it ends up being a cyclical ordeal for her.

By chance, a Friday afternoon meeting was cancelled, which freed up a few hours Gloria dutifully reserved to work on the report due the following Wednesday. When it came time to work on the report, however, she found herself less inspired. She could not pin down exactly where to start and whether she had all the requisite data. Gloria got occupied with other undone tasks, such as responding to emails and voicemails and other sundry clerical matters. She reassured herself that she would dispose of these nuisance tasks and then buckle down on the report. At some point, Gloria was “on a roll” and kept plowing through the lesser tasks; she justified tackling them first to free up time at the end of the day when she could begin to make headway on the report.

At the end of her day, Gloria felt accomplished and caught up, although a little spent. She decided to devote the rest of the workday to her lesser tasks and work on the report at home that evening. Once she was home, Gloria busied herself with chores and other tasks around the house. She sat down to view “just one episode” of a TV program before getting to work on the report, but that turned into a couch-bound evening of binge-watching. However, she took solace in the fact she had the whole weekend to finish the report. As she readied herself for sleep, determined to start fresh in the morning, she recalled a time when she finished such a report in only a few hours.

By late Tuesday night (and into Wednesday morning), Gloria was furiously trying to throw together a semblance of a passable report. It was unfathomable to her that she was facing this scenario yet again. She choked back tears of frustration and panic and doubted her ability to hold a “real” job. Gloria was certain this would be the time she was exposed as the impostor she knew herself to be. At the same time, she wrestled with a plan to call out sick as an excuse to buy more time as a last resort.

When reviewing this scenario in her CBT session, Gloria admitted that she knew she was procrastinating at each step, but still did it. When reverse engineering her various delays, she said that she approached the report with a vague plan (e.g., “I blocked out the cancelled meeting time for the report

but figured I'd be able to wing it to at least get started"), she doubted her readiness and capability (e.g., "I have to do these reports each quarter but I'm still not sure if I do them the right way; it is even harder to focus when I don't have a deadline pressure; I second-guess myself"), she grappled with subtle feelings of unease (e.g., "I got kind of antsy and was like, *ugh, meh*, when it came time to get down to work"), she gravitated to more readily achievable tasks (e.g., "I felt really good and on it after clearing out my inbox and stuff, though they really could have waited"), and then she had a heartening rationalization (e.g., "I figured I'd get it done somehow; I work best under pressure"). After everything, Gloria was late with the report and issued a formal write-up by her boss.

The benefit of the CBT model for adult ADHD is that it provides a framework for specifying the pivot points involved in the disengagement from a task. In the case of Gloria, it helps her understand exactly how she procrastinated on the report rather than having her simply try harder next time. Gloria's pivot points are illustrated by the parenthetical descriptions of her well-meaning intentions that were not actualized. In fact, the pivot point itself is a cognitive intervention as it provides different outlook for thinking about a task. Rather than Gloria working harder to not procrastinate, each of the junctures pinpoint exactly when, how, and why she put off the report (e.g., a procrastination "autopsy"). Change happens by implementing strategies at these points, but this is the core difficulty for adults with ADHD.

The rest of this chapter focuses on established cognitive interventions and how they are tailored for adult ADHD. [Chapter 5](#) of this volume applies these broad-based strategies to specific problem areas faced by adults with ADHD. The outline of cognitive interventions and their applications provides a menu of options from which strategies can be selected to match the needs of individual clients. The next sections start with a broad-based view of cognitive change and then home in on some specific strategies and cognitions relevant to adult ADHD.

IDENTIFYING THOUGHTS AND THEIR EFFECTS

Accurate self-monitoring (e.g., tracking behaviors) is a problem area for adults with ADHD, so identifying a client's thoughts is an important skill to

develop. For adults with ADHD, the question of “what am I thinking” or related check-in is particularly useful for taking stock of a situation. It is a practical entry point for judging a sequence of events and, in turn, offers a target for change. It is one of the ways to make CBT “sticky” and portable for adults with ADHD and serves an inhibitory function that introduces a pause and prolongation (in EF terms) of events. This pause creates space for reflection on a chain of events and the client’s reactions to them; it also allows for reflection or thinking forward through options for interpreting events and acting on them.

With this pause, the next step is for clients to assess their interpretations of events. This step involves catching the reflexive, automatic, “hot” cognition. This detection is followed by a reflective, “cool” processing (with the pause and reflection process itself serving as a “coolant”), which draws on the notion that initial thoughts are often incomplete, distorted, or unhelpful. There are different, more adaptive ways of construing (and managing) events. Follow-up questions like “How is this thought affecting me?” “Is there another way to look at this situation?” “What is my priority right now?” and “What are my options for handling this situation?” help clients consider alternative outlooks and courses of action. The process is best kept quick and simple for adults with ADHD, but even producing one alternative doubles the client’s options.

One aspect of psychoeducation in CBT is the introduction of cognitive distortions. These sorts of thinking errors are ubiquitous in human nature and are often innocuous, fleeting, and nondisruptive (e.g., “There’s never any parking around here”). These distortions represent the hot cognitive system designed to make quick judgments on the basis of limited information (e.g., thinking fast; Kahneman, 2011), an adaptive but imperfect system that is prone to populate gaps in information with best-guesses or conjectures.

There will be situations in which automatic thoughts are distorted and must be reevaluated with a more deliberative system (e.g., “There’s parking here, I just have to park a few blocks away”; e.g., thinking slow; Kahneman, 2011). Common distortions seen in adults with ADHD are reviewed later in the chapter. Automatic thoughts about tasks and events may be misleading, and often more useful views can be developed to foster engagement and follow-through (or make the informed decision of adaptive disengagement).

At the outset of CBT, automatic thoughts are uncovered during reviews of situations representative of overarching therapy goals, such as in Gloria's procrastination review. These after-the-fact reviews are an avenue for orienting attention toward thinking patterns at these pivot points. This orientation helps clients be mindful of cognitions as part of an overall functional analysis of events. There are many instances when adults with ADHD note that their thoughts are completely accurate, such as when Gloria noted that she misused her time, missed the deadline, and was reprimanded as a consequence. It is important to acknowledge these accounts and frustrations. However, these accurate, reasonable interpretations can become the triggers or events for subsequent thoughts and conclusions that may be assumed to be valid. In Gloria's case, she deduced that she was a "fraud and impostor" and that she struggled with the report "yet again." Although, her therapist noted this was because Gloria fell into the same procrastination patterns as in past months. CBT does not gloss over or minimize these difficulties but examines options for facing them and learning from them, including handling difficult moments such as when Gloria faced the consequences of the tardy report.

Some clients maintain that they do not have automatic thoughts. A workaround for this claim is to review a situation and ask whether the client might have had a positive thought. For example, Gloria mentioned that she did not have negative thoughts about the report on Friday when she abandoned her plan to start the report before leaving the office. The therapist asked if Gloria might have been thinking, "I'm looking forward to getting started because late Friday afternoon is a time I'm focused and motivated. I'm sure I have all the data I need and if I don't, I know exactly how to easily obtain it?" Presenting an opposite mind-set may uncover ambivalence about tasks. Inviting the client to take steps during a CBT session, such as Gloria using her laptop to look up data about her report, is another way to elicit hot cognitions and feelings.

Adults with ADHD often describe finding themselves in the grip of distraction, like a college student automatically checking social media on his arrival at the library, which runs the risk of undoing his study plan. Adapting CBT to the self-dysregulation issues in ADHD helps to educate clients that automatic thoughts do not necessarily appear first in a behavioral sequence

or even as complete ideas and reasoned decisions. In fact, there are times that distractions or impulses truly occur without thinking.

Instead, a question like “What was it like being in your skin at that moment?” helps to put words to these impulses, distractions, and other kneejerk predispositions to identify them and their influence, even after the fact. In the case of the distracted student, he concluded that his study plans were ruined, and he left the library. His unspoken, prepotent impulse and rule—“I must check my phone whenever I arrive somewhere”—was laid bare, and his therapist showed how this context–behavior link innocently, yet insidiously, undid his intentions. These sorts of cognitive–affective reactions may represent links to the delay aversion (e.g., the preference for tasks providing more immediate reward) common in ADHD. This penchant mixed with disinhibition and distraction may create a visceral, unquestioned system of habits that are understood and justified as “this is what I do.” Identifying and examining these cognitive–affective (or affective–cognitive) patterns as unspoken rules is in line with this CBT approach. Putting words on these impulses provides adults with ADHD with a framework for understanding these patterns and, from this framework, they can use targeted skills to change them at high-yield pivot points in the cognitive-behavior (and emotion) sequence. This broadened use of cognition helps uncover these pivot points to recognize and anticipate them, especially seemingly “thoughtless” ones.

Another useful way to put a finer point on the influence of automatic thoughts is to determine whether a client’s inner self-talk has a tone of voice. When Gloria described her barrier thoughts at the prospect of starting her report, she said, “I’d have to go ALL THE WAY BACK to my computer, LOG ON, OPEN the file, FIND the data, review it ALL, MAKE SENSE of it, and, by that point in the day, it was like, UGH—I’m not in the mood for this,” with capitalized words denoting those said in a manner implying great toil and effort. Her therapist pointed out the tone of voice she used to describe these steps and, apart from her words, that it likely reflected how she viewed and felt about the task. Gloria acknowledged that, in retrospect, the actual steps were simple, but any aspect of the report seemed onerous at the time. By reviewing the actual effort required for tasks (e.g., “How long does it take to log on to my computer?”) and the effects of the tone of

voice/thought, Gloria was able to modify her outlook and uncover and recognize task-related issues.

The role of cognitions for turning intentions into actions is an important theme in this book, and how tasks are framed or packaged is an important element to promote mind-sets that enhance follow-through. The terminology of CBT includes distortions, dysfunctional thoughts, maladaptive schemas, and other negatively tinged constructs that have precise meanings for clarity of concepts and discussion. (Even ADHD includes *deficit* and *disorder*, and I cannot think of another such “twofer” condition.) Some clients will latch on to the existing jargon of distortions and find them useful, the names of which are relatively innocuous (e.g., all-or-nothing thinking, mind reading); the maladaptive schema categories (e.g., failure, defectiveness) can be more stinging to others. The clinical task is to define with clients the vocabulary that adequately captures the relevant cognitions and opens options for change.

The next step in CBT for adult ADHD is the modification of distorted or otherwise unhelpful thoughts to foster more adaptive outlooks. The skill of being able rework an initial interpretation has implications for emotions and behaviors. The next section reviews various cognitive skills, starting with ADHD-friendly ways for assessing and changing distorted thoughts.

COGNITIVE MODIFICATION: RETAINING YOUR DEFENSE ATTORNEY

A classic cognitive intervention is the identification of an automatic thought connected to an event or trigger (including other thoughts). The automatic thought is then assessed to determine if it reflects a specific type of cognitive distortion, how this interpretation was arrived at, and the evidence on which it is based. The type, amount, and quality of evidence are judged, as is the utility of a specific thought, even when facing seemingly incontrovertible evidence, such as when Gloria mentioned being reprimanded by her boss for the late report (e.g., “If I don’t improve, I will lose my job”). Other, more adaptive views of an event and options for handling it are then considered. This practice of cognitive modification cultivates outlooks and options that

promote engagement in personal endeavors and good functioning, which is an all-to-brief synopsis of a complex process.

The Dysfunctional Thought Record (A. T. Beck, Rush, Shaw, & Emery, 1979), typically called a thought record, is a tool with which to externalize the cognitive modification process. A thought record comprises successive columns for recording a triggering event, automatic thoughts and distortions, emotional reactions, and alternative thoughts. There are several variations of this format (e.g., three columns for event, automatic thought, and alternative thought; two columns for negative thought and alternative thought), and it can be modified to whatever layout the client prefers.

Externalization of this process helps disentangle events, thoughts, and feelings, which is very useful for adults with ADHD because of difficulties with working memory. Many CBT-related apps offer digital permutations of this basic framework. However, keeping track of and using a thought record, accessing an app and entering and tracking information, or any other seemingly trivial matters with their use are impediments for many adults with ADHD.

An adaptation of cognitive modification skills for adults with ADHD is the coping card (from CBT for anxiety). Coping cards are index cards or any format with which to store preformed, adaptive thoughts and other reminders for handling certain situations. The cards serve to externalize and prompt skill use rather than relying on free recall (akin to a multiple-choice test being easier than a test relying solely on memory). In the case of anxiety, the coping card is used to counteract the effect of mood-congruent memory, the proneness to gravitate toward anxious thoughts and greater difficulty considering alternatives. Adults with ADHD likely have task- or context-congruent proneness for aversion and escape. Therefore, coping cards and other external coping reminders for vulnerable situations can be helpful, such as those in which adults with ADHD are prone for procrastination (e.g., “Define the first action step”), emotionality (e.g., “Notice the feeling, don’t act on it”), or impulsivity (e.g., “Let me think it over”). Such prompts can be kept on physical cards or digitally. Visible reminders of the steps for typical coping strategies, (Ramsay & Rostain, 2015a), homework, or other useful information is helpful, if not essential for adults with ADHD. Gloria developed a coping card to address her negative thoughts about the write-up: “My boss is supportive. I have a plan for completing my work on time.”

Organizing “stuff” such as coping cards and thought records is still tough to do for many adults with ADHD. There is a need for handy coping tools that can be used right away. One way to make coping strategies portable is using pithy nicknames, analogies, cultural references, or practiced coping commandments (Solanto, 2011) that resonate for clients in the hope that they will be used often and become habitual.

To this end, a useful coping analogy for cognitive modification is that of the defense attorney (Ramsay & Rostain, 2015a, 2015b). Automatic thoughts are viewed as a case made by a prosecuting attorney (e.g., Gloria’s reactions to her formal warning). The unquestioned acceptance of these thoughts is viewed as a judge rendering a decision, not because the case (i.e., thought) or evidence is necessarily strong, but because the prosecutor’s case did not face any objections or arguments made by a defense attorney on the client’s behalf.

The very exercise of considering what the defense attorney would say is an inhibitory tactic that prolongs the moment. Framing automatic thoughts as arguments made by attorneys obliges clients to reflect on them and to consider whether they would stand up in court. The reframe is also consistent with strategies of externalizing the problem and distancing or perspective taking (e.g., “If a friend of yours [with ADHD] was in this situation and had this thought, what would you say to him or her?”). It may be, at least in part, that conjuring an image of a person advocating for the client creates a sense that someone is on their side. Regardless of the mechanism, anecdotal evidence suggests the defense attorney question resonates with clients as a helpful coping tactic because it sticks with clients and can be used outside therapy.

Cognitive modification often opens new ways to view and handle situations to work toward a desired outcome. In some cases, though, there may be a problem to be addressed despite achieving an adaptive mind-set. For Gloria, who used the defense attorney analogy to good effect, viewing her write-up as “a speeding ticket, not a felony” helped rein in her negative thoughts. She was able to reread her boss’s formal warning as providing clear steps for dealing with it. She recognized her responsibility for changing her behaviors, half-jokingly calling her boss her “probation officer,” which was used to view the required action steps as “community service” that would enable her to expunge the write-up.

The defense attorney analogy is a rebranding of cognitive modification or restructuring. There are times when dealing directly with the content of automatic thoughts is difficult, particularly during an emotionally charged situation. Cognitive defusion strategies are useful during these and other situations as yet another coping tool.

COGNITIVE DEFUSION

Whereas the defense attorney is a tactic for implementing cognitive modification skills (e.g., reviewing the evidence for a thought), cognitive defusion can be seen as settling out of court without a trial, with negative thoughts maintaining visitation rights. Instead of examining the content of thoughts and their messages, defusion strategies sidestep becoming embroiled with them in this manner in the first place. Rather than contesting the veracity or usefulness of automatic thoughts, defusion skills include refocusing on a priority endeavor or simply staying in the moment despite the presence of intrusive thoughts, thereby de-energizing them (Hayes, Strosahl, & Wilson, 1999). To illustrate the point, therapists can ask clients to not think about a pink elephant. Attempts to comply with the exercise result in noncompliance. Instead, with cognitive defusion, the image of a pink elephant can bounce around in the client's mind, but merely as a nuisance that need not be evicted.

Defusion strategies ignore the content of a thought or what a client is thinking, as efforts to dispute or suppress it only serve to maintain it (e.g., "I must try harder to not think about a pink elephant"). Rather, thoughts are noticed and regarded in a neutral manner to decrease emotional reactions while still engaging in a planned action. Another analogy is to treat unwanted thoughts as though they are seasonal allergies. Instead of being sidetracked by bothersome sniffles, they are understood as symptoms of a harmless, though annoying, allergy. The occasional sneeze can be tolerated without undue disruption.

Other coping images can be used to foster defusion, such as that of a leaf floating on the wind, an incoming text to which does not need a response, or any number of mindfulness-based, acceptance strategies. In fact, some forms of self-talk, specifically referring to oneself by name, enhances such

cognitive distancing when responding to stressful situations (e.g., “Bob, this is a pink-elephant thought—notice it and let it go”; Kross et al., 2014).

This discussion raises the question of whether clients should be changing or accepting their thoughts. The answer is whichever works better for the client, with most clients striking a balance between them. A more nuanced view is that defusion strategies are helpful at the point of performance to tolerate discomfort during a shift from disengagement to engagement or other times when the client is in the midst of doing something (e.g., being willing to engage in a task when the client does not necessarily want to do so; Hayes & Smith, 2005). Modification strategies help with anticipations of task plans to make them seem doable and stoke motivation and self-trust enough to approach them. Cognitive modification also manages after-the-fact appraisals of quality and value of task performance, such as discounting yes—but thoughts (e.g., “Yes, I studied, but I should have started earlier”).

Cognitive defusion, mindfulness, and related process-oriented approaches to cognitions, emotions, and behaviors reflect the ongoing evolution of CBT and convergence of different but ultimately compatible ideas and therapeutic approaches (see Hayes & Hofmann, 2018). These developments, considered the third wave of behavior therapies (after the primary focus on observable behaviors and the cognitive revolution; see Fishman, Rego, & Muller, 2011), are useful for general clinical practice but are particularly relevant for a condition such as ADHD, which potentially cuts across and through so many experiences and life roles.

Often jumbled in with other cognitive interventions, reframing is a distinct coping tactic. Framing and reframing play a vital role in managing ADHD, particularly in defining and setting the stage for behavioral engagement.

COGNITIVE FRAMING AND REFRAMING

Reframing represents a shift in the client’s mind-set (e.g., how he or she makes sense of a situation), which can be either positive or negative; the focus here is on adaptive reframing. More specifically, the focus of this section is on framing tasks, endeavors, and coping strategies to the degree that they are viewed as feasible or doable. The framing is key because managing ADHD requires modified coping approaches and workarounds to

foster an adequate sense of self-regulatory efficacy for engagement and follow-through, including manufacturing motivation, breaking down tasks, and other steps discussed next.

Even the way information is presented makes a difference. In a classic study (Tversky & Kahneman, 1981), physicians were asked to respond to one of two differently framed vignettes about the administration of a treatment for a hypothetical disease outbreak. The scenarios were presented as either risk-taking (with the prospect of saving more lives) or risk-averse (with the prospect of losing more lives), but both scenarios had equivalent survival probabilities. More physicians endorsed the lives-saved vignette, although the risk–benefit was the same.

A common frame encountered when working with adults with ADHD is that of an individual's perceived capacity for an endeavor. Adults with ADHD often voice examples of insufficiency (self-distrust) frames when facing tasks: They are not in the right mind-set, they are not in the mood, they are too distracted, or they do not have enough time or focus, all of which are quickly judged as evidence of their inability to engage in a task (at least at that moment). This verdict justifies avoidance of an undertaking that the person is otherwise capable to perform and will be in the future, when things are right or enough—but not now.

The enough reframe involves a shift from insufficiency to one of sufficiency, having enough energy, ability, focus, or time for a task. The sufficiency reframe counters the reflexive view that an individual is not up to a task at hand. This reflexive view can be treated as a distortion, but framing provides an avenue for empowerment by way of sufficiency or a sense of being ready or able enough. A related coping tactic is the notion of lowering the bar or dissecting a larger task into discrete portions until arriving at a point where clients believe they can do the task: “Do you have enough focus to at least review your class notes for 10 minutes (or 600 seconds)?”

A compelling case has been made for the presence and effects of cognitions coursing through the escape–avoidance behaviors common to adult ADHD. Even in the myriad of examples of the effects of the core features of ADHD that are the primary sources of disruption, there are often mind-sets that arise and interfere with attempts to manage these disruptions and engage or reengage in tasks. The next section reviews some of the more commonly encountered cognitive distortions relevant to adult ADHD.

COGNITIVE MODIFICATION FOR COMMON DISTORTIONS

Preliminary research (see [Chapter 2](#), this volume) has identified the relevance of cognitive distortions in cases of ADHD, as well as those with coexisting diagnoses. The following sections review the more common distortion patterns and their relevance for adults with ADHD. These categories are standard fare for any practicing clinician, but there are some nuances when approaching these cognitions with adults with ADHD.

Perfectionism

Perfectionism has emerged as the most frequently endorsed distortion in a study of adults with ADHD (Strohmeier, Rosenfield, DiTomasso, & Ramsay, 2016), which was the first study to report on the frequency of specific types of distortions endorsed by this group. Perfectionism is typically associated with holding unrealistic performance standards and corresponding maladaptive reactions when those standards are not met (e.g., when a minor blemish on a project is viewed as nullifying the entire effort, the product, and/or the client's self-worth). These judgments can be based on an objective measure or ranking, though a client's subjective standards can be even more pernicious.

The fact that perfectionism is the most common distortion (Strohmeier et al., 2016) was initially surprising until the result was reconciled with clinical experience. A distinction can be made between front-end and back-end perfectionism (Ramsay, 2017b), which goes beyond the study data but has clinical utility. *Back-end perfectionism* can be viewed as having extremely high, rigid standards for quality, details, and/or performance. This leads to difficulties completing and submitting projects because they are not perfect enough or the vague, nonspecific sense that they could be better. Assignments or projects are late because of problems letting go of a desire to devote time and effort well beyond that required to produce a high-quality product, though not necessarily a flawless one.

Adults with ADHD, on the other hand, have difficulties organizing actions over time, including completing tasks in a timely manner, usually because of procrastination. Thus, *front-end perfectionism* reflects rigid standards or preconditions that must be met for engaging in a task or endeavor in the first

place (e.g., “If circumstances are right, then I can perform the task”), but there also exists a self-distrusting, conditional belief (e.g., “If circumstances are not just right, then I cannot perform the task”). Adults with ADHD often describe putting off tasks because conditions (internal or external) are somehow not sufficient (e.g., “I’m not in the mood”; “The library is full”). In fact, there is some truth in these concerns, as adults with ADHD are more prone to distractibility and dissuading factors that others can better ignore.

Even though front-end perfectionism is more common (anecdotally) than back-end perfectionism in adult ADHD, examples of back-end perfectionism are seen. Some examples derive from a proclivity for *hyperfocus* (Hupfeld, Abagis, & Shah, 2019), which in many cases is perseveration—the inability to stop a current activity to switch and reengage in a different activity. Adults with ADHD may get on a roll and spend inordinate time on a project beyond what is required, often to the detriment of other duties and obligations.

This hyperfocus perfectionism is usually not about unrealistic standards; instead, it is the feeling of being immersed in a task and the experience that, at least for many adults with ADHD, “This is my best me, finally in the mood, fulfilling my potential, and showing what I can really do.” This manifestation could be considered as binge-efficacy (e.g., “Now that I’m finally started and into this project, I want to make the most of this mode and not stop until I see it through—I don’t know when this might happen again”). This desire makes sense given the frustration voiced by many adults with ADHD about not fulfilling their potential.

Unfortunately, hyperfocus is often pressure-driven, such as facing a deadline with a last-minute, marathon work session. At these times, the drive to start a task is fueled by panic (e.g., “If I don’t start right now and study all night, I won’t be ready for the exam in the morning”). Some clients come to adopt such brinksmanship approaches (Ramsay & Rostain, 2015b), often justified with the thought that they work best at the last minute (Knouse, Mitchell, Kimbrel, & Anastopoulos, 2019). This can be proudly held up as an identity trait, as it has often helped adults with ADHD get out of jams in the past.

Hyperfocus in ADHD is not associated with risky behaviors, like those seen in mania. Instead, it reflects an experience of being “in the zone” or a similarly desired state. However, this state often interferes with a prudent and flexible allocation of time, attention, and effort, and when it results in

pulling an all-nighter, it exacts a toll on sleep and well-being for days after. This sort of massed practice or “cramming” is much less effective than distributed practice in terms of preparation and output, particularly in academics (Dawson & Guare, 2009).

Another form of back-end perfectionism is the self-imposed ADHD penalty. This penalty stems from the sense of guilt and shame often described by adults with ADHD who assume they have disappointed others and are thus indebted to them. For example, adults with ADHD often ask for help, request changes to plans (e.g., deadline extensions), or accrue unrequited favors from others. When coupled with poor follow-through on promises and not keeping up their end of a relationship, adults with ADHD assume they are building up social debts they cannot repay. These debts, real or imagined, diminish their assumed standing with others, eroding their social capital. This view is often distorted because it is based on an amalgam of situations and people selected to support a negative view (e.g., sour cherry-picking), mind reading others’ views of them, and discounting their own positive roles in these relationships.

The social impact of ADHD is often underestimated, and poor follow-through does run the risk of creating discord with others. In terms of back-end perfectionism and the ADHD penalty, presumed social debt puts pressure on adults with ADHD to deliver a better-than-average result, which is often a baseless assumption. Therefore, an already tedious task is made more daunting by the self-imposed and inexact penalty, which raises the stakes for a promise and fuels avoidance, a classic self-fulfilling prophecy.

For example, a college student with ADHD struggled to complete an essay for which he had been granted a 2-week extension by his professor. During a CBT session just before the essay was due, the client admitted he was stuck and unable to wrap up the final details. When the therapist suggested lowering the bar, noting the paper only had to be good enough to submit, the client responded that his essay “has to be that much better because I had more time to work on it.” In effect, this thought raised the bar on what was already a difficult task. The client held a vague (and untrue) notion that he had to do more than classmates but had no clue what this meant because it was conjured up by him.

In either type of perfectionism, cognitive modification aims to establish a mind-set about circumstances or standards for a task that will promote

engagement. This might manifest as lowering the bar for the college student described above who thought his paper would be held to a higher standard due to his extension. This might also manifest as modifying assumptions about the onboarding steps for an endeavor in the case of front-end perfectionism, like the fact that an individual has enough time and energy to start a task and any initial discomfort with it will likely be short-lived and bearable. These modified outlooks address the extreme view in perfectionism that “everything must be perfect or else I cannot do the task at all” that overlaps with the aim of finding a healthy middle ground in all-or-nothing thinking, which is reviewed next.

All-or-Nothing Thinking

All-or-nothing thinking, also called black-or-white thinking, stems from an affinity to catalogue, categorize, and evaluate experiences. This tendency is maladaptive when it unfairly diminishes the options for managing a situation by dismissing or overlooking vital factors. This usually results from ignoring the complexity of events that do not fit neat categories but instead requiring gray areas to accurately judge and manage them. For example, a client may judge his or her performance in absolute terms (e.g., success or failure) rather than having it fall along a continuum (e.g., “I’m getting better but I can still make improvements”).

All-or-nothing thinking often arises when assessing progress in CBT. Because of guardedness for perceived failure (often informed by past setbacks), early signs of difficulty make adults with ADHD prone to conclude CBT is not working and fall into escape–avoidance patterns. This reaction may reflect a compensatory strategy, a preemptive strike against failure (e.g., “I’m not doing better, CBT cannot help me. I will stop now before I’m told that I can’t be helped”).

The risk of premature dropout from CBT can be anticipated in early sessions. The therapist can normalize invariable slip-ups as a therapeutic feature of CBT for adult ADHD. It can be noted that the relapse rate for procrastination (or other EF issues) is 100%—it is not whether it will happen but rebounding when it does. The task is to face relapse and learn from setbacks, adjust, refine coping skills, and get back on track and to

improve by working through slip-ups consistent with the notion of antifragility (Taleb, 2012).

A role of therapists working with adults with ADHD is to highlight incremental gains. For example, timeliness may be a CBT goal with arrival at CBT sessions providing a target for skill practice. Over the first few meetings, a client may improve from being 15 minutes to 20 minutes late to being under 5 minutes late. However, she may be frustrated that she is still late, and in an all-or-nothing view, this is true. If she must swipe in with an ID card at work that monitors arrival time, 2 minutes late is still late, which remains a therapeutic issue for her job. In terms of behavior change, though, she has made notable progress. Falling short of a goal may be seen as failure despite progress, a view to which adults with ADHD are quite prone.

Ongoing effort is needed to manage ADHD. Therapists can point out progress being made and give specific examples of behavior change as movement along a continuum of change (e.g., “You are making progress, and there is more we can do to build on what you are doing”).

Magnification/Minimization

Magnification/minimization is the tendency to disproportionately exaggerate some aspects of an event and correspondingly minimize others, usually magnifying the negative and minimizing the positive. This mode of thinking is seen in cases of ADHD when a client faces some sort of mundane task that is not inherently enjoyable (e.g., homework, a work project, or a tedious clerical task). Difficulties and impediments related to the task are magnified (as these are prepotent, immediately compelling concerns), and the likely benefits, such as making progress on the task and the satisfaction of doing so are minimized (as these are deferred gains).

Cognitive modification of this distortion involves a recalibration of the magnification-to-minimization ratio. The very step of recognizing this distortion serves to inhibit, or at least delay, an impetuous escape from a task. The expected and magnified difficulties of a task at hand are assessed and downgraded in terms of how bad or insurmountable they seem; conversely, the deferred benefits of a task are upgraded in terms of their value and the client’s ability to achieve them. This process is coupled with

lowering the bar for the task at hand, which helps upgrade the client's self-regulatory efficacy for the task. This process also serves as cognitive exposure of thinking through a task to reduce emotional discomfort. There need not be a complete reversal of the negative-to-positive ratio such that all discomforts are eradicated and the task is viewed as all good; rather, this process serves to recruit enough "swing votes" to make a task doable, consistent with modifying the quick calculations of the time, effort, and energy costs of tasks that influence engagement versus disengagement (Henriques, 2011).

Comparative Thinking

There is a typical degree of social comparison that shapes an individual's self-definition. People iron out ways to use and enhance their talents and strengths in life while working around and accepting their relative shortcomings, often through observations of and interactions with others. Comparative thinking, though, becomes maladaptive when people make patently unfair appraisals. This is especially so for clinic-referred adults with ADHD for whom living with the condition entails working harder, differently, and often less effectively than peers in similar settings. In fact, there are times when the results of a client's efforts fall well short of expectations despite the time and energy expended. (Copps, 2000, noted that adults with ADHD often "work twice as hard for half as much.")

Adults with ADHD are particularly prone to this distortion because they use others and assumed societal standards as reference points for the "right" way to manage affairs, such as work, school, and personal life, which are common reference points for everyone. The typically effective coping methods that are fine for most people, though, are often not as easily or well used by adults with ADHD if not adapted to the nuances of the condition. Therefore, while an adult with ADHD is agonizing over a common problem (e.g., lateness, forgetfulness, misplaced keys), examples may come to mind of people who do not have such struggles (e.g., "My sister the attorney is not on her hands and knees right now, scrounging under the couch looking for her keys after she overslept").

Comparative thinking may appear as everybody else/nobody else thoughts: “Everybody else is on time despite busy schedules.” “Nobody else misplaces their keys every day.” There is some truth to these reactions as adults with ADHD have such problems with greater frequency and magnitude of effects. It is noted, though, that effective coping is effortful for those without ADHD, as they rely on many of the coping tools that are advised for managing ADHD. The cognitive shift is to affirm and telescope in on a client’s specific issue and craft a personalized, actionable plan: “I need a system for keeping track of my keys.”

Adults with ADHD often must use different tactics than their peers without ADHD to implement the requisite coping strategies and tools. That these strategies and tools are virtually compulsory for managing ADHD, yet clients still struggle with their use often triggers a sense of shame and feeling different. Shame is an emotion associated with the perception that an individual has acted in a way that diminishes self-respect and social standing with others, including feelings of humiliation (as opposed to guilt, an emotion associated with a perceived mistake).

Recalling that the selection pressure for EFs in humans was social demands of group living for reciprocity and cooperative efforts (Barkley, 2012), with cognitions functioning as self and social justifications for an individual’s actions (Henriques, 2011), it makes sense that adults with ADHD are prone to such reactions. Adults with ADHD often describe their struggles in terms of their effects on relationships and social capital despite efforts to change (which may involve mind reading, the distortion of presuming to know others’ reactions). In fact, a unique benefit of group CBT for adult ADHD is that it provides a community of individuals, including group leaders, who understand the struggles associated with ADHD and affirm that the client is not the only one facing these things (Groß et al., 2019; Solanto, 2011).

It was noted that ADHD is a quantitative difference and not a qualitative one insofar as it is a delay in the development and maturity of normative self-regulatory behaviors. This quantitative difference often makes clinic-referred adults with ADHD believe and feel that they are qualitatively different. While affirming the challenges posed by ADHD, the therapist can note that everyone uses organizational and time management tools and that procrastination is ubiquitous.

In a similar vein, many adults with ADHD describe an impostor syndrome, that they are scrambling to get by under the radar before others figure out that they do not belong, which was a concern voiced by Gloria. This theme underlies many comparative thoughts. Some adults with ADHD will preemptively withdraw from and avoid roles and obligations to circumvent failure, restricting their activities and options, and otherwise shrinking their worlds and lives, creating an invisible fence of ADHD (Ramsay, 2011b).

It is granted that managing ADHD requires customization of basic coping strategies. Any of the strategies can be tailored to a client's needs, like using colored highlighting to differentiate types of tasks in a planner or taking a reduced class load in college. A client who struggled to plan and put together a shopping list in advance of grocery shopping devised a reverse shopping list; she would go to the store, see what she was confident she could prepare, and construct a menu in that fashion. She spent more time at the store, just as a college student's reduced course load requires an extended graduation date, but these adjustments made her primary goal manageable and increased her self-regulatory efficacy. The cognitive shift is finding what works for a client.

The distortions reviewed here are those commonly encountered in CBT for adult ADHD. (The highlighted CBT manuals in the reference list include other distortions relevant to adult ADHD.) The next section focuses on other ways to modify thoughts.

OTHER COGNITIVE CHANGE TACTICS

There are a variety of strategies for modifying thoughts apart from those mentioned. Socratic questioning is a classic intervention in CBT (A. T. Beck, 1976; J. S. Beck, 2011; Wenzel, 2019), the ideal of guided questioning and conversations that aim to uncover and analyze a client's thoughts and tacit rules. The relative accuracy and utility of these cognitions are examined through this inquiry as well as pondering exceptions, adjustments, and alternatives to these initial reactions, which externalizes them and the process. The time between sessions offers opportunities to try out different behaviors, catch and work through a client's thoughts in real settings,

entertain different outlooks, and otherwise take active steps that hold the promise of improved functioning.

Guided discovery requires much more structure, redirection, and outright guidance by therapists to keep sessions on track and productive when working with adults with ADHD. This does not suggest impersonal drill instruction or inflexibility in session agendas. Rather, this guidance takes the form of observing drift and ensuring actions of the session are in line with client intentions. Nonetheless, the coping tools and strategies for adult ADHD are a therapeutic touchstone, shaped by a grasp of the client's goals, difficulties, and case conceptualizations.

As disengagement and escape–avoidance are the predominant reactions associated with ADHD, a central task of cognitive interventions is to foster engagement with various coping strategies. Some of the useful cognitive strategies adapted for adult ADHD are reviewed next.

Therapeutic Homework: Fostering Engagement in Field Experiments

The use of coping strategies in specific life roles and endeavors outside of therapy and corresponding functional improvements is the essential measure of therapeutic change. Therapeutic homework supports these outcomes through the recruitment of task-promoting thoughts and reduction in task-demoting thoughts. The aim is to foster clients' belief that they can implement the requisite change strategies, use them, and thereby see results.

Therapeutic homework in CBT for adult ADHD directly targets the relevant life problems that necessitated treatment in the first place; it is the idea that psychosocial treatment for adult ADHD operates at the functional level rather than the symptomatic level (Ramsay, 2017a). Most adults with ADHD have plans and goals that are feasible and desirable (although sometimes unrealistic), but yet struggle to enact them. Cognitive strategies target the pivot point between disengagement and engagement.

To this end, starting small and crafting early homework tasks for which there is high likelihood of success is particularly important for adults with ADHD (Ramsay & Rostain, 2015b). The goal is to not only promote initial success experiences, but also illustrate that procrastination, disorganization,

and other issues occur in small matters in the same way as in larger, important matters. For example, unloading a dishwasher, returning an impulsive online purchase, or paying bills are useful initial targets. The way in which a client avoids unloading a dishwasher entails the same issues as putting off a report for work. This view opens innumerable options to practice and generalize coping strategies.

A useful takeaway reminder and analogy to reinforce this point (and illustrate how unloading the dishwasher is in any way relevant to not getting fired at work) comes from the 1980s movie *The Karate Kid* (Weintraub & Avildsen, 1984). The teenage protagonist, Daniel, seeks karate training from Mr. Miagi. Before providing any formal lessons, though, Mr. Miagi assigns Daniel several chores (e.g., painting a fence, waxing a car, sanding the floor), with precise instructions for each one. When Daniel finally erupts in anger that he is not getting the training he sought, Mr. Miagi reveals that each chore represents a fundamental karate skill; Daniel had actually been in training all along.

Even the word *homework* may trigger noxious memories of past school difficulties. Reframes such as *field experiments*, *takeaway tasks*, *game plans*, *action plans*, *skill practice*, *gathering experiences*, or any preferred label maintain the aim to improve life outside of therapy (e.g., “The other 167 hours this week”). It is useful to normalize that imperfection and outright difficulties with some tasks is expected as part of the learning curve—whatever the outcome, there is a way to make positive use of it.

Define Terms/Specificity

Defining terms is a strategy typically used when clients refer to themselves in critical terms, as a *loser*, a *hopeless case*, or as often heard from adults with ADHD, *lazy*. Any term may hold a distinctive meaning for a client different than a presumed definition, such as a client ambivalent about the intimacy she craved in relationships. It was only when the therapist asked her to define her view of intimacy, which the client described as “giving in to another person no matter what they ask of you,” that new light was cast on the impasse.

It is a good practice to make sure the therapist and client are on the same page and to inquire about clients’ definitions of terms and labels (e.g.,

“Being lazy means that I know what I need to do, others seem to do it without a problem, but I still just don’t do it”). Specifying terms in this manner transforms a label from a character trait into a cognitive behavioral matter, which is easier to address (e.g., define the specific task you need to do, lower the bar to make sure it is manageable). Socratic questioning by the therapist can also be used to flesh out such issues—“If you told me you needed a pen to complete a form and I gave it to you, but then you did not use it because you thought that it had no ink in it or because you were not sure how to fill in the form and did nothing, is that lazy or is something else going on?” Such negative self-attributions are common for adults with ADHD, as these cognitions may have been implicitly and explicitly reinforced by frustrations, comparisons with others, and, in some cases, labels they have heard over the years, which fuel potential schemas.

Defining terms and specifying examples is particularly helpful when it comes to task engagement for adults with ADHD. The reframing/framing of tasks creates actionable steps, such as the smallest action a client can take to start or “touch” a task, help to lower the bar so that the broader task is reduced into a manageable engagement step, à la Mr. Miagi.

Another term to define is *it*, as clients will often say, “I can’t handle it.” Defining the *it* uncovers idiosyncratic meanings that create barriers to follow-through. For example, after his boss had assigned a project during a face-to-face meeting, a client became confused when reviewing his notes from the meeting, as they were disorganized and incomplete (e.g., “They made sense at the time”). The client planned to email his boss for clarification but later said, “I could not do it.” When asked about the *it* getting in the way, the client said that he worried that his boss would be annoyed at having to repeat instructions. He was concerned he would be seen as incompetent, citing times his boss and others were frustrated by his distractibility and disorganization. These issues were used to disentangle and sort through the client’s mind reading of his boss, including conceding that his boss might be frustrated, crafting the email, and accepting the fact he needed the project details from his boss. The client was encouraged to define his specific role in this situation (e.g., “Send an email requesting the details I need to do my job”) and eventually sent the email. (Defining terms/specificity is further discussed in [Chapter 5](#).)

Perspective Taking

Apart from their many other effects, working memory deficits affect perspective taking, which plays a role in manufacturing motivation for a delayed reward. For example, most tasks require tolerating a degree of time-limited discomfort to get started. Once on-task, discomfort often fades and opens the promise of achieving a felt, visceral satisfaction of completing an objective or at the very least time spent on task. Adults with ADHD are prone to impulsivity and escaping such discomforting tasks, though. Perspective taking involves holding in mind and acting on the alternative view that an individual can make headway and that the initial discomfort will be short-lived, which draws on cognitive defusion (e.g., “I can feel discomfort; it will pass once I start”).

Perspective taking is also useful when addressing the comparative thinking common to adult ADHD, as was mentioned in the previous discussion of everybody else/nobody else thoughts. Another variation on a classic perspective shifting question is to use the example of a friend who has ADHD (e.g., “If a friend of yours was in the same situation and had the same thought, how would you advise him or her”). Clients are often more compassionate with others than they are with themselves, including minimizing their personal need for patience and self-compassion when managing ADHD.

A useful analogy to illustrate this idea is the plight of a left-hand dominant person who encounters desks, scissors, sports equipment, stringed instruments, and other items typically designed for right-hand dominant people. Left-hand dominant people truly face more difficulties finding items fitted to them, but it is worth the extra time and effort to find customized items, as well as accepting the reality that sometimes they must simply improvise and make do with whatever is available.

On the other hand, perspective taking can operate as a Trojan horse, a covert justification for escape–avoidance. Decrees like “In the grand scheme of the universe, what use is an essay on ‘Beowulf’ to a business major?” are invoked to an individual’s detriment. Therapists can adopt a devil’s advocate role to gently confront whether such perspectives are adaptive in a specific context, thereby balancing the right of self-determination with ensuring clients are making informed decisions: “Yes, the ‘Beowulf’ paper is

not your life's work; but, tackling it now will avoid your risk of working on it over break, taking an incomplete, or possibly retaking the course. Ultimately, it is your choice, though we can review tactics for handling it.”

Perspective taking and scaling, the latter referring to viewing one's reaction along a continuum help to identify exaggerated reactions and place them at a more realistic point on a range (e.g., “Yes, reading ‘Beowulf’ is a chore, but is it really the worst? How does it rank from 0 to 100? What could be worse? Is it worse than compound fractures in both legs?”). Scaling the client's discomfort leverages a view that a task can be unpleasant and still tolerable. The client's ability to endure time-limited discomfort is a sufficiency reframe, rather than an all-or-nothing view (e.g., “I can manage it” vs. “I'm not in the mood”).

Can Positive Thinking Be Problematic?

When discussing the aim of cognitive modification, the descriptor used is *adaptive* thoughts, not necessarily *positive* ones, which is by design. A misguided critique of CBT reduces it to the power of positive thinking. It makes sense how this view may have taken hold as CBT came on the scene as a therapy for depression (A. T. Beck et al., 1979). CBT for depression targets the signature themes of hopelessness and pessimism, promoting adaptive optimism and hopefulness coupled with behavioral activation to achieve improved mood.

Positive thoughts can be distorted, though, such as individuals with gambling addiction ignoring laws of probability or individuals in a hypomanic/manic episode minimizing the risks of reckless acts. *Incautious optimism* is an issue relevant to escape-avoidance common to adult ADHD (Knouse & Mitchell, 2015; Knouse et al., 2019). Maladaptive positive thoughts are often coupled with impulsivity, such as adults with ADHD who are prone to over commitment, rashly taking on projects that are compelling, but which they cannot reasonably fulfill (e.g., impulsive compliance; Ramsay & Rostain, 2015a).

Impulsive compliance is often fueled by enthusiasm for a novel opportunity. Apart from difficulties saying no to others, positive feelings associated with an invitation and the gratitude expressed by the asker (e.g.,

“Great! You’re the best!”) reinforce a proneness to answer yes. There are many situations that can be anticipated, but others arise unexpectedly. In either case, advance coping strategies can be developed and practiced.

Interventions for incautiously optimistic thoughts, impulsive compliance, and other maladaptive positive thoughts draw on interventions for impulsivity. Impulsivity is a sequencing/working memory problem punctuated by disinhibition, illustrated in descriptions such as “On your mark. Go. Get Set.” or “Ready. Fire. Aim.” When faced with an interesting proposition, many adults with ADHD have difficulties being able to pause, think through their existing commitments (e.g., reflect), and judge whether it is feasible to take on the responsibility (e.g., profligate). This process includes managing the decision pivot point by either declining an offer or delay to allow for further deliberation. Cognitive interventions challenge the assumption that clients have no control over impulsivity.

A central skill for impulsive compliance is crafting a pithy coping response for buying time. When invited to take on an obligation, adults with ADHD can express interest but defer a final decision (e.g., “I’m honored to be asked to organize the school fund-raiser but let me get back to you”). Having a stock response helps to circumvent the assumed pressure to offer an immediate answer.

This does not mean that an adult with ADHD will never accept any invites. Buying time allows an adult with ADHD to ride out the initial impulse, mull over an offer, and sort through any logistic factors and potential conflicts. This delay allows an adult with ADHD to propose any conditions that would allow him or her to accept the invitation without undue stress (e.g., negotiating a deadline). There may be persistence on the part of a person trying to recruit the adult with ADHD, such as using a combination of flattery, pushiness, pleas, or outright guilt induction. An assertive take-away skill is that of the politician ploy to “stay on message,” simply repeat the thanks, but no thanks script, including the reminder that one need not justify a decision.

When addressing incautiously optimistic thoughts such as “I study best the night before an exam,” guided discussions of the implications of this view help to assess it (e.g., buying time with the client to sort it out). For example, a therapist can ask, “Are there any potential difficulties with waiting until the last minute? Do you have any other assignments that are due at the same

time?” Even if the client is confident in his or her plan to cram at the last minute, the extended ripple effects on sleep and other domains of life should be considered. Ultimately, clients have the right of self-determination, but a guided review promotes informed decisions.

In fact, relevant to the discussion of maladaptive positive thoughts, there is a view of ADHD being associated with a proneness for risk-seeking. Recent research has disentangled the issue of risk-seeking from that of suboptimal decision making, indicating that it is a deficit in the latter skill that results in the former (Dekkers et al., 2018). Decision-making and problem management interventions can be helpful in promoting adaptive choices.

There will be times that adults with ADHD (or anyone else) will be impulsive or act imprudently. Apology is a commonsense strategy after an ill-advised act to make amends, which can go a long way toward assuaging the effects of impulsivity. On occasion, an adult with ADHD may have to resort to an after-the-fact retraction of a promise. A reframe of this strategy is that for the investment of a minute of discomfort, the client is saving himself or herself from greater stress. Other facets of managing impulsivity are discussed in [Chapter 5](#) of this volume.

Focusing on Strengths and Resources

Clinic-referred adults with ADHD in CBT are dealing with notable impairments in at least one area of life, although they are usually facing stress and impairments in other areas too. The management of ADHD through CBT itself asks clients to sign on for a process requiring the use of various tools and strategies. This can be viewed by clients as potential sources of failure and frustration, noting that it is the difficulties with disorganization and follow-through that created the problems that led them to seek help in the first place.

A role of therapists working with adults with ADHD is to reinforce progress. Adults with ADHD are understandably prone to negative overgeneralization, including when facing difficulties in CBT. An undone homework task or coping setback is evidence that the client is “failing” at CBT just as they have “failed” at everything else. This reaction is magnified

by mind reading the therapist: “I know my therapist is bored with me because I’m still struggling with procrastination.” A useful approach is to normalize these slip-ups and reactions as typical in the course of CBT for ADHD. Moreover, behavior change and maintenance involves a process of taking several steps forward and a few steps back.

An aspect of CBT for adult ADHD, though one that is often not as clearly detailed, is exploring and cataloging examples of personal competence, strengths, and aptitudes. The initial and primary CBT objectives target the typical problem areas, the usual suspects in adult ADHD. However, there will be talents or interests that clients may describe or explore during a course of treatment that have been stifled by ADHD or sacrificed because of the time and effort devoted to managing the effects of ADHD. Even within the impairment domains, there may be aptitudes that have taken a back seat to the effects of ADHD, including how the condition interferes with opportunities for clients to display their best selves (see Sedgwick, Merwood, & Asherson, 2019).

Even problem areas may offer a glimpse into such positive characteristics and qualities, such as a college student who tends to overcommit with clubs and other duties. Although the student may work at being more discerning in what she takes on, her passion for being active and involved can be reinforced and leveraged in positive directions. An aspect of healthy coping is to ensure that client get their recommended daily allowance of self-care activities, which include personally valued endeavors. Such valued activities can be invoked for therapeutic targets (e.g., “You are really good at keeping up with exercise, even after a full day of classes. Are there aspects of your ability to do this that you can use when facing assignments?”).

A concept that is familiar to practicing clinicians that is particularly relevant for adults with ADHD is that of goodness of fit, the match of a client’s strengths and interests with the corresponding expectations and demands of a setting. This issue often arises when assessing the fit of academic and work situations (see Lasky et al., 2016). Clients may find themselves encountering significant struggles in a college major or work setting that go beyond the use of coping strategies to manage challenging aspects of these endeavors. Instead, there are essential demands of a field of study or career that are ill-suited for the goals or well-being of an individual. The ostensibly straightforward task of finding a better fit often runs up

against comparative thoughts (e.g., “All my friends will graduate on time,” “I’m almost 40—I need a career”). Although there will be pragmatic issues related to finances and availability of jobs, focusing on strengths, skills, interests, and other aspects of good fits often yield some promising options or at least obvious poor fits to avoid.

Although CBT is first and foremost a clinical treatment undertaken to address life problems, the recognition of skills and aptitudes is an important component in its customization for adults with ADHD. Highlighting positive examples of coping and the use of talents that may have been run asunder by the difficulties associated with ADHD is another useful avenue of intervention, a variation on the notion that there is nothing wrong that cannot be bettered by what is right.

CONCLUSION

This chapter reviewed classic cognitive interventions adapted for adult ADHD, including the nuances of automatic thoughts and other mind-sets in clinic-referred adults with ADHD. Cognitive interventions focus on enhancing the ability of adults with ADHD to engage in and implement these tasks and endeavors, including differences for how coping skills are framed and delivered. [Chapter 5](#) focuses on the use of these interventions in various real-world contexts and situations faced by adults with ADHD.

KEY CLINICAL POINTS

- **There are various ways to identify and track cognitive distortions to help clients become more aware of them.** Different aspects of self-talk provide novel ways to consider the influence of cognitions and operate as an inhibitory intervention that allows for prolongation of the immediate moment.
- **The defense attorney analogy is a tactic with which to implement cognitive modification skills.** Negative

automatic thoughts are framed as an argument made by a prosecuting attorney to the court. The defense attorney serves as an advocate for the client to review the evidence. Defusion strategies are a companion tactic with which to accept and deenergize intrusive or distressing thoughts rather than trying to suppress them.

- **Cognitive reframing is a useful cognitive skill for managing many reactions that may involve a sense of insufficiency in adults with ADHD and for reexamining whether adults with ADHD have enough energy, focus, or time to complete a task rather than avoid it.**
- **The most common cognitive distortions encountered with adults with ADHD include perfectionism, all-or-nothing thinking, magnification/minimization, and comparative thinking.**
- **The classic CBT cognitive interventions play an important role in various other related change tactics.** These include following through on therapeutic homework or field experiments; defining terms and specificity, particularly when addressing labels; perspective taking and keeping reactions in proportion to events; managing difficulties related to distorted positive thoughts; and identifying and making therapeutic use of a client's strengths and resources.

5

Cognitive Interventions in Action

Common Issues in Cognitive Behavior Therapy for Adult ADHD

Chapter 4 reviewed many classic cognitive interventions and typical cognitive distortions encountered in cognitive behavior therapy (CBT) and how these are adapted to the needs of adults with attention-deficit/hyperactivity disorder (ADHD). The focus of Chapter 5 is how these interventions are woven into psychosocial treatment to tackle the functional difficulties faced by adults with ADHD, particularly those related to escape–avoidance. The brain’s reward system is influenced as much by the anticipation of a reward as its achievement (Sapolsky, 2017); therefore, cognitive interventions help adults with ADHD frame and approach tasks so that they trust their ability to engage in them, which is consistent with the self-regulatory efficacy cognitive theme.

This chapter is organized to introduce coping topics in terms of their typical frequency of occurrence and priority for adults with ADHD in the course of CBT. Such problems are not so easily compartmentalized, however, and there is a great deal of overlap amongst these therapeutic issues. Managing procrastination also draws on interventions for time management that are influenced by impulsivity and emotional dyscontrol. The order of presentation is debatable, but practicing therapists will find the central issues for adult ADHD covered in this chapter. Chapter 6 reviews less frequent, but important, issues for therapists working with ADHD.

The review of common therapeutic issues facing adults with ADHD starts with fostering engagement in treatment before tackling procrastination,

starting with a subset termed *procrastivity*. This review is followed by time management, disorganization, and overlapping but distinct issues of managing emotions, discomfort, impulsivity, and motivation/values. The review ends with assertiveness and self-advocacy, addressing schemas, and handling difficulties clients may have using coping strategies. This final issue is particularly relevant, as adults with ADHD often struggle to reconcile and manage normative setbacks encountered in CBT or any attempt at behavior change.

As in [Chapter 4](#) of this volume, the interventions reviewed in this chapter offer a menu for therapists and their clients. There is not a prescriptive order of introduction of interventions or expectation that all of them will be used or found useful by each adult with ADHD. Clients may find and rely on some favorite go-to coping tactics or mix-and-match them to suit their needs. The measure of the interventions is their utility in helping clients implement coping strategies to improve functioning. Clients must engage in treatment to reap these benefits, though.

ENGAGING IN TREATMENT

Late-identified adults with ADHD often need time to come to terms with their diagnosis and its implications. An accurate diagnosis of ADHD can be considered the first cognitive intervention because it provides a reframe for making sense of longstanding difficulties and frustrations (Ramsay & Rostain, 2015b). This insight and prospect for change boosts hopefulness for many clients, though others have an initial grief reaction as they reconsider their lives through the lens of ADHD. Clients often wistfully (or angrily) reflect on how their lives might have been different had ADHD been recognized earlier. Witnessing clients process such grief reactions may provide hints of possible schemas, if not fully formed examples: “For all this time I thought I was just lazy, a screw-up.” A period of reviewing these reactions using accurate empathy and psychoeducation usually allows clients to reach a point of readiness for change.

Some adults with ADHD were diagnosed in childhood or adolescence but continue to experience problems. They may describe unsuccessful attempts at change in past treatments, through self-help and expert advice, or they may

disclose new life difficulties. They are likely on medications and have reduced symptoms but realize “the pills don’t teach the skills.”

Psychoeducation about ADHD as a problem of self-dysregulation helps to normalize and make sense of these experiences. This framework gives a neurobiologically informed explanation for the behavioral manifestations of ADHD—“Here is why and how you struggle with disorganization.” Outlining CBT provides a framework for how it can be helpful that may kindle hope for change; what can be done about the why and how of ADHD. Clients can also be encouraged to do their own research through reputable publications, ADHD organizations, and online resources which provide credible information and a sense of community. A full list of resources and organization is listed in this volume’s [Appendix](#).

Psychoeducation about the CBT approach includes the useful reframe that it is a shift from managing ADHD to managing pivot points. This is not merely a semantic twist but sets an important tone that the problems associated with ADHD (e.g., procrastination, poor time management, disorganization) can be sorted into specific, observable behaviors that lead to specific, actionable coping steps that are more believable in terms of self-regulatory efficacy. This is not meant to suggest that adults with ADHD are urged to “try harder” to be organized; rather there are high-yield points between disengagement and engagement or other moments when the timely use of coping strategies are emphasized and targeted. Better use of coping skills fosters improved functioning.

The notion of pivot points, itself, could be considered an intervention. William James described the notion of now as constituting the “specious present” (James, 1890). This point is a window of a few to several moments representing the time span for certain actions (e.g., a handshake, a musical motif, other brief events). The specious present is a yoke between the past and the future, and people move through time on these pulses. It was described as “the prototype of all conceived times . . . the short duration of which we are immediately and incessantly sensible” (James, 1890, p. 631) providing an increment of consciousness with “a bow and a stern” (p. 609). It is at this fulcrum (and leading up to it) that cognitive interventions are likely most relevant in addressing ADHD. Defining and targeting these influential windows of opportunity, the synaptic cleft between abstract plan

and visceral experience, between not doing and doing, is the aim of CBT for adult ADHD to draw actions more in line with intentions.

This pivot point view sets the stage for goal setting. This process involves breaking down common goals (e.g., “I want to procrastinate less”) into more specific behaviors. The notion of starting small involves eliciting immediate, smaller examples of goals (e.g., “What is a recent example of when procrastination was a problem for you?”). Even if the example is seemingly insignificant, the point made is that people procrastinate on the small stuff the same way as they do the big stuff. The skills for handling one task can be used with all the others. Clients with ADHD are already prone to procrastination, making it and other forms of maladaptive disengagement arguably the central target in CBT for adult ADHD.

PROCRASTIVITY AND ADULT ADHD

Procrastivity refers to the phenomenon in which an individual makes a good-faith plan to engage in a priority task, but when it comes time to perform the task, engages in a lower priority (but still productive) endeavor (Ramsay, 2017b). Although procrastivity and other task delays can be adaptive at times, the construct is used here to focus on the larger issue of procrastination as a clinical problem that affects most adults with ADHD. Procrastivity is self-defeating because the lower priority task, although useful, is not as time urgent or important as the high-priority task and draws time and energy away from it, increasing the likelihood the priority task will go undone.

Consider the example of a client who intends to work on their income taxes on a Saturday morning well in advance of the April 15 tax deadline. Once Saturday arrives, however, the client abruptly changes plans with a justification (e.g., “The lawn is looking pretty high. I should mow the lawn now. I will mow the lawn, then I will be able to focus on taxes”). If executed as stated, there is no problem with this plan, whatsoever. However, what usually happens is after mowing the lawn the client has other task-demoting thoughts (e.g., feeling too tired) or finds other things that need to be done and justifies pushing off taxes to tomorrow.

Procrastivity is not unique to ADHD but illustrates the distrust cognitive theme of poor self-regulatory efficacy. Adults with ADHD become dispirited (i.e., lose motivation) at the point of performance because of doubts of their capacity to carry out the steps of an otherwise logical and feasible plan. This thought and related feeling of discomfort result in procrastivity—jumping to a task for which they view themselves as more able to manage. Adults with ADHD will then criticize themselves for not keeping to what, in hindsight, seems logical and feasible plan—the double whammy of negative thinking in ADHD and procrastination.

Reverse Engineering Procrastivity

Because procrastivity promotes action and engagement, albeit to escape a priority task, it is important to deconstruct exactly what it is about procrastivity tasks (themselves likely a subject of avoidance in the past) that suddenly makes them seem more doable when facing higher priority tasks. What can be gleaned from them that can help adults with ADHD?

First, procrastivity tasks tend to be more manual or clerical, whereas higher priority tasks are often mentally challenging and exact a greater cognitive load. Each person holds a personalized algorithm for weighing the difficulty of assignments, chores, and other tasks and his or her corresponding ability to handle them. Tasks such as taxes or financial matters, homework, writing tasks, and unfamiliar jobs with a potential for error (e.g., completing online student financial aid form) are likely candidates for escape by procrastivity. Relative to other tasks, these involve a degree of uncertainty about making progress and reaching a desired outcome.

Even among competing high-cognitive-load tasks, there is an implicit rock–paper–scissors scheme for determining their relative degree of difficulty (e.g., a reading assignment is easier than a writing assignment, paying bills is easier than an online financial aid form). These risk–benefit rules recall the behavior as a commerce model in which actions undergo quick, nonconscious appraisals of their time, effort, and energy costs (Henriques, 2011). Despite the logic of facing higher priority tasks first, these tasks are often reflexively judged to be bad investments and avoided,

magnified by delay aversion and executive function (EF) difficulties in adults with ADHD.

Second, with procrastinatory tasks there is a better sense of what can be accomplished within a window of time than for a high-priority task. There is a clearer sense of cause and effect between the input of time, effort, and energy and outcome for procrastinatory tasks. A client who avoids taxes by mowing the lawn might describe an image of working on taxes for hours and making no progress, whereas the time and effort to mow the lawn is well known. This predictability makes the procrastinatory task seem comparatively more manageable.

In fact, adults with ADHD may take on procrastinatory tasks that require much more time and effort than a priority task (e.g., 2 hours mowing rather than 1 hour doing taxes). Clinical anecdote suggests that clients escape to procrastinatory tasks requiring more time and effort when they are confident (e.g., greater efficacy) that they will achieve a desired outcome. A priority task, conversely, is viewed as a potential source of frustration (e.g., wasted time and effort), which may activate a degree of visceral, emotional discomfort. Therefore, it is deemed better to devote more time and effort to an assured positive outcome than less time and effort to an uncertain, potentially negative (discomforting) outcome.

Third, the procrastinatory task, because it is often a familiar one, comes with an existing action template or well-established routine that helps adults with ADHD more readily start than the priority task. The client facing taxes may feel disorganized and uncertain how to approach the task. This uncertainty creates a degree of hesitation and unease, even in mild form, which opens a justification for escape, fueled by a proneness for emotional dyscontrol and impulsivity.

The fourth and fifth elements of procrastinatory tasks are related. A procrastinatory task often provides a clearer sense of progress when compared with the priority task, which is the fourth element. There are incremental markers that progress is happening (e.g., a clear view of how much lawn has been mowed); the progress on priority tasks is less clear (e.g., how much more time and effort is required to complete a tax return, will previous steps need to be corrected before filing).

These examples bring us to the fifth and final element of procrastinatory tasks, which is that they offer a definitive, readily achievable endpoint that

brings with it a visceral sense of completion. Priority tasks often have imprecise, deferred endpoints, perhaps because of unclear markers of progress. These jobs require devoting efforts, often across time, without a clear sense of when they will be done (apart from a deadline).

In the case of mowing the lawn, there is a hard stop offering a positive, felt reaction (e.g., “I’m done mowing!”). Mowing the lawn may not be an existentially fulfilling venture, but there is a positive feeling associated with finishing the task. A deferred reward is an abstraction that is extremely difficult for adults with ADHD to hold in mind and use as motivation. Although there is a clear tax deadline (but not now), it may be unclear where one stands at any time relative to the finish line, not to mention the allure of the wild card escape option of a tax extension.

Lessons Learned From Procrastivity

Procrastivity is not unique to ADHD, but it and other forms of procrastination likely occur more frequently and with more impairing effects for adults in this population. Fortunately, the facets of procrastivity provide several useful lessons that guide CBT interventions for adult ADHD.

The first lesson is to define a specific behavior that represents the smallest actionable step, at least for engagement. This pivot point is one for which a step is defined as something a client can do to move from being *off task* to being *on task*, the synaptic step of turning intention into action. This step also navigates the reflexive, visceral (emotional) discomfort, even in mild form, associated with tasks and resulting proneness for an impulsive escape.

Using the tax example, an actionable first step is to collect all envelopes marked as important tax documents or the digital equivalent. Carrying out this action does not represent any appreciable progress on the central task, but, especially for adults with ADHD, it is the essential engagement step of *touching the task*—the task is now tangible and no longer an abstraction. Even if an adult with ADHD stops after this step, he or she did not procrastinate, and taking this step has exponentially increased the odds of taking more steps.

The second lesson is to outline ensuing steps, creating an explicit behavioral script or recipe for the task plan. This turns the conceptual knowledge of what needs to be done into actually seeing and doing a sequence of actions (e.g., “I will take the tax document envelopes to my kitchen table, open them, and organize them by category. I will then log on to the IRS website”). Such scripts externalize, manualize, and sequence steps for engagement, akin to a this-then-that approach. Scripting may seem remedial, but it is an accommodation for the working memory and sequencing problems that are features of adult ADHD (Barkley, Murphy, & Fischer, 2008).

Scripts may include steps for later reapproaching tasks that require multiple work sessions. A final step of the current work session is to schedule a day and time for the next work session. There may be different scripts for different tasks at various points in a project (e.g., “Next time I work on my taxes, my first step is to gather receipts for my work expenses”; “I will reread the last two paragraphs of my essay I wrote last time”).

The third lesson is to set a discrete time frame for working on a task, including a specific start time and a specific end time, ensuring the expected task duration is realistic. This framing creates a bounded task with which to track the flow of the task. The imposed parameter offers a time-based way to set up a realistic plan and to track progress. A definitive endpoint provides a specific target for calibrating effort and energy, including marshalling and extending resources to “hold on” until the end (e.g., “Five more minutes, then I’m done”).

Adults with ADHD may propose an open-ended work plan or large block of time (e.g., all day; 3-hour block); however, these sorts of plans often reflect maladaptive positive thoughts. When making task plans, these lofty notions are reassuring placeholders that soothe immediate discomfort or stress (e.g., “I’ll take care of taxes on Saturday when I have all day to work on them”). This example embodies the now/not now conundrum in ADHD—unless facing an imminent and unavoidable task (“now”), it is a disembodied concept (“not now”). People often do not do things they enjoy for 3 hours or all day. In fact, facing a 3-hour or all-day work block is an overwhelming prospect that increases risk for avoidance.

The strategy of creating a time-bounded task plan draws on the hard stops offered by typical procrastivity tasks. The bounding is analogous to setting a

goal of swimming a certain number of laps in a pool. The defined endpoint provides the wall at the other end of the pool that provides a reference point by which individuals with ADHD can calibrate their time, effort, and energy management (e.g., “Half a lap, then I’m done”). The bounding approach reflects one of many ways to frame/reframe time and tasks to foster engagement, which can also be used to extend effort (e.g., “I feel good, I can do one more lap”). This lesson is particularly important for tasks requiring multiple work blocks to reach a finish line for each increment, thus sustaining efforts across time.

The fourth and final lesson, which overlaps with time bounding, is to define a doable behavioral objective for a task. Although time-bounding provides benchmarks for progress and completion, it is useful to define a minimal behavioral objective, such as reaching a certain step in the action script. Using the tax example, an actionable objective could be to enter basic data on the online tax form. Even if the objectives are quickly met, the behavioral benchmark has been reached and efficacy is reinforced. The time-based and behavioral objectives can be used together and create a whichever-comes-first endpoint to achieve a point of completion.

[Exhibit 5.1](#) lists the lessons of procrastivity, which provide ADHD-friendly ways to approach tasks. They do not change the tasks but how they are framed and defined, which likely improves self-regulatory efficacy. The next section reviews the use of these and other strategies to address the broad-based procrastination encountered with adults with ADHD.

EXHIBIT 5.1

Lessons Learned From Procrastivity

Procrastivity definition: Avoiding a higher priority task by engaging in a lower priority, less time-urgent (but productive) endeavor that is ultimately self-defeating.

Facets of procrastivity tasks are that they

1. tend to be manual or clerical;
2. provide a clear sense of what can be accomplished in a window of time;
3. provide a series of familiar, actionable steps for getting started;
4. provide a clear sense of progress on the task; and
5. provide a clear endpoint with a definitive conclusion to the task.

Coping strategies developed from procrastivity for promoting engagement and follow-through are to

1. define the smallest, specific, actionable (manual) step to move from off-task to on-task;
 2. define an ensuing sequence of behavioral steps or script to make them actionable;
 3. create a bounded task with a start- and end-time, which allows assessment of progress on the task; and
 4. define an achievable, task-based objective that provides a minimal target for the task, which can augment a time-based endpoint.
-

MANAGING PROCRASTINATION: HOW YOU DON'T DO THINGS

Procrastination has been deemed the “quintessential self-regulatory failure” (Steel, 2007, p. 65). For clinic-referred adults with ADHD, procrastination ranks as one of the most, if not the most, common problems. The lessons of procrastivity (Ramsay, 2017b; Ramsay & Rostain, 2016a) inform many elements of an implementation-focus in CBT for adult ADHD (Ramsay & Rostain, 2015a, 2015b). Many of these approaches overlap with and draw on research from broader self-regulation interventions (Vohs & Baumeister, 2016) and implementation intention strategies (Gollwitzer, 1999). This CBT approach aims to help clients understand how ADHD interferes with their objectives of understanding how they procrastinate or do not do things, thus defining corresponding pivot points for coping.

A clinical tool developed for this end is the How You Don't Do Things (HYDDT) form. The pivot points are presented in this section in the same order as on the form, which serves as a takeaway reminder and coping tool.

Define the Overarching Goal and Its Value

The first step in tackling procrastination is understanding exactly what a client wants to do and why. There is an array of issues that emerge at this stage that may encompass any number of EF or motivational factors. A common barrier at this step is sorting through and prioritizing among competing tasks. Mitch, a college student with ADHD, sought CBT because of difficulties managing college, specifically difficulties organizing and managing homework. An initial pivot point that emerged was deciding which of several assignments to do first. Another student may have a specific homework task but faces a sorority meeting vying for her time. Both students have a task goal to do homework, but each faces their own prioritization.

After defining a task goal, its value for the client should be reviewed. The phrase *do homework* may connect with a desire to be a better student, pass a class, or simply get it out of the way; such tasks also may hold other value (e.g., “I want to know that I can fulfill obligations even if they are not fun”), which can be leveraged to promote follow-through. Whenever possible, it is good to set up external reminders of goals and their values. These may be an inspirational quote, an image, or a timer set for a time-based study goal. One client bought a plastic toy button embossed with the word *Easy* that he would hit after finishing an assigned chapter. The button operated as a cue for starting the task and a reinforcing gesture for completing it.

Goal valuation is important to bring to the forefront of a client's mind. A nonclinical study about choice making when given personally relevant options illustrated the role of orienting attention in the valuation process (Suri & Gross, 2015). In the study, there were opportunities for acting on priorities (e.g., healthy vs. unhealthy food, taking stairs vs. escalator), and visible cues for priorities led to better follow-through on actions consistent with these priorities than when cues were absent. These types of externalized coping prompts and incentives are recommended for adults with ADHD, who require more frequent, prominent, and salient cues for them to be effective.

(In some cases, ambivalence about tasks represents broader therapeutic issues, such as an uncertainty about a college major or the desire to be in college at all.) The next step involves making the valued plan more actionable.

Redefine Tasks in More Actionable Terms

Clarification of an overarching goal and its value sets the stage for turning it into a more defined action plan, specifically reducing it to a sequence of specific, manageable steps. In the case of a homework assignment, an actionable task definition specifies a particular assignment. In Mitch's case, after deciding the economics homework was his priority, *do homework* was reworded as *work on Economics 101 assignment*. Some individuals will find this to be an adequate step for getting started, however for others, this step and definition still result in a task that is an abstraction.

A more specific, actionable task is to answer questions at the end of [Chapter 5](#) for Economics 101. This offers a clearer, more specific image of what needs to be done, reduced to a manageable portion of work. This clarification is likely a component of a broader homework goal that requires more detailed scripting (e.g., "After finishing [Chapter 5](#), I'll log on to the discussion board for Philosophy class. I'll read posts since the last class. I'll consider ideas for my required post"). While providing a clear-cut objective, even this level of detail may not provide enough impetus for getting started. The next step involves specifying the action step for a task that signifies moving from being off-task to on-task: the engagement step.

Smallest Actionable Step of Engagement

After making a task goal more actionable, the next step is to tease apart and define the smallest actionable, manual step that promotes initiation of the actionable task plan. Even though there may be a perfectly feasible action plan set out, there remains the need to navigate the pivot point from disengaged to engaged. This may be achieved by highlighting the first step in the action sequence or, in many cases, spending more time setting out a plan for the launch sequence before getting to the task plan.

For Mitch and his economics homework, first steps related to the task script might be to open Economics text and read questions at the end of [Chapter 5](#). Such initial steps need not result in progress on the task but still are helpful in getting started (e.g., check the online syllabus to confirm assignment). Taking this step does not mean that Mitch will complete or even start the homework, but it helps lower the bar and shift from not doing it to doing it. In the case of adults with ADHD, these initial steps may serve dual purposes as checking ensures accurate information (e.g., that the homework is for [Chapter 6](#), not [Chapter 5](#)).

Another manual first step for Mitch is to get to a study station (e.g., “I will go to the library at 3 p.m. tomorrow”) or other examples that touch a task (e.g., “I will get my gym bag,” “I will get car keys to run errands”), which help clients get out of their head and into the here-and-now moment. These sorts of initial steps are like dipping a toe into a swimming pool. The person is not yet swimming but by simply touching water, the chances of swimming have exponentially increased. Even arriving at the pool, wearing a swimsuit, and finding a swimsuit at home all represent pivot points or ways to touch the task, which makes the task visceral rather than conceptual and increases engagement.

Planning the engagement step also represents cognitive exposure and rehearsal that serve a behavioral priming function to ready the client for this and subsequent behavioral steps. The first step is designed to initiate a launch sequence of other steps necessary for the task. Once started, the behavioral sequence (e.g., the study script in the homework example) is likely familiar and more actionable.

The task remains at risk for avoidance. Although the plan seems feasible during therapy, there are many dissuading tasks competing for a client’s time, effort, energy, and attention outside the CBT session. In effect, the client has the coordinates for his or her task plan but must now navigate to this behavioral destination, including steering through procrastinativity and other distractions.

When and Where Will You Perform the Task?

Another priming step for a priority task is to have a plan for when and where it will be performed and documenting this time (e.g., in a planner). This strategy may also serve as the smallest step of engagement. As noted previously, this step does not immediately address the task but initiates the launch sequence connected with the desired outcome.

Mitch viewed his plan to go to the library after his last class let out at 3:00 p.m. as a feasible one. Scheduling the time and place at which a task was to be performed provided a targeted plan to just get there. Walking to the library does not get the assignment done, but it entails a necessary cognitive shift of going with an intention of studying (“study mode”), even if done with a sense of resignation or discomfort. Mitch adopted what he called “zombie mode”—“Don’t think, just walk”—to get to the library. He later recounted that while walking to the library he felt more focused, felt less discomfort about the task, and had a mind-set that he would get some studying done. He also saw many other students walking to and seated in the library, which normalized the fact that they had to study too.

How Much Time to Devote to the Task

The final task planning step on the HYDDT form is to set a realistic, bounded time frame for a task (with a start time and end time). The start time for a task is often established during the when-and-where discussion of an action plan, but it is equally important to establish an end time. The objective is to set a feasible and achievable time frame in which to perform the task and establish an endpoint at which there can be a positive felt sense of completion, with self-efficacy ratings and task completion being positively correlated (Bandura, 1997).

There is a bias toward making task predictions based on ideal circumstances and an individual’s best performance (Kahneman & Tversky, 1979) rather than on typical conditions. Adults with ADHD may be inclined to set ambitious expectations because of their desire to complete a task in one sitting in an effort to contain stress and discomfort. It is advised that a time estimate not be based on a client’s view of their best days (e.g., “There are times I get on a roll and I can study for 5 or 6 hours”), but rather a more modest estimate to enhance engagement.

Mitch planned to go to the library at 3:00 p.m. after his last class. His initial plan was to study until 7:00 p.m., but the therapist wondered aloud whether 4 hours at the library after a full day of classes was too ambitious. After some back-and-forth discussions about what constituted a realistic endpoint, Mitch settled on staying until at least 4:30 p.m. but he retained the option to stay later. This plan increased the likelihood of his hitting the target.

In this example, a time-based endpoint was used, but a task-based goal could also have been used (e.g., completing at least two economics problems). However, some task-based targets for academics (e.g., writing three pages) may be variable in terms of the time they require to complete. A task-based approach is handy for administrative tasks or those with clearer time and effort estimations (e.g., a set number of online job applications). For other chores, item- or location-based endpoints can be used (e.g., remove all dirty dishes from the kitchen counter). As long as a client can give himself or herself credit for keeping to the spirit of a task-based goal, they are a useful adjunct (e.g., “I wrote two, not three pages of my paper, but I was productive”).

Being able to see the endpoint allows a client to calibrate efforts to reach it, including using this focal point when persisting through difficulties (e.g., “Ten more minutes until 4:30 p.m.; I can do it”). Adults with ADHD often run into trouble when holding themselves to nonspecific, often unrealistic tasks and time expectations (e.g., “I’m going to spend all day organizing the house,” “I’ll skip classes tomorrow and spend all day researching and writing my 10-page paper”), which have a high likelihood of not working out as planned.

Two additional points can be made about this approach. First, viable endpoints are benchmarks for progress on a task. Reaching each of these points represents an accomplishment by itself. Positive feelings associated with getting things done, even small tasks, are typically undervalued. The sense of completion, for a single task and for cumulative tasks throughout a day, is an important one for adults with ADHD, as it reinforces and provides evidence of self-efficacy. Highlighting an endpoint and having externalized reminders for it helps manufacture motivation (e.g., “How good will you feel at 4:30 p.m. when you’ve met your study goal?”).

Second, this approach emphasizes getting started and making enough progress. When reaching his defined endpoint, Mitch may be on a roll and

keep working on this or other assignments. Once engaged, a client can extend an endpoint (e.g., “I’ll keep going to the end of this chapter,” “One more problem and then I’m done and can submit it”). These bonus scenarios are benefits and consistent with the spirit of the interventions (but must be checked in the event they are excessive, such as hyperfocus, and interfere with other priorities).

Personalized insights can be gleaned from these examples (e.g., “I can handle a 2-hour study session,” “I work better in the morning; I need shorter work blocks in the afternoon”). The bounded task approach is useful, if not essential, for adults with ADHD who are juggling diverse tasks and obligations. Time-bounded work blocks help to organize plans for budgeting time and switching between different obligations and endeavors, including self-care and down time activities.

At this point in the HYDDT process, there is a personalized, realistic plan with which to counter procrastination. Attention now turns to potential difficulties and distractions that may undermine these intentions. The image of achieving a goal itself can be pleasing enough that it distracts from and interferes with the actual execution of a plan (Oettingen, 2014; Oettingen & Cachia, 2016). The strategy of *mental contrasting* involves defining goals and objectives coupled with managing likely barriers to follow-through (Gawrilow, Morgenroth, Schultz, Oettingen, & Gollwitzer, 2013; Gollwitzer & Oettingen, 2016). The next sections focus on identifying and managing barriers to the plan.

What Are the Barriers to the Plan?

Many adults with ADHD say that they are great at making plans but not at executing them. The following sections answer the question posed to clients after setting up a coping plan: “This plan makes perfect sense sitting here right now. What could interfere with its implementation when you go to use it in the real world?” This includes anticipating and planning for potential task-interfering thoughts, feelings, and escape behaviors.

Task-Interfering Thoughts

“What thoughts could you have about the task and your plan that might convince you to scrap it?” Some variation on this question elicits thoughts and images clients already have or imagine they will have when facing the task. In the case of Mitch, the question asked may be along the lines of, “Based on your past experience, what thought will go through your mind tomorrow at 3:00 p.m. when you are walking out of your last class to go to the library that could convince you to do something else?”

Common thoughts that arise are that conditions (internal or external) are not “right” or are somehow insufficient for effecting an otherwise feasible plan (e.g., “I might not be in the mood to study then,” “I might be too tired,” “The library might be too crowded”), which lead to clients believing that they do not trust themselves to do this right now. It is as much the interpretation of dissuasions as it is their disruption (e.g., “I’ve already wasted 15 minutes just getting ready to study—this is pointless now”). These task-interfering thoughts occur within a network of feelings (discomfort), impulsivity, and permission-giving for escape, all of which conspire in nanoseconds to justify a comforting exit plan.

Cognitive modification interventions focus on anticipating, catching, and evaluating these justifications, such as tweaking the ratio of positive-to-negative anticipations of a task to a point at which it is viewed as doable. This pivot point is where the idea of front-end perfectionism is relevant (Ramsay, 2017b; Strohmeier, Rosenfield, DiTomasso, & Ramsay, 2016). Front-end perfectionism sets unrealistic preconditions for a task (e.g., being in the mood, being sufficiently focused). The adaptive view is that a client does not need to be in the mood for a task, as no one is ever in the mood to study or work. Similarly, examining sufficiency reframes that a client has enough energy and focus to follow through on or at least attempt a task plan is like finding a gray area for black-and-white thoughts (e.g., “Even if you are tired after class, will you have enough energy to at least get to the library?”).

The defense attorney coping tactic interrupts, prolongs, and delays impulsive justifications and escapes to think through a situation, including making use of coping reminders, which can be useful to set out beforehand in anticipation of facing potentially task-dissuading thoughts. Cognitive defusion tactics can be used to note and accept task-demoting thoughts and any discomfort to persist on a task plan. The initial (or anticipated) discomfort is reframed as a brief investment of a few minutes in the service

of the plan; additional skills and mind-sets for managing these emotional issues are discussed next.

Emotional Interference and Discomfort

Cognitions related to not being in the mood for tasks are likely rooted in learned emotional associations from past experiences for many adults with ADHD, even in subtle form. Various tasks, obligations, and other mundane but necessary chores are made more difficult by ADHD and thereby are linked to uneasy (if not utterly aversive) feelings. These visceral sensations range from mild annoyance to quasitraumatic reactions from past failure experiences and impaired self-regulatory efficacy.

Adults with ADHD may have difficulties pinpointing any specific, overriding emotional theme associated with a task or job. In fact, when untangling visceral reactions to avoided tasks, they are often described as an issue of uncertainty about a task and the related, nebulous discomfort from this uncertainty that prompts escape–avoidance.

Although not a genuine emotion, the commonly encountered and indeterminate feeling of discomfort described by adults with ADHD has been termed *ugh* (Ramsay & Rostain, 2015a). The feeling is usually tied with a thought along the lines of “I’m not up to doing this,” “I’m not in the mood,” or “I don’t want to,” suggesting aversion that prompts an impulsive escape. The *ugh* concept (and other onomatopoeic utterances when facing irritating tasks) strikes a chord for clients; the main idea being that facing a task, even one in the service of a valued goal and outcome, is tied to some degree of visceral discomfort and dispiritedness.

Being discomfort-free is not a realistic precondition for most priority tasks, particularly those associated with deferred rewards. Emotional management strategies for adults with ADHD draw on basic mindfulness and defusion principles such as recognizing and noticing feelings in a moment without needing to dispel them (Zylowska, 2012). The tactics of observing and stating a feeling and emotional labelling are associated with reduced firing of the amygdala and better emotional management (Brooks et al., 2017; Lieberman et al., 2007). These tactics provide a means for bearing emotions and distractions by instituting a pause in experience in which to counter an instinctive escape. Apart from any benefit these skills have on

neurobiological networks, they offer useful psychosocial tactics with which to navigate these moments rather than giving up (e.g., “I’ve been texting for 15 minutes. Okay, I’m off task and frustrated. I can take some breaths, reread the problem, and ease back into my work”).

Cognitive reframing is a useful coping approach that supports emotional strategies, building on the notion that feelings do not need to dictate actions. Emotions can be noticed, accepted, and tolerated while keeping to a task plan, especially during the initial engagement steps (“Can you get to the library even with the *ugh*?”). Defusion strategies are consistent with these efforts, the acceptance of discomfort as an expected part of the pursuit of valued goals, a willingness to do so even if not wanting to do so (Hayes & Smith, 2005). Facing initial task discomfort is like getting into the pool and taking a few moments to get acclimated to the water temperature before swimming.

Escape Behaviors

Finally, a therapist can ask a client, “What are the behaviors that will signal that you are procrastinating?” or, using a poker term, “What are your tells for procrastination?” Clients often cite behaviors such as texting, checking social media, and excessive time on websites as common time thieves.

Although escape behaviors may fall into the category of procrastinativity, there are copious examples of nonproductive escape tasks (e.g., playing a game on a phone or tablet, watching television, otherwise wasting time earmarked for a priority task). These actions are often justified by statements like “I deserve a break,” “Let me relax and then I’ll be in the mood for the task,” and countless others. Mitch said that he is at risk for “going down the rabbit hole” of news websites during study time. His resolution was to put his laptop and smartphone on airplane mode until at least 4:30 p.m., his planned end-time.

Tagging escape behaviors ahead of time helps clients to catch or avoid them and stay on task. In fact, it is useful to differentiate between good and bad breaks, as some bad ones (e.g., checking the news) run the risk of undoing the plan, whereas good, bounded ones (e.g., get a cup of coffee) are more likely to keep the person on track. Task planning also addresses risks by way of stimulus control, such as when Mitch chose to study at the library

rather than among the distractions in his dorm room and put his gadgets in airplane mode.

In fact, behaviors that are escapes in the middle of a task (a bad break) can be used as incentives for completion (e.g., “At 4:30 p.m., I will catch up on the news”); although, after successfully completing a task goal, most adults with ADHD describe being less likely to engage in them. This sort of this-then-that coping skill is a manifestation of Premack’s principle, the use of a more highly desired activity to promote follow-through on a less desired one. This principle is an empirically based staple of behaviorism that is familiar to any parent making computer use contingent on a child completing homework. Predicting justifications for escape and developing task-promoting thoughts is an effective use of cognitive interventions.

What Is Your Implementation Plan?

The HYDDT form is like the self-regulatory exercise of mental contrasting (Oettingen, 2014; Oettingen & Cachia, 2016). Defining a goal and corresponding objective is more likely to promote action if coupled (or contrasted) with plans for facing the real-world barriers to follow-through. The use of implementation intention plans (Gollwitzer & Oettingen, 2016) was added to mental contrasting to establish Mental Contrasting With Implementation Intentions.

Implementation intentions stem from research on the observation that a purely goal-focused approach to behavior change does not inexorably produce actions necessary to achieve that goal (Gollwitzer, 1999). Consequently, specific, action-oriented plans tied to specific contexts (consistent with an overarching goal) have been shown to improve follow-through. These plans are framed in if-X-then-Y conditional statements in which a specific action or obstacle is tied with a specific setting, such that the setting is a cue for a desired action (e.g., “If situation X is encountered, then I will perform the goal-directed response Y”; Gollwitzer & Oettingen, 2016, p. 223). Mitch developed an implementation plan for getting back on-task in the event he got distracted (e.g., “If I get off track, then I will reread my answer to the current problem”).

Although not yet studied in adults with ADHD, studies in children with ADHD show that these statements promote better follow-through when compared with control participants (Gawrilow, Gollwitzer, & Oettingen, 2011a, 2011b; Gawrilow et al., 2013). The if-X-then-Y strategy has been a facet of the CBT approach for adult ADHD and its implementation focus (Ramsay & Rostain, 2008, 2015a, 2015b, 2016a). In a small open study of adults with ADHD who completed CBT without medication, significant improvements on an activation scale were achieved, consistent with this implementation focus (Ramsay & Rostain, 2011).

Within the HYDDT framework applied to the case of Mitch, implementation plans can be designed for the initial behavioral step of engagement (e.g., “If I can get to the library, then I can review my economics assignment”). These statements are particularly useful for managing the pivot points within a task plan, such as defining the step for returning to the task after a brief break (e.g., “If I close the news website, then I can reread the last few sentences I wrote”). Implementation plans can also be designed for reengaging in tasks after being distracted, dealing with rationalizations for escaping a task, managing obstacles (e.g., “If the main section of the library is crowded, then I will take the elevator to the fifth floor”), or other vulnerabilities for deviating from the client’s intentions. Implementation or if-X-then-Y plans, are useful take-away tactics, including the use of possibility language, such as “when X, then Y.”

Figure 5.1 provides a sample HYDDT form, which outlines the elements of procrastination and space for developing coping plans. In the spirit of personalized coping, many clients have specific go-to tactics. For others, these issues may differ by type of task or setting. The form can be personalized as a means for handling a client’s distinctive procrastination profile.

FIGURE 5.1. A Sample How You Don't Do Things Form

| HOW YOU <i>DON'T</i> DO THINGS |
|---|
| Current task and overarching goal/value: (example: Write the monthly report; do well in my job) |
| Redefine current task in more actionable terms: (example: I will review the monthly data.) |
| Define smallest, specific, actionable starting point: (example: I will take my laptop to a coffee shop and start by opening the data file.) |
| Specific time (start time and end time) and day this will be done: (example: Saturday at 9 a.m. until 10 a.m.) |
| Where this will be done: (example: My favorite coffee shop) |
| What might interfere with implementing this plan? Task-interfering thoughts? (examples: I have to be “in the mood” to work on the report; I need longer than an hour; I’ll do other things today and then I’ll be able to focus on the report tomorrow.) |
| What emotions/feelings might interfere? (examples: Pressure to make progress; worry whether I will get it done; boss may find mistakes; ugh, I don’t want to do it; feeling too tired) |
| What are your escape behaviors/rationalizations that might interfere? (examples: I should do other work first, then I’ll be in the mood to do the report; |

catching up on email and other work-related tasks; I deserve to relax on the weekend.)

What is your implementation plan? (example: If X, then Y—If I can get to the coffee shop, then I can open the data file.) Hopeful plans for living and for the future:

It is important to keep in mind that procrastination also interferes with meaningful personal undertakings that are vital to well-being and sense of self. Procrastination is a meeting point for the EF difficulties faced by adults with ADHD—there are many ways to not do things, including poor time management, which is discussed next.

TIME MANAGEMENT CHALLENGES

Time is the most commonly used noun in the American English language (Burdick, 2017). Time management or, more specifically, organizing behavior across time, is a core problem area for adults with ADHD. *Temporal myopia* signifies the recurring nearsightedness (or time blindness; Barkley, 1997) that undermines planning, organizing, and sustaining behaviors toward long-range, high-yield goals. This concept is also captured in the now/not now dichotomy commonly described by adults with ADHD, where a priority matter resides in the not now category until it becomes imminent and urgent, vaulting into the now category. Consequently, many tools and strategies are better devoted to helping adults with ADHD to better organize and manage time and tasks, as is discussed next.

Organizing Time

Typical time management strategies include tools, such as calendars, daily planners, to-do lists, and visible time pieces, with which to track the flow of time, from minutes and hours within a particular day, to the flow of days

across a week and beyond. Such tools are “time machines” that allow adults with ADHD to see time in increments with which to map out and parse their behavioral plans. Planners and calendars are essentially series of empty columns and rows that divide up time in visible segments of varying specificity (e.g., 15-minute segments, hour-by-hour, day-by-day, week-by-week). Not only a device with which to make task appointments, these visuo-spatial representations also provide a means for tracking where someone is in time relative to his or her schedule and plans.

Cognitive reframing is useful in time management to help individuals with ADHD view time devoted to a task in more adaptive ways. These modified views have ripple effects on other elements of time management, such as the effort and energy required of a task. In fact, judging time is an area where distorted positive thoughts often arise.

A basic time management recommendation is to devote a portion of time each day to plan out the day’s schedule. A suggested guideline (that can be personalized) is to spend 10 minutes setting out or reviewing a plan for that day. However, the phrase *10 minutes* is often merely a euphemism for an indiscriminate, brief span of time. Individuals with ADHD may intend to set up a day’s plan, but have the thought, “10 minutes is not that much, I can do this later,” then do not get around to it. This is a quintessential example of how a seemingly trivial delay triggers a cascade that ends up in the frustration of yet another mismanaged day.

From a linguistic standpoint, 10 minutes is a whole substance or chunk; the same time can be reframed as 600 seconds, which is a shift to small particles (Pinker, 2007). Although identical, reframing minutes as seconds creates a cognitive shift as the latter seems a more manageable time investment. Variations on this time framing for tasks, such as a 5-second rule (Robbins, 2017) up to a 10-minute rule (Ramsay & Rostain, 2003), cluster around the notion of the smallest bit of time that can be tolerated to engage in a task.

Before the advent of the World Clock, international time zones, and wearable timepieces, time estimates were given in terms of familiar tasks, such as “I’ll be with you in a milking-of-a-cow” (Johnson, 2014). In fact, there is a line of research using a striatal beat-frequency model of temporal discrimination or the learning of useful durations of time (Burdick, 2017). The model holds that an individual’s sense of time is tied to learned chains

of behavior in actual tasks (automatic, habit-based processing). In a similar vein, such time reframes can be drawn from client's experience to facilitate task follow-through, like planning the day. For example, the 10 minutes devoted to planning the day can be framed as the time it takes a student to walk to the cafeteria, the length of two songs by a favorite musical artist, or the length of a television commercial break. These reframes offer analog, concrete, visceral feelings of time that may be more palpable than clock times ("Can you spend the length of two Jack White songs to plan your day?"). The Pomodoro technique (Cirillo, 2006/2018) is a system for breaking down tasks into increments, aided by timers and apps to externalize reminders.

Sustaining Effort and Energy Across Time

Time management includes effort and energy management, the pacing of an individual over time. This section focuses on thoughts about the perceived demands of endeavors and self-regulatory efficacy for meeting the effort and energy demands. As noted in [Chapter 1](#) of this volume, people automatically judge the cost-benefit of tasks to determine whether they are worth the investment relative to the result (Henriques, 2011). ADHD makes many tasks seem to be bad investments, despite their logical value.

This facet of time management is closely connected to how a task is defined, not unlike how time is framed or reframed to be viewed as manageable. Seeing as time, effort, and energy are conceptualized here as being a related bundle, the example of planning one's day will continue to be used as an example. As with time, the cognitive task is to frame effort and energy in manageable allotments such that adults with ADHD can adequately assess their sufficiency to these demands to enhance engagement (or make an informed decision to defer a task).

To determine the effort required of various plans throughout the day (including the effort required for planning itself), tasks are dissected into specific, behavioral steps. Queries such as "How would you describe what you have to do if you were writing a recipe for this task?" or "How would you program a robot to do this task?" help to transform an overarching, potentially overwhelming task, into a series of actions. This exercise also

serves as cognitive exposure, facing and thinking through the task, as well as prolongation in EF terms. In the case of planning the day, the script might be to access the planner, record and review existing commitments, and consider how to use remaining discretionary times.

Therapists may run into a Goldilocks problem with some clients getting distracted by overly detailed itemizations of plans and others still defining them so broadly that they overlook important pivot points. Guided inquiry about the utility of itemized plans and anticipations of how they will unfold in real time can help reach a point at which the estimations are sufficiently right for a client with overly detailed plans (e.g., “That recipe is comprehensive but it looks daunting at first glance. Do you think it will be more likely to help you get started or will the details be distracting when you use it?”) or a client with overly broad plans (e.g., “You have ‘get up and out the door to work’ as a first step. Seeing as leaving your house on time has been a problem area, are there any smaller steps within that one that would be helpful to specify?”).

Fortune telling cognitions may emerge about efforts on planned tasks (e.g., “I might get stuck on my assignment”). This anticipatory distortion predicts problems that are statistically possible but unlikely or at least are manageable. A coping maxim is to not let possibilities get in the way of the probabilities associated with task engagement. Anticipatory problem-solving can be used to craft if-X-then-Y plans for handling possible snags (e.g., “What could you do if you have problems with the assignment? Can you contact the class TA or professor or go to office hours?”).

These anticipated snags may appear as visual images of wasted time and effort/energy (e.g., “I can see myself sitting here all afternoon doing homework without making a dent”), although framed in all-or-nothing terms, there may be some truth to these views for clients facing a backlog of work. Even painstaking efforts over a weekend might not lead to fully catching up on tardy homework or a buildup of chores. Clients may rely on *massed effort* and marathon work stints when facing a deadline, which is the default, last-ditch option for facing overdue work to limit the effort and discomfort to one agonizing sitting.

Distributed effort, on the other hand, focuses on segmented task goals such as selecting and starting on one overdue assignment or household chore to make progress. A useful reframe is that whatever small step is planned

“will have to be done at some point”; overdue tasks as a daunting whole can be thought of being composed of pieces. Seeing and believing and trusting the value of small efforts is important for adults with ADHD, particularly for projects that will have to be picked up and set down several times. Portion control of effort on longer-range plans can be tracked by crossing items off a list or simply using the planner as a record of times devoted to a project, logging tasks accomplished, and planning next steps. Distributed effort also benefits from recruiting a helper such as a study buddy or bartering with a friend (e.g., “You help me organize my kitchen and I’ll help you with your closet”).

The idea of distributed effort is used to break down tasks or projects across time to meet a deadline or achieve some sort of other objective. The choreography of different task demands throughout each day and across a week also gets at the issue of energy management or self-regulatory endurance. As is said of soccer players, good players find their rest while on the field.

Cognitive distortions about energy arise in two related ways for adults with ADHD. The first is the now familiar sufficiency judgment of whether a client has enough energy for a task. Periodic tiredness, fatigue, or a malaise after finishing a task when there is not a clear sense of what to do next, and other examples of the ebbs and flows of energy throughout a day are perfectly normal. However, all-or-nothing reactions of “I’m too tired” or some manner of “I’m not up to it” run the risk of justifying disproportionate, self-defeating avoidance.

The second and related aspect of the sufficiency thought is the view of a client’s energy as a finite resource like the gasoline in a car; it must be conserved to keep from being completely emptied. An ebb in a client’s energy activates escape thoughts when facing a planned, realistic undertaking (e.g., “I’m too tired. There’s no way I can do this now. I have to rest”), which is self-defeating when it undermines reasonable follow-through.

This is not to say that an adult with ADHD should not take breaks, have pockets of down time, or occasionally call it a day earlier than planned. Adequate rest, sleep, and discretionary time should be priorities in a client’s schedule. It is not only duties such as work, school, or chores that fall prey to assumed lack of energy, but also activities that foster happiness and well-

being. The therapeutic issue is effective energy management and ensuring such choices are informed decisions rather than avoidance.

Energy management cognitions play a role in task engagement, often when exiting rest mode to enter work mode, but also when switching between work tasks. Such transitions are sensitive windows (pivot points) of time for adults with ADHD because they are leaving a task with which they have successfully engaged and presumably made some progress (or was a pleasant diversion) and now face the prospect of gearing up for another task, which holds its own onboarding challenges. Hence, any sense of weakness or insufficiency in terms of energy increases the likelihood of avoidance or escape. These reactions can fuel justifications in the form of outwardly logical permission-giving thoughts (e.g., “I did a good job and I deserve a break”). There may be a subtle desire to end on a high note after having already tackled a task on the basis of instinctive, unspoken mistrust beliefs (e.g., “I finished this task. I was on a lucky roll and I’m due for my luck to run out, so better for me to stop while I’m feeling good and productive”).

Cognitive interventions reframe the energy needed for a task from a requisite, “optimal” level (which sets the stage for an insufficiency view) to a view that a client has enough energy for a task. The strategy of scaling energy to specific actions is also useful. This entails viewing energy along a continuum, like the battery level on a smartphone, and assessing how much energy is required (e.g., “Do you have to be at 100% to get started?” “If your phone battery was at 50%, would you still use it?”). These modifications challenge all-or-nothing views and establish a sense of enough energy and making good use of it. These adaptive thoughts are bolstered by time management tactics, such as creating a bounded task for calibration of energy for engagement (e.g., “Do you have enough energy—enough bars on your battery—to read the math problems and see what you can do in 30 minutes?”).

The concept of generating energy is a counterpoint to that of energy as a finite resource. An example of a car with a dead battery can illustrate this point. After a dead battery is jump-started and the engine is running, the car is not immediately shut off to conserve energy but is driven for a time to fully recharge the battery. The idea of generating energy through action is a handy one for clients challenging distortions such as “I’m too tired to go the gym” with “How often have you seen people fall asleep in spin class?” Socratic

questioning about this issue usually uncovers clients' experiences with sparking enough energy for a task ("I know that once I'm at the gym, I rally").

The energy facet of time management also pertains to the choreography of tasks. For example, some people plan time early in the day for work that exacts a high cognitive load, a time when they feel sharper and more galvanized. After facing these mentally demanding tasks, they switch to administrative duties, face-to-face meetings, or other tasks that are more hands on, which exert less or a different cognitive load. This switch offers a welcome change of pace that uses a different energy, even if not representing a true break. On the other hand, there are some tasks that can be reasonably performed even in low energy mode that are planned for other times of the day. A person might not expect to work on a monthly report at 11 p.m., though mindless chores or readying work items for the next day are reasonable at that hour.

Another aspect of energy management is tending to energy needs throughout the day. Research on willpower, a construct comparable to self-regulation, has fostered a view of it as a muscle that can become fatigued and less efficient (Baumeister & Tierny, 2012). Self-regulatory difficulties characteristic of ADHD render clients more prone to not only willpower fatigue but also mental and physical fatigue (Guntuku, Ramsay, Merchant, & Ungar, 2019; Rogers, Dittner, Rimes, & Chalder, 2017; J. L. Young, 2013), which may magnify coping difficulties.

The basic means for bolstering energy and recharging the self-regulation battery include adequate sleep; a healthy diet; regular exercise; positive, goal-directed self-talk; healthy breaks between tasks (including mindfulness exercises); and incentives and other emotional boosts for task completion. All these self-care domains, though, are problem areas for adults with ADHD because they require self-monitoring, planning, and follow-through to reap benefits. Conversely, unhealthy, if not harmful, habits deplete energy and coping resources.

In terms of other energy management strategies, many clients carry protein-rich snacks and water or sports drinks with them for when they notice their energy flagging. Opportunities for walking, like during work breaks, help integrate physical activity and mental breaks in the day, as well as activities that may be already established in a client's schedule (e.g., exercise classes, mindfulness practice, hobbies). Adults with ADHD must

guard against the tendency to forego these self-care activities as a self-imposed ADHD penalty because of coping difficulties (e.g., “I cannot justify going to yoga class when I have not gotten anything done at the office”). Self-care is a good target for treatment that supports ADHD management and well-being.

A planner can be used to establish times for activities as well as periodic breaks in one’s day when there is a pause and chance for respite. Similar to having an endpoint for a task, breaks and transition times in a schedule provide bounded reference points when a person can recharge. Breathers in a schedule may include lunch, a planned coffee break, a train ride home, sitting in the car waiting to pick up children, yoga class, or undedicated down time. Periodic rogue, scheduled days off from work or scheduled events on the calendar offer valued markers. If nothing else, simply being able to hold on until reaching these anchor points helps break up the day, week, or month into portions.

There are many effective time management tools and strategies for adults with ADHD. The cognitive elements of the framing of time, effort, and energy are necessary steps for using these tools, but their use can be undermined by disorganization (e.g., misplacing a planner). Organization, the focus of the next section, is another aspect of managing ADHD often tied to time management.

ATTITUDES ABOUT ORGANIZATION

When describing disorganization problems, many adults with ADHD are usually referring to difficulties organizing behavior across time, such as juggling different tasks and other time management issues discussed previously. Disorganization also refers to processing difficulties (e.g., expression of thoughts and ideas) as well as sequencing behaviors for enacting a plan (e.g., scripting). However, disorganization most often refers to problems managing the various “stuff” of life, such as coping tools and information in different domains of life.

Thus far, the emphasis of this chapter has been on defining specific tasks and plans to foster engagement and follow-through. Organization is treated using the same scaffold but focuses on establishing habits and basic tools for

routinizing many foundational demands of daily life. Again, implementation is key. Reviewing a client's belief in or self-regulatory efficacy for the typical organizational approaches augments a skills-based approach to personalize and improve behavioral follow-through.

A first common step is establishing homes or a launch pad (Kolberg & Nadeau, 2017) for the essential tools of daily life. Setting a consistent location for keys, a phone, a wallet/purse, and other needed items is important. This home is the place for action objects for later use or for priority items such as homework, an umbrella, a gym bag, a prescription, and so forth.

It is easy for adults with ADHD, though, to minimize the importance of this pesky step because it is annoying and thereby prone to rationalizations (e.g., "I'll put my keys away later. One time won't hurt"). This inconsistency coupled with working memory difficulties make it hard to remember to remember where items were placed. The issue for many adults with ADHD struggling with disorganization is that the time, effort, and energy devoted to tracking down needed items is often compounded by the ripple effects from other stressors, such as looking for items while already running late for work or class. Similarly, a misplaced planner or other item may have cascading effects for a commitment or procrastination later that day.

Cognitions related to consistently placing items in a home base (or similar habits) often revolve around "should" or more specifically, "should not" statements (e.g., "I should not have to be so compulsive about keeping these things in one place"), as well as magnifying the hassle factor involved in such routines (e.g., "I have to go all the way back upstairs to put my keys away"). Normalizing and reframing the benefit of these routines as well as the fact that the hassle to maintain them is minimal helps to promote follow-through, which can be reinforced with the use of coping reminders.

Organization skills also are used to manage other possessions such as clothing, kitchen items, and various files and other tangible articles. Common complaints refer to clutter, untidiness, or incomplete processes such as baskets full of clean but unfolded laundry. Time and procrastination management skills are used to prioritize and schedule specific tasks, either individual tasks (e.g., folding and putting away clean laundry) or upholding systems for recurring chores. Such manual tasks are generally low cognitive load undertakings that can be performed in low energy mode, usually with

predictable and positive results. Moreover, they can be paired with enjoyable tasks, such as listening to music or podcasts. In fact, it is important to be on guard for the fact that these sorts of tasks that may be innocently recruited as procrastivity tasks (e.g., “I’ll do laundry first; then I’ll focus on studying”). Framing chores as time- or task-based endeavors with bounded endpoints that can be done while enjoying some form of media fosters task-promoting mind-sets and follow-through.

Managing information is another organizational issue, particularly gathering and accurately recording important information. The information may be class notes, work assignments, appointments, or promises made to friends. As discussed in a later section, interpersonal skills are underused for managing ADHD. Simple steps of asking someone to repeat something, repeating back what one has written down to make sure it is accurate, or reaching out to someone later for clarification are coping skills to ensure a client has needed information. Making use of or advocating for additional resources, such as teacher office hours, meetings with a supervisor, or check-ins with a spouse also help ensure one is on track with endeavors. [Table 5.1](#) lists some skills used for managing attitudes about organization.

A barrier to the use of organizational and other skills is negative feelings about them. The management of visceral feelings of discomfort and other emotions associated with tasks is essential in terms of thoughts, which is covered in the next section.

TABLE 5.1. Managing Attitudes About Organizational Skills

| Organizational strategy | Maladaptive thought | Adaptive thought |
|--|---|--|
| Using a home for keys, wallet, smartphone, and other essential items | "It is a hassle to put things away right when I get home." "I should not have to do this." | "I can set up a home near the door to make it easy." "I do not want to have to do this but I am willing to develop this habit to avoid more hassles." |
| Scheduling chores | "By the time I get around to doing the chore, I'm too tired." "I will wait until I am in the mood to do it later." | "I have enough energy to do the steps. I can listen to music while I do it." "If I can take the first step, I can get started and last for 10 minutes." |
| Entering tasks in a daily planner | "I should not have to be so rigidly detailed." "No one else must do this." | "Planning helps me get things done and have more free time." "I do not know what others do. This works for me to stay on track and feel better." |

EMOTIONAL MANAGEMENT DIFFICULTIES

Emotional dyscontrol is a core feature of ADHD despite its total absence from diagnostic criteria (Adler et al., 2017; Barkley, 2015b; Kooij et al., 2019). These affective issues are different from the common coexisting emotional disorders. Emotional dyscontrol in ADHD manifests as relatively short-lived but sharp, disruptive reactions to stressors, such as problems downregulating emotional reactions and upregulating adaptive emotions necessary to manage a stressor or face a task. These triggers are of the sort that would elicit emotional reactions from anyone but are more disruptive and distracting for adults with ADHD.

There are many facets of emotional management, including dealing with specific situations and changing or leaving a setting, attentional deployment or what is attended to, cognitive appraisal or managing interpretation of

events, and managing reactions to events (McRae, Ochsner, & Gross, 2011). Recognizing and acknowledging the client's current emotional state is a good first step, even if only to take notice that he or she is feeling upset or bothered. Identifying and stating the current emotion reduces amygdala activity (Lieberman et al., 2007). Emotional labeling is a similarly portable and easy-to-use coping activity with which to modulate feelings (Brooks et al., 2017). Much like catching automatic thoughts, these emotional check-ins (e.g., "How or what am I feeling?") create a pause and opportunity for coping.

The process of naming emotions can be aided by coupling it with a corresponding cognitive theme (A. T. Beck, 1976; Burns, 1989). Some relevant emotions for adults with ADHD (and corresponding cognitive themes) are anxiety (perceived risk, uncertainty), anger (unfairness), guilt (having done something wrong), and shame (being less valued as a person). What's more, the concept of emotional granularity (L. F. Barrett, Gross, Christensen, & Benvenuto, 2001; Smidt & Suvak, 2015) suggests that more precise emotional labelling promotes better emotional management. An example of this is not only recognizing an apprehension about homework but labelling the feeling as "my I-don't-want-to-work worry." Minimal emotion labelling is enough for greater emotional clarity and plans for coping, though not necessarily follow-through by itself (Vine, Bernstein, & Nolen-Hoeksema, 2019).

In addition to these reactive cognitive strategies, proactive steps can be taken to face situations that are typically emotionally activating to adequately prepare or perhaps avoid them. Clients can identify risk factors (e.g., hunger, time of day) that may interact with high-risk situations (e.g., long lines, critical feedback) to stir untoward emotions. Personal cues or tells that a client is upset are also helpful (e.g., clenched fists, tone of voice, being short with others) as they signal the need to use coping skills. Stress management and mindfulness skills for top-down regulation can be used daily to tend to feelings (Mitchell et al., 2017; Zylowska, 2012) and gain greater perspective and emotional endurance for handling typical hassles. These day-to-day practices help to domesticate feelings (Taleb, 2012), by which they are recognized and experienced (accepted) but do not overwhelm intentions. This process can include mind-sets of gratitude and positive feelings.

Working memory difficulties create problems recalling effective options for handling emotions. Crafting a set of go-to reminders for positive coping or having readily available emotional coping cards, notepad, or a physical reminder (rubber band on wrist) can be helpful. Self-care, exercise, and other good habits also support emotional management. Field experiments offer chances to actively practice skills such as mindfulness. Together, these skills modify the thought that an adult with ADHD cannot control their emotions, an important cognitive shift.

Such emotional management strategies help adults with ADHD better handle affectively provocative situations. However, Bandura (1997) noted that “the activities of everyday life are strewn with frustrating, boring, stressful, and other aversive elements” (p. 63). Therefore, the ability to manage discomfort is arguably the skill most relevant to managing adult ADHD.

TOLERATING DISCOMFORT: TAMING THE *UGH*

Tolerating discomfort, the *ugh* feeling, has been proposed as the key emotional target of CBT for adult ADHD. This discomfort is reciprocally determined from the effects of ADHD on functioning. Repeated frustrations become associated with negative feelings and self-doubts (mistrust) that punctuate engagement and follow-through on tasks and roles. These gut-level, evident, but nameless feelings are often expressed as onomatopoeic syllables (*ugh*, *bleh*, *meh*), telltale signs of aversion. Goal-focused behavior requires persistence of effort for relatively little immediate benefit and often short-term costs. Switching between tasks, keeping up with assignments, tense moments with others, and other matters of adult life all involve a degree of unease, the handling of which is a core facet of self-regulatory efficacy (Bandura, 1997). *Ugh* feelings can be magnified by schemas, as such feelings that may be tied to self-mistrust that forewarn of potential failure (or at least discouragement).

Ugh feelings and related discomfort have been addressed previously and as a facet of overall emotional management strategies. There are many cognitive distortions related to discomfort, such as emotional reasoning (e.g., “I must be discomfort free to do this”), comparative thinking (e.g., “No one

else struggles with such feelings”), and all-or-nothing thoughts (e.g., “If it feels bad, it must be bad”) that justify escape–avoidance. However, these thoughts are amenable to reframing the relationship with emotional discomfort and simply developing adaptive alternative thoughts; in fact, discomfort can be reframed as a cue for facing high-value, high-yield tasks—these feelings signal their importance and relevance.

Drawing on progressive exposure interventions for anxiety, cognitive defusion, and other elements of acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999), accepting discomfort is seen as a commitment to a personally valued endeavor. Facing the initial discomfort is reframed as a time-limited challenge and opportunity—“Can you manage the *ugh* for a minute to see if you can get engaged? Could you hold your breath for a minute? How will you feel after you get started?”

Cognitive defusion strategies are particularly relevant for managing such affect, as such discomfort is closely tied to cognitions along the lines of “I really do not want to do this” or “I’m not in the mood to do this.” The notion that a client can entertain such feelings and thoughts about tasks while still engaging in them is useful across the board for coping with ADHD, the idea that clients can be willing to face their feelings though not wanting to do so (Hayes & Smith, 2005).

REINING IN IMPULSIVITY

Of the symptom domains of ADHD, impulsivity is the outsider, clumsily paired with hyperactivity. Impulsivity is relevant for adult ADHD, particularly its overlap with emotion regulation. Impulsivity is essentially acting on an overriding whim without forethought. It is not a stretch to infer that emotions contribute to the whim or urge to act that, in the case of ADHD, trumps over already fragile inhibitory skills. Impulsivity is a distinct factor in procrastination (Steel, 2007, 2011), perhaps operating as a preemptive escape at the first hint of emotional discomfort (e.g., *ugh*), launching an escape–avoidance program to avoid further possible discomfort and failure when facing difficult tasks. A connection of impulsivity and emotions is consistent with the hot EFs used to manage pressing, affectively laden situations.

So, managing impulsivity is a priority issue for adults with ADHD. But if impulsivity is acting without thinking, what good are cognitive interventions? Cognitive strategies target the all-or-nothing thought that “I cannot control my impulses.” Antecedent control is more effective than reining in already activated behaviors and emotions. Therefore, coping strategies target a client’s impulsivity profile, the high-risk situations in which he or she is prone to have troubles (see [Chapter 4](#), this volume).

Risk factors for disinhibition include settings associated with boredom, impatience, or other uneasy states. There may be social contexts that are risks for impulsivity or lashing out at others, such as facing long lines, having tense discussions with a boss or spouse, or dealing with the typical hassles and inconveniences of life. Positive feelings and excitement also may trigger impulsivity such as impetuous online spending because of the “thrill of the hunt” or marathon gaming sessions. Otherwise enjoyable, upbeat social events may be risks for ill-chosen comments or dominating conversations. There may be points in a day when a client’s inhibitory skills wane, particularly before prescribed medications take effect or after they wear off, or any times when a client feels out of sorts because of hunger, anger, boredom, loneliness, and/or fatigue.

Such situations are high-yield targets for therapeutic homework. Specific settings can be selected for coping skill practice (e.g., getting in a long line at a coffee shop to practice distraction strategies such as striking up a conversation or returning texts). Plans can be developed for managing risky times or transitions such as mindfulness practice or exercise in the evening when medication effects wear off. Another valid strategy for handling such risk factors is to avoid them (e.g., going elsewhere for coffee). Along this line of prevention, self-care is a useful domain of coping strategies for impulse control, like having a midafternoon snack to ward off “hangry” (i.e., anger due to hunger) feelings.

At some point, though, clients will face difficult situations because of their impulsivity, such as a hurtful comment in a fit of anger, getting sidetracked and forgetting a promise, telling a risqué joke, or having to back out of an obligation because of overcommitment (see [Chapter 4](#)). As with any aspect of self-control, the relapse rate for impulsivity is 100%—mistakes will be made. Once recognizing the effect of impulsivity, self-critical thoughts often follow (e.g., “I messed up again,” “I ruined things,” “I cannot

face the person”). These thoughts interfere with considering ways to undo or at least make amends for an error, leading to delay and avoidance.

Clients may minimize the ability to mend such missteps, even after-the-fact, perhaps because of a sense of diminished social capital and shame. Adults with ADHD often underestimate the benefit of simply apologizing for impulsive behaviors. This option is often hindered by guilt, embarrassment, or flipping responsibility (e.g., “She’s too touchy. I’m over it, why isn’t she?”). In such delicate situations, the common cognitions elicited are mind reading and fortune telling (e.g., “My friend will never forgive me,” “My coworker will be angry that I totally missed our project meeting”) and other self-recriminations. Nonetheless, these can be addressed with the reframe that good coping involves facing difficult situations (and discomfort) rather than avoiding them. Creating an actionable coping plan for the way in which to face such situations is also helpful.

The discussion of impulsivity drew from previous sections on managing discomfort and emotions. There is also a creative, motivating aspect of emotions, which is discussed next.

MANUFACTURING MOTIVATION AND THE VALUATION OF TASKS

Motivation is a term, like the term *willpower*, that often suggests a fixed character trait (e.g., “I’m not as motivated as everyone else”). When facing problems from escape–avoidance stemming from the consistent inconsistency of ADHD, this view of motivation can morph into a belief that the client does not care, is lazy, and similar attributions voiced by adults with ADHD. These same adults describe the vexing paradox that “when I’m interested in something, I get a lot done.”

Manufacturing motivation (Ramsay & Rostain, 2015a) is an important skill for managing adult ADHD, as many priority tasks involve deferred rewards requiring sustained efforts to achieve. The interventions discussed previously, chiefly those targeting procrastination, represent coping skills that operate individually and in concert. Each effort and the sum of these efforts creates an impetus to engage in a task, helping an adult with ADHD

feel “enough” like starting and eventually crossing the threshold from not doing to doing.

An aspect of creating motivation is a review of the task valuation. Eliciting a client’s buy-in for a task orients attention to it and informs a corresponding action plan (e.g., the HYDDT form). The question “Why do you want to bother doing this at all?” helps elicit a client’s motivations that may range from the aspirational (e.g., “I want to know I can make myself do this”) to the tactical (e.g., “It just has to be done”). Such valuation has been found to promote motivated behaviors in nonclinical research (Suri & Gross, 2015). The aim of valuation is to foster engagement by building up its merits and relevance for a client, not unlike motivational interviewing (Magill et al., 2018).

As was noted in [Chapter 1](#), motivation is the ability to generate an emotion about a task in the absence of an immediate consequence (Barkley, 1997). A personalized review of a client’s strengths, passions, and aspirations offer potential cues and reminders that can foster persistence on tasks. The use of externalized motivational prompts such as coping cards, inspirational quotes and images, or other takeaway materials help adults with ADHD recall these values at the point of performance. For example, a client saving money to buy a car can hang pictures of makes and models she would like to own or set these as the wallpaper on her laptop or phone. These cues help keep her goal in mind while using coping skills to handle spending choices. Such valuation can also focus on personal attributes (e.g., “I want to know that I can stick to a plan”) and other objectives apart from the pragmatic goal-focused objective. These sorts of objectives can also fall within the purview of schema modification, which modify core beliefs related to self-mistrust (see [Chapter 4](#)).

Although focusing on a direct line between intentions and actions, many objectives include a social and cultural element such as dealing with others or institutions (e.g., work, school). Therefore, goals may require interacting or coordinating efforts with others. The next section focuses on an interpersonal skill for managing ADHD.

ASSERTIVENESS AS AN ADHD COPING STRATEGY: DEFINE YOUR ROLE

An aspect of wielding social capital is to advocate for oneself, including seeking help when needed. Such self-advocacy is akin to assertiveness. To reframe assertiveness in actionable terms, the coping strategy reviewed in this section is deemed *define your role*.

Define your role entails identifying a problematic interaction and setting a plan for handling it to achieve a specific outcome. It serves to organize, prioritize, and sequence steps to approach it. Step one is to clarify the nature of the problem, the other person(s) involved in the situation (e.g., boss, teacher), and the desired outcome, as there may be overlapping but distinct issues. Once this is established, step two is to define the client's role in this interaction. From this role definition, step three identifies the specific actions to be performed by the client to fulfill this role. An important facet in this step is separating out those factors and actions that are not the client's responsibility (e.g., to convince the other person about the matter) or are outside of their control (e.g., how the other person might react).

The client's actions are defined in behavioral terms regarding what steps are required. These steps include when and how to approach the other person, including the type of communication (e.g., face-to-face, email), and scripting out what to say and do in a straightforward, parsimonious way, framed as the simplest, clearest way to fulfill the client's role in that situation. Step four is implementing the plan. Once the last syllable has left the client's lips or he or she has hit send on an email, the client has fulfilled his or her role. Now, it is the other person's role to respond to what the client said. Cognitive interventions most often address mind reading and fortune telling about what the other person might be thinking, uncertainty about the outcome, and distress tolerance and normalization that the client can notice and feel discomfort and still fulfill the role—and even if a desired outcome is not achieved, the client has still faced the situation.

Returning to the example of Mitch, the college student with ADHD, he agreed that it would be helpful to attend his professor's office hours for help after a poor exam grade. However, he was ambivalent, noting discomfort at the prospect of going to see the professor because of a vague, nonspecific prediction that it will go poorly. When reviewing this in a CBT session, he agreed that the professor in her teaching role offers office hours to be of help to students. The therapist and Mitch defined Mitch's student role, which he can fulfill by physically arriving at the professor's office during the

appointed hours, introduce himself, and provide a succinct, scripted summary of his request: “I’m having problems with this week’s assignment.” An assertive request can be reframed as a simple account of the client’s view of the facts of a situation. On uttering the last syllable, he will have fulfilled his student role and started the meeting.

For most adults with ADHD, defining their role helps to organize and implement self-advocacy strategies. One of the realities of assertiveness is that even when used effectively, the desired outcome is not always achieved. This does not mean that these skills are not useful or that facing the situation was a mistake. Learning that disappointment can be faced and tolerated is an important emotional and social skill; in fact, it may promote self-advocacy going forward by being better able to handle difficulties and setbacks, which is the focus of the next section.

USING COPING STRATEGIES AND HANDLING SETBACKS

There are no trade secrets for managing ADHD. It is not a problem of not knowing what to do but instead is a performance problem. In some ways, CBT for adult ADHD, which requires organization of behavior outside of session, is like offering an injection treatment for needle-phobia—clients have to do the very thing that is a problem for them to achieve the outcomes they desire (e.g., “If I was able to do those things, I wouldn’t need to see you!”). This conundrum and related frustrations inherent in engaging in CBT for adult ADHD can be considered as among its side effects (Knouse & Ramsay, 2018).

This is the insidious nature of ADHD, as it makes behaviors that others take for granted more difficult. A food poisoning analogy illustrates how coping strategies become contaminated by past coping failures. If a person eats a tainted food, he or she feels ill as the body tries to expel the toxin. The next time that person is presented with the same food item, the body cannot help but feel queasy as a protective measure, even if the person is assured the food is fine.

This example helps therapists understand and empathize with the negative thoughts and beliefs about school, work, or other endeavors that adults with ADHD are told they should enjoy or value but which are much more

confounding and tedious for them. An avoidant mind-set (and *ugh* feeling) is a self-protective reaction to avoid or expel frustration and pain. Adults with ADHD are already prone to escape—avoidance coping for this reason and the reflexive conclusion at the first sign of difficulty in CBT may well be “I told you that these strategies would not work for me.”

Cognitions associated with the basic coping strategies for ADHD cluster around all-or-nothing thinking (e.g., “I’ve failed; this doesn’t work”), overgeneralization (e.g., “Nothing will work for me”), comparative thinking (e.g., “Other people don’t have to work so hard to stay organized”), and discounting the positive (e.g., “I was almost late”; yes-but thoughts). These reactions often arise in the early stages of CBT when the focus is on main coping strategies and tools (e.g., using a daily planner, making a to-do list).

The food poisoning analogy can show that the therapist understands and concedes that discomfort is part of the change process. A precursor to fostering a coping mind-set is reviewing a client’s history with coping strategies. In many cases, negative thoughts about coping are based on obstacles with the use of coping tools and not the utility of the tool itself (e.g., “I lost my planner,” “I did not check my to-do list,” “I did not enter the meeting in my phone calendar,” “I got off to a good start last semester but then faded after midterms”).

It is granted that losing tools, using them inconsistently, and establishing habits are challenging but manageable issues. Socratic questions such as, “If you locked your keys in your car, would you say that your car did not work?” or “If someone owns a treadmill but does not use it, would it mean that exercise is not helpful?” help reinforce the point that not only are these central issues for adults with ADHD, but that others struggle with them too. Judicious therapist self-disclosure can reinforce these points and build the alliance (e.g., “I’ve had this item on my to-do list for over a week”).

The therapist can reiterate that ADHD makes it difficult to consistently use coping tools, though that it can be done. There are some trial-and-error steps necessary to personalize tools for clients. The experience of many adults with ADHD is that they were given generic advice about using a daily planner (e.g., “Use this planner”) or dealing with procrastination (e.g., “You need to start earlier”). The CBT model for ADHD sets its sights on exactly how a client does not use coping skills, which creates customized pivot points for coping.

Clients may search for the right tool, such as a planner or organizational system, often jumping around to different ones at the first sign of trouble or simply seeking a new, better one (i.e., neomania; Taleb, 2012). A useful reframe is that the right tool is one that is good enough and used consistently. Although smartphones have features that are ideal for many people, others find that they do not access them enough to be helpful. A client might respond, “I should be able to use my smartphone as my planner.” This should statement is a stumbling block when a tool clearly does not work out because, rather than the tool being the problem and other options explored, it is chalked up as a personal failing.

Embedded in the issue of finding coping tools that are good enough is an adaptive mind-set that there are diverse ways to cope well. This is an important notion, from the standpoint of using coping tools, but also finding and fashioning good fits that optimize well-being and functioning related to life choices and roles. In some cases, such good fits may challenge implicit outlooks (e.g., “I should pursue a real major rather than my talent in the arts”; coming to terms that college or a job is a poor fit).

Rebounding from setbacks is an inescapable part of life and behavior change, as well as being an essential skill for managing ADHD. Invariable slips ups are part of the change process. Setbacks are framed in behavioral terms (e.g., “I did not break down the task into small enough steps” vs. “I procrastinated again”). The felt experience of increasingly being able to follow through on intentions provides the raw material for newfound confidence and adaptive beliefs, including at the schema level, which is discussed next.

CHANGING MALADAPTIVE SCHEMAS/CORE BELIEFS

Schema domains represent an array of categories of normal developmental needs, such as connection, autonomy, limits/boundaries, and safety/vulnerability (J. E. Young, 1999). The definitions of schemas and core beliefs are reviewed in detail in [Chapter 3](#) of this volume. These beliefs operate nonconsciously and are strongly associated with emotions. Automatic thoughts and other immediately accessible thoughts can be viewed as a weed with the schema/core belief acting as the root.

As discussed in [Chapter 2](#), schemas of failure and defectiveness/shame are among the most frequently endorsed themes in adults with ADHD, and self-mistrust was proposed as the central schema underlying these schemas. Many adults with uncomplicated ADHD may not necessarily have problematic schemas but still struggle with poor self-regulation.

The emergence of recurring themes in cognitive and behavioral patterns provide clues for likely rules and beliefs. Compensatory strategies within the CBT case conceptualization reflect efforts to deal with these beliefs that initially seem adaptive, but which end up strengthening maladaptive beliefs like self-defeating behaviors. Without a doubt, the most common compensatory strategy in adult ADHD is disengagement in all its forms (Knouse, Mitchell, Kimbrel, & Anastopoulos, 2019; Knouse, Zvorsky, & Safren, 2013; Torrente et al., 2014). As a result, compensatory strategies (viz., disengagement or escape–avoidance) offer a useful way to identify the influence of latent schemas/core beliefs and to flesh out the case conceptualization from the inside out.

The Vertical or Downward Arrow (Burns, 1989) is a therapeutic tool for unveiling schemas/core beliefs. The exercise involves highlighting a recurring automatic thought and, rather than modifying it, examining it in a specific manner. The client is invited to perform an exercise of viewing the meaning and implications of this thought by assuming it is true and accurate. With each successive response, the question of the meaning of the thought is repeated until the time at which an underlying, absolute belief is arrived.

For example, a client had difficulties initiating an important work project. He justified busying himself with other tasks and “getting ready to get ready” for the project despite knowing the deadline was approaching, which was a common problem. The client agreed to try a Downward Arrow in therapy where his therapist asked, “Assuming that it is true that you must do all of these other tasks before starting the main project, what does that mean for you or say about you?” The client responded, “It means work is always going to be a struggle for me. I’m not as efficient as my colleagues.” As the therapist continued to probe successive thoughts, the client provided the following answers: “My boss and colleagues will see me as an unreliable worker,” “I’ll probably get fired or have to quit before I get fired,” “I won’t be able to hold down a job,” “I can’t trust myself to do what I need to do,” and “I’m going to be a failure, unemployed, and alone because no one will want to be

with someone so unreliable.” This exercise unveiled the maladaptive schemas, and the clinical question turned to what to do about it?

A benefit of CBT for adult ADHD is its emphasis on promoting adaptive thoughts, coping skills, and functioning in everyday life, which concurrently addresses many schema triggers. Directly targeting this level of beliefs and emotions in adult ADHD requires the use of modified schema-focused approaches not typically included in extant manuals (Lücke, Lam, Müller, & Philipsen, 2017; J. E. Young, 1999). These include eliciting maladaptive schema and core beliefs and developing adaptive or at least modified alternative versions of them. An important aspect of schema modification is accounting for the effects of ADHD on the client’s experience and self-concept (e.g., “How do you think you came to hold this belief about yourself?”). It is always useful to reinforce incremental gains in treatment, as well as to examine how these gains may support modified outlooks and adaptive beliefs. Checking progress and identifying how a client’s actions contributed to positive outcomes (and catching thoughts that subtly discount progress, such as attributing it to luck) is a way to affirm experiences and fashion adaptive beliefs and a sense of efficacy (e.g., “How does the fact that you were able to get started and follow through on your report affect your old belief about yourself?”).

In these ways, CBT can foster a spirit of not only resilience, but also agency consistent with a growth mind-set (Dweck, 2006/2016). These aims ideally help adults with ADHD to face and learn from challenges and transcend them through endeavors clients may not have previously believed were within their capacity to achieve.

CONCLUSION

The clinical issues addressed in this chapter follow the familiar theme of promoting engagement and follow-through on necessary tasks and coping skills. [Table 5.2](#) reviews each of the problems and interventions reviewed in this chapter. The cognitive domain includes the classic restructuring and framing strategies for addressing task-demoting thoughts. Cognitive defusion strategies are helpful with emotion and discomfort management and developing task-promoting mind-sets of sufficiency, like a client who can

accept that he or she is not in the mood for a task but can still engage with it. These approaches work in concert in CBT to build experiences with which to modify schemas/core beliefs and concurrently recognize and develop a client's aptitudes, self-trust, and overall functioning. [Chapter 6](#) extends these skills to less common, though important, matters seen in cases of CBT for adult ADHD.

TABLE 5.2. Summary of Cognitive Interventions in Action for Specific Problem Areas for Adults With ADHD

| Common problem area | Typical cognitive interventions |
|-----------------------------------|--|
| Engagement in treatment | Psychoeducation |
| | Cognitive modification/reframing expectations |
| | Define pivot points/start small |
| Procrastination | Lessons from procrastivity |
| | How You Don't Do Things form |
| | Frame actionable pivot points and tasks |
| | Cognitive modification (e.g., defense attorney) |
| | Cognitive defusion (e.g., accept discomfort) |
| | Emotional labeling/granularity |
| | Implementation plan |
| Time management difficulties | Frame/reframe time |
| | Sufficiency reframe of effort/energy for task |
| | Defense attorney for negative anticipations |
| | Perspective taking and scaling effort and energy ratings |
| Disorganization | Defense attorney for distorted thoughts about organization skills, including positive thoughts or rationalizations |
| | Normalize/accept the hassle of using organization strategies |
| | Pair organization maintenance behaviors with positive activities |
| Emotional management difficulties | Emotional labeling/granularity |
| | Define terms related to strong emotions |
| | Modify/accept thoughts associated with an assumption of lack of control over emotions |
| | Cognitive defusion/acceptance of discomfort |
| | Identify risk factors and personal tells for emotions |
| | Homework practice (mindfulness) |

| Common problem area | Typical cognitive interventions |
|--------------------------------|--|
| Tolerating discomfort | <p>Modify thoughts that one must be in the mood or discomfort free as a precondition for a task (e.g., front-end perfectionism)</p> <p>Use discomfort as a signal of the value of a task</p> <p>Reframe discomfort as a time-limited investment for a valued task</p> <p>Homework practice</p> |
| Impulsivity | <p>Modify/accept thoughts associated with the assumption that impulsivity is out of client's control Identify risk factors for impulsivity</p> <p>Use assertiveness to manage impulsive compliance</p> <p>Modify/accept self-critical thoughts related to impulsive acts to make amends</p> |
| Motivation/values | <p>Devote time to valuation of tasks</p> <p>Use external reminders of motivation</p> <p>Define actionable pivot points to create doable actions to enhance motivation</p> |
| Assertiveness/self-advocacy | <p>Use the define your role technique to clarify the issue to be addressed</p> <p>Modify distortions associated with mind reading and anticipating outcomes</p> <p>Recognize underlying assumptions (schemas) that may interfere with self-advocacy</p> |
| Handling setbacks in skill use | <p>Normalize setbacks and corresponding discomfort</p> <p>Challenge typical distortions or all-or-nothing thinking, overgeneralization, comparative thinking, and discounting progress</p> <p>Personalize coping strategies and identify good fits; challenge "should" statements</p> |

| Common problem area | Typical cognitive interventions |
|--|---|
| Changing negative schemas and core beliefs | <p>Identify and use compensatory strategies (avoidance/disengagement) to illustrate underlying schemas/beliefs</p> <p>Identify client's incremental progress as evidence for modified schemas/core beliefs</p> <p>Reinforce client's strengths and coping resources</p> <p>Use Downward Arrow technique to uncover underlying beliefs</p> |

Note. ADHD = attention-deficit/hyperactivity disorder.

KEY CLINICAL POINTS

- **Even engaging in psychosocial treatment for adult ADHD can be daunting for clients.** There may be grief or anger reactions at the diagnosis and wondering how life could have been different had it been identified earlier. Time spent processing these reactions as well as credible psychoeducation materials and online resources can aid this process.
- **Procrastination is arguably the most common presenting complaint for adults with ADHD.** Examining procrastinity, those seeming productive endeavors used to avoid higher priority tasks, yields strategies for promoting engagement and follow-through. These and other interventions, while still focused on behavioral engagement and follow-through, include important cognitive facets related to task definition, insufficiency thoughts, and fostering task-promoting mind-sets.
- **Time management includes time, effort, and energy management, how adults with ADHD pace themselves in and across tasks.** Reframing time and perceptions of the effort and energy requirements of an endeavor, particularly to

promote a client's sense of having enough of these to engage in a task is a key clinical target.

- **Managing emotions, discomfort, and motivation/values are closely allied topics.** Emotion management includes spotting risk factors and early signs of negative feelings to take coping steps. Facing discomfort reactions when facing pivot points and managing the *ugh* feeling is arguably the central emotional theme in CBT for adult ADHD. Mindfulness, acceptance, and cognitive defusion strategies all help garner a mind-set that “I can feel discomfort and persist on my plan.” Emotions can be recruited to enhance a value of a task as well as pinpoint interests that are fulfilling and enjoyable as a component of self-care and well-being.
- **Coping strategies for impulsivity challenge the thought that “I cannot control myself.”** Antecedent control is ideal, either taking preemptive steps to manage or avoid risky situations. After-the-fact approaches for dealing with the consequences of impulsive actions require facing discomfort but can mitigate effects.
- **Assertiveness, including self-advocacy and using social capital, is an underused coping domain in adult ADHD.** Framing interpersonal situations in actionable terms (e.g., defining your role) keeps with the theme of outlining actionable plans. Cognitive interventions usually address thoughts and beliefs about follow-through on these actions.
- **ADHD is a performance problem, which means that it interferes with the use of coping strategies.** In addition to past frustrations with using these skills, maladaptive schemas/beliefs can further interfere with them. Handling setbacks is normalized as an expected occurrence in CBT for adult ADHD and as a distinct coping skill. Cognitions about skills or tools that do not work often yield nuanced details that offer options for coping. Review of relevant schemas also helps illustrate how these beliefs contribute to avoidance.

These beliefs can be reevaluated and modified as clients make progress, including cultivating a sense of agency and growth.

Additional Clinical Issues in Cognitive Behavior Therapy for Adult ADHD

Attention-deficit/hyperactivity disorder (ADHD) is complex because its effects are so wide ranging, including coexisting clinical issues that have primary or secondary effects on the core symptoms. This chapter reviews the clinical issues pertinent to cognitive behavior therapy (CBT) for adult ADHD, as well as some that may be rare. When rare issues arise, they become clinical priorities, and it is useful to have a framework for managing them. Topics are presented in the order of the frequency with which they occur in adults with ADHD. The chapter starts with the issue of medications, challenges faced by emerging adults, and the most common comorbid diagnoses for adults with ADHD. This is followed by a discussion of sleep issues, managing technology use, the effects of ADHD on relationships, issues faced by senior adults with ADHD, suicidality, and adult oppositional behavior. The chapter ends with a review of therapist reactions that may arise in the course of psychosocial treatment with adults with ADHD.

MEDICATIONS

Pharmacotherapy is an evidence-supported treatment for ADHD for all ages. CBT combined with medications is an effective, often essential regimen for most adults with ADHD. An argument can be made that anyone diagnosed with ADHD regardless of age should consider and review medication options for treatment. The distorted thoughts, like magical thinking and externalizing responsibility, are some of the most common that arise when adults use medications to manage ADHD.

Magical thinking is the notion that a medication for ADHD itself will be a singular, life-changing event, often spurred by accounts in popular books of awakenings bordering on biblical proportions (e.g., “But this I know: I was distracted, but now I can focus!”). Indeed, many adults with ADHD find that effective medical treatment provides a missing piece of a lifelong puzzle and produces dramatic improvements. These wholly positive accounts make good reading, but outcomes from medications vary, including among responders. When clients pin their hopes on medications to totally resolve symptoms and impairments and unlock their potential, it becomes an issue.

Often fueled by unrealistic hopes, some adults with ADHD engage in *externalizing responsibility* and blame their difficulties on medication and, in some cases, other people. A subset of adults with ADHD endorse patterns of negativity, oppositional attitudes, and cynicism (Robin, Tzelepis, & Bedway, 2008). It is easy for others, including care providers, to forget or simply not understand how confounding it can be to live with ADHD. Clients feel frustrated and powerless to control and direct their own attention and efforts, and they may hold out hope that medications are the answer. They may then lash out when these or other hopes are not realized. Relatively common nuances of clinical practice may be seen as insufferable barriers, including frustrations with the trial-and-error search for the right medication, dose, and timing; management of side effects; dealing with the reality of when a client’s response to medication falls short of hopes and expectations; and hassles with insurance and prescription limits. However, most adults with ADHD internalize their problems.

Pharmacotherapy is supremely helpful and essential for many adults with ADHD. Psychostimulants for ADHD are amongst the most effective treatments in clinical psychiatry. However, in many cases there are residual symptoms or side effects that, though substantially improved, still interfere with functioning and coping. Dealing with magical thinking focuses on setting

realistic expectations, including the limits of medications (or any other treatment) to be able to reach or even approach a level of perfectibility.

For most individuals who are disappointed by an incomplete response to medications, psychoeducation and additional coping strategies are usually enough to modify outlooks and foster engagement in another treatment or support service. Young adults with ADHD often struggle with whether to take medications when facing many developmental stressors and increased responsibilities, which are made more difficult by ADHD. The next section focuses on this age cohort and some common issues that may arise in psychosocial treatment.

EMERGING ADULTS WITH ADHD

Many adults are identified with ADHD later in life because they “got by” throughout primary and secondary school, perhaps doing well. Mild, circumscribed symptoms may simmer or be masked during these years, becoming increasingly problematic but not enough that help is sought. These undiagnosed individuals face later difficulties in college, when entering the work force, or at other junctures in life that tax their already impaired self-regulatory capacities beyond a degree that can be explained away.

Emerging adults (Arnett, 2000) with ADHD often provide retrospective accounts of getting by in school without completing homework assignments, by using class notes without doing assigned readings (or vice versa), by relying on cramming at the last minute, or by outright cheating or excessive parental help (e.g., finishing assignments or projects for the student). Others sacrifice sleep, extracurricular activities, and a social life to keep up with the same amount of work peers complete in less time. Students with ADHD may benefit from additional support provided by tutors, coaches, and parents sitting with them to ensure homework is completed and getting them to school every day. Without these supports, undiagnosed ADHD quickly becomes apparent in college and work settings in young adulthood.

College Students With ADHD

CBT is well suited for college students with ADHD, as its structured approach fits well within a semester schedule. The regular demands of class attendance, and deadline-driven projects provide salient therapy targets. Balancing academics with a social life, self-care, and other tasks of daily living make college a veritable executive function (EF) obstacle course. CBT can be readily adapted to the on-campus needs of students with ADHD (Ramsay & Rostain, 2006, 2016b), including a novel program of group and individual follow-up sessions (Anastopoulos & King, 2015; Anastopoulos et al., 2018). ADHD coaching for college students has also produced positive results (Field, Parker, Sawilowsky, & Rolands, 2013; Parker, Hoffman, Sawilowsky, & Rolands, 2011; Prevatt & Levrini, 2015).

The core skills for managing ADHD reviewed in [Chapters 4](#) and [5](#) of this volume are directly relevant to college students. For example, a friend may invite a student with ADHD for an evening out the night before a midterm exam. The most prudent option for the student with ADHD would be to decline the invitation and study. Using core skills, the student with ADHD can prioritize the student role (i.e., studying) that night and plan for a night out after the exam, thoughts and discomfort associated with a fear of missing out or of being left out can be framed as time-limited and tolerable, and the student can set up a specific study time and location and a specific starting task, all of which are pivots points that promote a deferred goal of being ready for the exam.

Writing assignments are at the top of the procrastination list for all college students (Steel, 2011) but especially for those with ADHD. Writing is a high cognitive load task that draws on several EF skills. It requires organization and discipline to schedule and devote time to the task well in advance of a due date. The mental organization, sequencing, and expression of thoughts and ideas all make demands on working memory, motivation, and concentration. Students with ADHD may intend to work on a paper in small increments over time, but such plans often crumble when facing a writing task, in part because of reassuring justifications for putting it off (e.g., “I work best the night before a deadline,” “I need to be in the mood to write”)

The act of writing a paper can be broken down into distinct writing modes. These modes are designed to address a common frustration for students with ADHD, as they tend to simultaneously generate and organize ideas in their mind, type them, and then edit the text into its final form (e.g.,

perfectionism when writing). Such perfectionism is likely an attempt to make a first draft be the final draft to finish the paper all in one sitting. Unfortunately, this can make the writing process feel bogged down and tedious (e.g., “I’ve worked on this paper for an hour, and I’m only on the second paragraph”). This type of perfectionism, as with front-end perfectionism, reflects the desire to minimize discomfort (e.g., “If I can finish it in one sitting, then I will be done and won’t have to face it anymore”). Some students who wait until the last-minute use the urgency of a deadline to override the editing pressure.

Parsing a writing assignment into different writing modes helps to create more manageable, discrete tasks. Consider the process of furnishing a room, which requires gathering furniture, having the furniture moved to the room, and finally, placing the furniture in the desired spots (see [Table 6.1](#)). The first writing mode, the *preparatory mode*, is like gathering the furniture and other décor items. This mode includes choosing a topic, completing any background reading, gathering references, and organizing an outline. A basic first step that serves as the first smallest engagement step is to review the syllabus about the paper. Apart from touching the task, this step ensures the student has accurate information about the deadline, page requirements, and other parameters.

TABLE 6.1. The Furnishing a Room Analogy for Different Writing Modes

| Writing mode | Furnishing a room analogy | Writing tasks in this mode |
|-------------------------|--|--|
| Preparatory mode | Collect items for the room | Choose a topic, complete background reading, gather references, and draft an outline |
| Generative writing mode | Deliver, unload, and place items in the middle of the room | Get thoughts and ideas down on paper, including incomplete thoughts and placeholder words that will be changed later |
| Editing mode | Decorate and situate furniture in the room | Review and hone what has already been written to make it good enough to submit |

Outlining a paper is a useful strategy often resisted by students who say it does not work for them. This can be reframed as devoting time to thinking about what to write or game planning the paper. Thinking of the outline as a PowerPoint presentation can help students with ADHD put it in more familiar terms. This makes the task manual as bulleted ideas can be generated and sorted, which represent ways to externalize and visually sequence ideas. None of these steps yet have focused on writing the paper, rather they reframe the basic engagement steps to foster a student's sense of efficacy for writing.

Therapists should watch for signs of *pseudoefficiency* at this stage (Ramsay & Rostain, 2015b), which occurs when a student is busy but not productive (i.e., procrastivity). A student may collect many more reference materials (e.g., 50 articles) for a paper, when only a few (e.g., five articles) are needed. The student may feel productive but is misappropriating time, effort, and energy, and now she faces a large (albeit digital) pile of articles. It may be useful for students with ADHD to set up a bounded task (e.g., find 10 good-enough articles).

The second writing mode is the *generative writing mode*, also referred to as *free writing*. This mode is like having furniture delivered and unloading it and other items in the middle of the room. The generative writing mode reflects getting ideas down on in a Word document, using placeholders for words that may be replaced with better ones later, and allowing for incomplete ideas, among other ways to face discomfort.

The final writing mode is the *editing mode*, which is like situating the furniture and decorations in the room. Editing text exacts less cognitive load, as revising existing text is viewed as easier than producing new ideas. If nothing else, this mode provides an alternative to an all-or-nothing reaction to writing (e.g., "I can't write" vs. "I'm in the editing mode"). This option can be used as a paper starts to take form and a student devotes a writing session to editing. This target may end up being the sole focus of a writing session or may be an engagement step that leads to some generative writing.

Students with ADHD may be frustrated by an inability to organize and express their ideas. One strategy for getting unstuck is to say aloud what they are struggling to write. Such ideas can be told to a roommate, pet, plant, or simply by talking aloud to themselves. The switch to verbal expression (vs. typing) and concurrent auditory processing often help a writer get unstuck.

Voice-activated word processing software is an assistive technology that many students with ADHD find useful (and is often available at campus learning centers).

For example, a student with ADHD struggled writing papers despite many insightful ideas. He received excellent class participation marks, but they were brought down by late submission penalties for his papers. During a CBT session, the student was urged to describe his ideas for a paper while recording himself on his smartphone, which would serve as his outline. At his next session, the student mentioned it was his easiest paper in terms of getting started and seeing it through, as he was guided by descriptions of his ideas in his own voice.

Bridging strategies are necessary when students must devote separate work blocks to a paper, stopping and restarting several times. Some helpful tips include leaving a parenthetical reminder at the stopping point in the document with the next idea or point to be made. Rereading the last few paragraphs from the previous writing session is an implementation step (e.g., “If I read the last two paragraphs I wrote, then I can write at least one paragraph today”).

College degrees have come to be regarded as the minimum criteria for employability, which has likely contributed to rising levels of student stress (Hibbs & Rostain, 2019). Most young adults with ADHD at some point will enter the workplace in some manner, which is the focus of the next section.

Emerging Adults With ADHD at Work

Young adults entering the workforce face challenges related to organization, time management, and other EFs. Students with ADHD find that college offers less structure and oversight than high school; there also is less structure and supervision in day-to-day work life. The goodness-of-fit of job demands and aptitudes is important for adults with ADHD. Many adults with ADHD report that jobs that are more hands-on or manual are more protective from the effects of ADHD (Lasky et al., 2016).

An underappreciated difference for emerging adults transitioning into the workforce is the different pace. An academic calendar is driven by a semester framework in which there is a specific start date at which students

begin with a blank slate in terms of grades. Classes, exams, and other obligations are apportioned over a set number of weeks leading up to a clear endpoint, followed by a break before the new cycle begins, a bounded (albeit lengthier) task.

For the most part, there is no end of the year in adult life. There are benchmarks in some jobs (e.g., tax season for accountants; school calendar for educators), but there is still a steady, unending stream of work to manage. There also are mounting adult roles and responsibilities outside of work to be handled. The mechanisms used by young adults with ADHD to get by in school (e.g., all-nighters) are often no longer feasible in the workplace.

An important coping skill for young adults with ADHD in college or the workplace is self-advocacy and asking for help. Independent functioning is not solo functioning; it is the ability to identify and use available resources. By using the define your role strategy (see [Chapter 5](#)), there are many steps that young adults (and students) with ADHD can take to identify and make use of resources around them, including eliciting help from others. For college students, available resources include instructor office hours, accommodations, and campus learning centers, which provide regular meetings with a learning specialist and access to voice-to-text software for writing assignments. For young adults in the workplace, adjusted work hours or written summaries of project of details may help employees with on-time arrival, keeping track of assigned tasks, or remembering details. Many of the cognitive and behavioral strategies outlined in previous chapters and sections can be adapted to managing workplace problems.

The goal for most adults is to move away from their families' home, however many young adults continue to live with their families for a time during emerging adulthood. This can be particularly stressful for young adults with ADHD and their parents, which may lead to family meetings within the context of CBT for adult ADHD.

Emerging Adults With ADHD and Their Parents

An issue for therapists working with young adults with ADHD is family involvement. These emerging adults and their parents face complex, evolving family dynamics. Parents of young adults with ADHD are straddling the line

of promoting their child's individuation with the fact that that child has a relative delay in self-regulatory skills. These young adults are striving for autonomy while steering through a phase of life when they assume the mantle of adulthood, all while dealing with ADHD. There may be disruptions in the process of becoming an adult (e.g., academic leave, job loss, financial needs) that have implications for the whole family (Barkley, 2017).

Parents of young adults with ADHD, especially those who are struggling, may have catastrophic thoughts about their children's difficulties. Although they are based on real stressors, these thoughts reflect negative time projections (e.g., "He will never start his own life and will live with us forever"). Young adults with ADHD may have similar fears when facing adulthood: feeling behind peers, shame at still living at home, or being financially dependent.

When targeting these fears, be it with family members or the young adult with ADHD, it is helpful to define the difficulties in adult life through the lens of a growth mind-set (Dweck, 2006/2016) or *antifragility* (Taleb, 2012), the notion that facing these challenges can foster strength and progress. Academics fosters a pass/fail or fixed grade mind-set about performance, whereas the workplace offers a greater array of performance demands and options. A young adult has more responsibility and more opportunities for fashioning a good fit in their job experience, which is particularly relevant for adults with ADHD (Lasky et al., 2016).

The challenge for parents is to keep their fortune-telling/ruination thoughts about their adult child in check. This may involve recognizing generational differences in how young adults approach a job search and job options. The therapeutic task with young adults with ADHD and their parents is to strike a balance between allowing the emerging adult to navigate a course through adulthood and the availability of supports (e.g., housing, finances, treatment; see Barkley, 2017; Hibbs & Rostain, 2019). Many of the issues facing young adults with ADHD are addressed in CBT, including helping parents see and support incremental progress (Knouse & Ramsay, 2018).

The specter of ADHD complicates any aspect of becoming an adult. Adult ADHD is made more complex by coexisting psychiatric diagnoses, which are addressed in the next section.

COMORBID ANXIETY, DEPRESSION, AND SUBSTANCE USE

CBT is well-positioned to address the coexisting diagnoses associated with ADHD, the most common being anxiety, depression, and substance use. These issues are usually woven into the therapeutic agenda and many coping skills for ADHD are easily applied to them (e.g., implementation strategies promoting behavioral activation for depressed mood). All the case-by-case nuances of the permutations of comorbidities are beyond the scope of this section, so this overview touches on the most typically encountered cases in the treatment of adult ADHD.

Anxiety

Anxiety is the most common coexisting diagnosis with adult ADHD. It makes sense as ADHD makes various tasks difficult for adults with ADHD. Anxiety is an emotion associated with the perception of uncertainty or risk—the nature of ADHD itself creates uncertainty.

Anxiety, at least in small portions, is a great motivator. It is an emotional cue that provides information, meaning, and impetus for either action or inhibition. Some adults with ADHD, in fact, describe troubles from a lack of such anxiety (e.g., “My problem is that I’m not anxious enough about things. I’m underwhelmed and I just want to be ‘whelmed’”).

Clinic-referred adults with ADHD often describe a degree of discomfort on tasks viewed as difficult, tedious, or simply deemed “work,” which triggers escape–avoidance. At some point, the ratio of avoidance to engagement shifts such that the anxiety related to facing the task is exceeded by mounting anxiety of the costs of not meeting a deadline or other consequences. This shift from a task being an abstraction (e.g., “I know the midterm is coming, but I still have time”) to becoming an imminent reality (e.g., “The midterm is tomorrow morning!”) represents a shift in the now/not now conundrum. This shift transforms anxiety from fueling avoidance to spurring action such as diving headlong into a task by means of binge working or massed studying at the last minute (often romanticized as hyperfocus).

From a developmental standpoint, late-identified adults with ADHD often describe a kindling of anxiety over time as they face increased performance

demands. They may have gotten by in middle school by completing homework or preparing for tests at the last minute, but they sacrificed quality, grades, and/or sleep. Anxiety at this age is relatively circumscribed, tied to specific assignments. As assignments and other duties increase in number and difficulty in high school, college, and beyond, anticipatory anxiety correspondingly rises to meet the rising stakes for performance. This results in longer delays in getting started, with more pressure associated with waiting until the last minute. Binge working to meet deadlines has greater negative effects on well-being and performance. At some point, this cycle is no longer tenable, resulting in escalating apprehension that risks becoming a distinct anxiety disorder. However, this kindling view of anxiety and ADHD is clinically informed conjecture.

This anxiety, perhaps better viewed as persistent worry or apprehensiveness, is tied to the dissonance between knowing what must be done and a mistrust of a client's ability to do that. It is a visceral aversion to such demands from this dissonance that manifest as the *ugh* feelings (see [Chapter 5](#)) and worry linked to tasks, which results in escape–avoidance. This cycle culminates with adults with ADHD facing the consequences of being late with a task, crafting explanations or justifications for the tardiness, or rushing to complete it on a wave of stress. Worry may convert into full-blown anxiety when facing the actual costs of avoidance (e.g., a failing grade, probationary status at work, relationship discord).

From an intervention standpoint, this worry is addressed directly by fostering engagement and following through on matters affecting these life domains using the coping approaches for adult ADHD, which double as exposure interventions for anxiety. Cognitive interventions target anticipatory thoughts tied to risk and uncertainty that fuel avoidance, such as fashioning task-promoting reframes and engagement plans for facing and following through on tasks, addressing magnification/minimization distortions, and a client's ability to tolerate discomfort and uncertainty.

Social anxiety may develop over time. Many adults with ADHD do not view themselves as shy but describe mounting reticence to contribute in group settings. This apprehension often stems from inattentive symptoms giving rise to public embarrassments, like being called on by a teacher during class while in the middle of a daydream (or conversation with a friend) and having no clue what has been said. Memories of giggles by

others, being chided by the teacher to “pay attention,” or being present but not taking part in talks with friends, left them feeling at a loss, “spacey,” or “dumb,” impressions and attributions which persist into adulthood.

A coping domain for adults with ADHD is the use of interpersonal skills, which is a form of self-advocacy (see [Chapter 5](#)). The simple step of asking someone to repeat something, admitting to having “zoned out” for a moment, or admitting to being bad with names are ways to quickly manage social faux pas. These strategies that could be considered acceptance or shame-attacking for social anxiety are also workarounds for working memory difficulties (e.g., “Can you invest 5 seconds of discomfort and ask him to repeat his name?”). Apart from managing the immediate situation and challenging negative predictions (e.g., “He will think I’m flighty”), these skills improve social collateral by being self-effacing, staying engaged in interactions, and making better use of support and connections.

Depression

As with anxiety, the connection of ADHD and depression makes sense. The impairments associated with ADHD result in failures and lost opportunities as well as decreased self-esteem, which lead to escape–avoidance. These setbacks are the direct result of the self-dysregulation characteristic of ADHD. Depression, an emotion associated with the perception of loss, magnifies and is magnified by such ADHD-related difficulties.

The overlap of ADHD, depressive symptoms, and negative thinking has long been conceptualized from clinical anecdote, with growing empirical support (see Knouse, Zvorsky, & Safren, 2013; Mitchell, Benson, Knouse, Kimbrel, & Anastopoulos, 2013; Oddo, Knouse, Surman, & Safren, 2018; Serine et al., 2019). ADHD creates failure experiences, which promote the development of negative expectations, resulting in cognitive behavioral avoidance, which creates more failure experiences and a risk for depression.

The implementation-focused approaches adapted to adult ADHD also benefit mood. Framing actionable steps for engaging in endeavors is consistent with behavioral activation and graded tasks for mood, as are cognitive interventions for depressive thoughts. Anecdotally, there is more pessimism about the anticipated pleasure or other outcome of a plan in cases

of depression alone (e.g., “It’s not worth the bother to go; I won’t enjoy the movie anyway”); whereas the thoughts of adults with ADHD and depression initially emphasize the effects of disorganization on plans or the effort they require, which then magnify pessimism about an activity (e.g., “Knowing me, I probably won’t even be able to get ready and get there on time; I probably wouldn’t enjoy the movie anyway”). The first facet of this depressive avoidance for adult ADHD can draw on coping strategies for procrastination, such as specifying the value of a task and the specific steps necessary to complete it. In terms of the predictions about enjoyment of a task, scaling a client’s anticipated enjoyment (e.g., a 0–100 scale) and comparing it with the actual experience is a classic approach for dealing with depressive thinking (Burns, 1989).

In cases of ADHD and depression, reviewing the evidence on which distorted thoughts are based (e.g., the defense attorney strategy) can be complex. There will be accounts by adults with ADHD that seem to support a negative conclusion, such as a college student’s saying she will fail a class after failing an exam. When asked how she arrived at that view, the student will produce a litany of other missed or failed assignments in the class and point out her current failing grade. In these cases, the review of the evidence requires closer scrutiny to determine leverage for change. It may be that the student is recently diagnosed and has not yet developed coping skills or has not yet adapted them to her current class. It may be that the class or major (or college itself) is a poor fit or simply represents a stressful situation to be handled in the process of becoming an adult. Regardless, options and plans can be formed, even when they are not ideal (e.g., dropping the class).

Substance Use

Substance use problems, ranging from problematic recreational use to abuse and dependence, are seen in many cases of adults with ADHD. Nicotine, alcohol, and marijuana are the most common substances used by adults with ADHD and there are estimates of a high prevalence of these individuals in substance-use treatment programs (Nigg, 2013; Notzon et al., 2016; van Emmerik-van Oortmerssen et al., 2012). Therapists typically encounter problematic use bordering on abuse, like marijuana or alcohol use that

started off as recreational but has escalated to a point that causes difficulties for clients.

Although there are potential benefits of medical marijuana for some health conditions (e.g., chronic pain, inflammation, epilepsy), ADHD does not currently number among them (Volkow, Baler, Compton, & Weiss, 2014). In fact, early initiation of marijuana use (before 16 years old) is associated with poor cognitive function, and young adults with ADHD are overrepresented in this sample (Tamm et al., 2013). Nonetheless, the belief that marijuana and related products are beneficial for ADHD is a common one encountered by therapists treating adults with ADHD, particularly young adults (Mitchell, Sweitzer, Tunno, Kollins, & McClernon, 2016).

A first step in clinical practice is identifying and raising the issue of substance use and determining whether clients see it as a problem. Some adults with ADHD start CBT with substance use as a therapeutic target; for others, there may be compelling evidence of substance use that affects functioning, including attempts to self-medicate. Along with motivational interviewing approaches (Magill et al., 2018), the CBT framework for understanding ADHD is useful. A collaborative understanding of any use patterns helps to elicit specific pivot points where a client may be open to change. The Cognitive Model of Addictions form (A. T. Beck, Wright, Newman, & Liese, 1993) is a useful guide for breaking down a pattern of substance use into discrete steps and developing coping strategies at each step.

For example, a client who uses marijuana as a sleep aid reviewed this use within his broader recreational use. Along with his therapist, the client identified that he did not like marijuana's amotivational effects on him the next morning. The client was willing to explore other ways to improve his sleep rather than using marijuana at the first hint of sleep onset difficulty without committing to complete abstinence.

An all-or-nothing approach to substance use may result in resistance and risk for drop out from treatment. Adopting a harm reduction approach is a useful way to broach substance use. The rationale is framed as making informed decisions and acknowledging a client's right of self-determination. Defining pivot points at which to replace substance use with coping strategies makes effective coping more feasible and less overwhelming and invites clients to experiment with what works. Therapists can invoke their

therapeutic role to point out and confront obvious difficulties and concerns about glaring substance abuse that requires a higher level of intervention, including concerns about misuse, abuse, or diversion of prescribed stimulant medications for ADHD.

As in the previous example, many young adults with ADHD use marijuana as a sleep aid, as this group is particularly prone to sleep problems, which are reviewed next.

SLEEP PROBLEMS

Sleep problems result from and contribute to self-regulation difficulties, making sleep a vital issue for adults with ADHD. There is a wealth of research documenting ADHD-related sleep issues and their cascading effects on other regulatory processes, including energy, appetite, concentration and attention, and impulse control (Barkley, 2015c; Kooij, 2013; Nigg, 2013).

There are cases in which clients have a primary sleep disorder that coexists with ADHD (e.g., insomnia, sleep apnea, disrupted sleep-onset disorder). Other sleep problems are described as trouble “turning off” the mind in bed, sleep delay despite fatigue (e.g., fending off sleep to do one more thing), or simply being night owls. In some cases of chronic off-time, disrupted sleep patterns, the shift to a nighttime orientation stems from a progressive behavioral shift in sleep–wake patterns over time.

Some adults with ADHD report pronounced asleep-to-awake transition problems, like sleeping through multiple alarms. This state of lowered arousal and performance during transition is deemed *sleep inertia* (Tassi & Muzet, 2000). Such difficulty waking in early morning is a defining symptom of delayed sleep–wake phase disorder and is associated with worse cognitive functioning on forced morning waking (Solheim et al., 2018).

The thoughts and beliefs that adults with ADHD hold about sleep may interfere with healthy sleep habits. For example, handling transitions and task-switching are often problems, including shifting to “sleep mode.” Many adults with ADHD get mired in tasks (e.g., projects, gaming, flitting from site to site online) when nearing their targeted sleep time. When probed for their thoughts, adults with ADHD often report that this is the time they finally do what they put off during the day, that everyone else is asleep and no one is

expected to be working, and that going to sleep means that they will have to face tomorrow. Clients with an established history of sleep difficulties often report that they do not want to lie in bed unable to sleep, choosing instead to keep doing what they are doing until they cannot stay awake. Sleep itself is sometimes viewed as a waste of time, with some clients describing “sleep guilt” from having been told that they sleep away days or nap too much, hinting that undue sleep is a sign of laziness. This becomes self-defeating as it undermines clients’ sleep needs and interferes with daytime functioning.

A reframe for managing sleep issues for adults with ADHD is that the quality of a night’s sleep starts with the wake-up time that morning. A fixed wake-up and get-up time (as these are distinct steps) should be set and kept regardless of the amount or quality of sleep. Once up and going, the reframe is that there will be enough focus and energy for adequate functioning, even if feeling the effects of poor sleep, as very often thoughts gravitate to a sense of insufficiency.

Such cognitions about sleep are consistent with subjective–objective sleep discrepancy (SOSD), the disparity between sleep estimation and polysomnographic data, that is often seen in insomnia (Crönlein et al., 2019). This disconnect manifests as recalling less sleep than is documented by objective data, which can result in the insufficiency view mentioned previously. An open study (though not specific to ADHD) of CBT for insomnia (Garland, Vargas, Grandner, & Perlis, 2018) with a psychoeducation component for SOSD was associated with improvements on a measure of accuracy of sleep estimation and actual sleep quality (Crönlein et al., 2019). However, conclusions could not be drawn about whether improved sleep led to better estimations or if there was a mediational role of psychoeducation.

There are many justifications for staying up late that are enabled by corresponding justifications for sleeping in the next morning (e.g., “Work doesn’t care if I’m late,” “I can skip my first class,” “I don’t have anything to do tomorrow”). Some clients describe sleep as a boring task. Ready for sleep requires the hassle of leaving what a client is doing, which presents a barrier to a healthy sleep schedule.

A cognitive shift toward using a sleep mode behavioral script may include adaptive thoughts about preconditions for sleep and a client’s aversion to plans (e.g., “I should be able to just go to sleep when I want”).

Poor self-monitoring interferes with tracking clock time, signs of fatigue, and other sleep cues. Sleepiness is recognized and attended to much later than is healthy, like how profound thirstiness signals dehydration.

That said, discrete signs and tells of fatigue can be tagged as cues for sleep. Apart from physical (e.g., yawning) and behavioral cues (e.g., mindlessly refreshing a social media page), reminders in the environment can be used. These prompts may be a designated time (11:00 p.m.), an alarm set for a sleep-mode script, or a roommate or partner readying for bed.

The sleep-mode script is a useful tool, whether for individuals who have difficulties quieting their mind or for those who stave off sleep despite being tired (Ramsay & Rostain, 2015a). This script is a personalized routine of sleep-promoting steps designed to prime sleep, not unlike a bedtime routine for children. The script transforms sleep (or at least getting into bed to sleep) into discrete actions rather than viewing sleep as being wholly out of a client's control. Steps are personalized and can include logging off and charging devices, preparing items for the next day, meditation, or reading in bed, to name a few. Some people have much briefer sleep scripts, noting that once they get in bed, they quickly fall asleep.

Many adults with ADHD have longer sleep latencies once in bed. Mindfulness, simple relaxation breathing, and muscle release exercises and an accepting mind-set that one can be lying awake while still resting are helpful reframes. Writing out thoughts, to-do items, and worries before getting into bed is another proactive way to process and externalize disquieting thoughts. Adults with ADHD can be advised to get up after a certain amount of time and engage in quiet activities before returning to bed, which is considered a reboot of the sleep script.

Similarly, many adults with ADHD experience middle-of-the-night awakenings and have difficulties falling back to sleep. A common automatic thought in such cases is, "My sleep is ruined, I will not get a full night's sleep, and tomorrow will be bad." Psychoeducation provides an adaptive alternative to this thought. Sleep historians have found that a single, uninterrupted block of sleep is a relatively recent standard (Johnson, 2014). Accounts from diaries have uncovered a first and second sleep sandwiched around periods of wakefulness during which people got out of bed, did light chores, or otherwise quietly passed time until returning to bed. This can be used to challenge *sleep math* (e.g., "It is 3:13 a.m., if I fall asleep

immediately, I can still get 3 hours and 17 minutes of sleep”) and suggests that one can be rested enough to keep to their set wake-up time and adequately face the next day. Blocking the sight of a clock to avoid sleep math is another useful tip.

Many individuals use their smartphones as their clocks. Concerns have been raised about the blue lighting used on smartphones and tablets and that they interfere with the brain’s sleep-promoting melatonin by mimicking the effects of sunlight (Wood, Rea, Plitnick, & Figueiro, 2013), though their role as a distraction from sleep is of greater concern. The next section focuses specifically on the relevance of managing technology use for adults with ADHD.

TECHNOLOGY

Technology has become ubiquitous in modern life, particularly personal items such as tablets, smartphones, and smartwatches, which provide unceasing access to all manner of apps, social media, and information. Voice-controlled personal digital assistants and smart homes are commonplace. Apart from their many benefits, these gadgets can easily cross the line where distraction is always just a click away. Teenagers and young adults with ADHD are among the groups most disposed to excessive gaming and online activity, including social media (Guntuku, Ramsay, Merchant, & Ungar, 2019; Li, Zhang, Xiao, & Nie, 2016; Yen et al., 2017). Most individuals with ADHD, though, simply struggle with problematic use given that these devices pose an ever-present risk for distraction and escape.

Adults with ADHD would do well to identify situations in which technology is a distraction and take preemptive action steps accordingly. A student who wants to study in the library for an hour between classes can turn off or silence her phone or otherwise create barriers (stimulus control) to easy access, such as placing it at the bottom of her bookbag. She may identify and challenge justifications of wanting to check her phone before studying, instead reminding herself that she will check and catch up on things after studying (with the need to dig through her bag serving as a cue for the coping reminder). The use of implementation plans is also helpful when facing these sorts of temptations, helping to manage the pivot points between being off

task and on task (e.g., “If I want to check my phone when I get to the library, then I will put it in my bag right away as I unpack my study materials”).

The previous example is an instance of when studying does not require the use of technology. However, technology is often essential to a task and poses a risk for distraction (e.g., using a laptop to post to an online discussion forum for class). Prospective planning for using technology in such cases can be a helpful step. This strategy involves setting out a scripted implementation plan for the task at hand (a targeted cognitive rehearsal), especially for starting a task. This includes defining realistic, actionable behavioral steps to get started on the task (e.g., “I will start my class post by going to the library and rereading the requirements on the syllabus”), setting a realistic task expectation (e.g., “I will read the most recent posts”), and a realistic, bounded time frame for the task with start and end times (e.g., “I will work on this for at least 30 minutes—from 1:00 p.m. and will post by 1:30 p.m.—and I will not open up any other windows until I am done”). Potential task-interfering thoughts can be anticipated, and adaptive coping reframes and perspectives can be constructed (e.g., “I can tolerate a delay in checking my email until I finish my work”).

When the use of a computer and online access present risks for distraction, having a technology use plan helps to make the specific task and plan more immediately salient. A plan framed as “After I finish my discussion board post, I will put my laptop on airplane mode to work on my essay for 30 minutes before I take a break” helps recognize and repurpose a distraction as an incentive. These plans can be paired with barriers to distraction (e.g., “If I need to check something online before I’m done, I will do so and then put my laptop back in airplane mode and reread the last paragraph I wrote”).

Accepting and tolerating discomfort and inhibiting the impulse to check devices are embedded issues when managing technology use. Identifying the urge to look at a device and responding with a quick appraisal is a useful way to catch and redirect oneself (e.g., “I’d be checking for the sake of checking; I can wait until after class”), though entering priority situations with an implementation plan helps reduce getting off track. For adults with ADHD, such microdistractions open an all-too-inviting avenue for toxic disengagement.

It is fully acknowledged that these strategies are not immutable skills that guarantee follow-through and safeguard against distractions. Devices provide undifferentiated signals for new tweets, texts, social media posts, news updates, and others that constitute a variable ratio reinforcement schedule for checking—a veritable Skinner box—although clients know the majority of these are pointless. Yet, adults with ADHD have distinct problems inhibiting such prepotent responses. Psychoeducation about these behavioral principles helps to shed light on clients' habitual technology use patterns and existing justifications and behavioral scripts. This represents yet another area of managing adult ADHD in which cognitive interventions focus on the notion that “I have no control over my impulses.”

An aspect of the proneness to distraction through social media, video chat, texts, and emails and the fear of missing out or being left out mentioned previously is the desire for social connectivity. Relationships with others is another domain of life on which ADHD exacts a toll.

RELATIONSHIPS

Managing adult ADHD is made more complicated by how a client's functioning in adult roles affects others such as spouses/partners, children, friends, work colleagues, and communities or groups to which he or she belongs. In fact, an evolutionary view of why and how humans acquired such a sophisticated frontal cortex and EFs is that it was from the unique demands that arose from group living and the coevolution of culture and the brain (Barkley, 2012; Henriques, 2011; Sapolsky, 2017). With the advent of these communities, there were increased selection pressures for cooperation, impulse control, delayed gratification, and other features of self-regulation required in an increasingly intricate social world.

The social effects of ADHD have only recently received attention. The core features of ADHD, as disruptive as they are for clients, are also frustrating for stakeholders in clients' lives who may experience ripple effects of ADHD symptoms on joint efforts in which there is an expectation reciprocity, cooperation, and sharing duties. Therefore, ADHD's effect on social capital and social standing is an important therapeutic element.

The two relationship domains that arise most often in treatment are those with spouses or committed partners and parents of adults with ADHD. There are many other potential interpersonal problem areas, but it is dealing with the romantic and parental bonds that is most likely to result in stakeholders attending at least one therapy session. Because family meetings were covered in the emerging adult section above, this section focuses on meetings with spouses or committed partners of adults with ADHD.

It is common to invite partners into a session of CBT, particularly during the psychoeducation phase (see Safren, Sprich, Perlman, & Otto, 2017b). Such sessions provide an opportunity to supply information about ADHD, to correct misconceptions, and pinpoint strategies that can be helpful. Partners often provide useful feedback and perspectives on clients' behaviors and areas of difficulty. It can be helpful to have periodic conjoint sessions to assess progress and determine any adjustments to be made to the treatment plan. There are many strategies that can be instituted by the pair together (e.g., a shared calendar system, task coordination, regular relationship check-ins).

Separate couples therapy is indicated at times, ideally with a therapist familiar with ADHD. Not yet well researched, there is a study of psychoeducational groups for ADHD and partners (Hirvikoski, Waaler, Lindström, Bölte, & Jokinen, 2015) and clinically informed guides for ADHD-focused relationship therapy (Pera & Robin, 2016).

A complaint voiced by partners of adults with ADHD is that the client does not care, which is based on frustrations with the effects of ADHD and EF deficits on duties within the relationship, often leaving partners to overfunction to manage them. This state may lead partners to assume a parental role, a dynamic that is the antithesis of a romantic, mutually respectful relationship. When these issues keep happening, it is seen as a sign that the adult with ADHD does not respect or value his or her partner. Annoyance may boil over when facing these matters if the adult with ADHD is (or seems) distracted or otherwise dismissive of his or her partner, and the adult with ADHD might react with defensiveness or outright anger. These reactions are fueled by feelings of guilt or shame about the client's role in the relationship quagmire, not to mention helplessness at the prospect of his or her ability to rectify it. These problems are exponentially magnified when partners are coparents or there is any other added complexity.

It is difficult for partners to fathom the difficulties experienced by adults with ADHD, much less to not take them personally, which is why psychoeducation is so important (Kooij et al., 2019; Pera & Robin, 2016). As in individual therapy, understanding ADHD is the first cognitive reframe for couples insofar as it provides a shared understanding of the effects of ADHD, reexamines beliefs about how relationships “should” be, and guides how to adapt a relationship touched by ADHD. Mutual cognitive modification and defusion skills for managing and reframing reactions and getting to a solution-focused outlook help set the stage for better coping and relating for both partners (Ramsay, 2016a). At the same time, it is essential that the adult with ADHD seek specialized treatment to develop better coping strategies that will benefit personal and relationship functioning.

It is important to have daily check-ins to coordinate plans and tasks. This platform also sets the stage for relationship-enhancing activities and simply having regular “face time” (the analog version preferred over the digital version). Collaborative plans for division of labor in the household, automating bills, and setting up a shared calendar system are helpful for any couple, but virtually essential when one partner has ADHD. There is a good prospect of an improved partnership; even working together on these sorts of coping strategies fosters open communication and intimacy.

The partners of adults with ADHD may wish to seek therapy to address any relevant personal issues related to the relationship, including as it evolves over time. A time of life that is of growing interest in terms of ADHD is its effects on senior adulthood, which is discussed next.

SENIOR ADULTS WITH ADHD

There is an increased interest in ADHD among senior adults, as many of these individuals, though not previously identified with ADHD, are now seeking assessments to discern ADHD symptoms from those of normative cognitive decline (Michielsen et al., 2012). Once a diagnosis is established, many senior adults wonder if they can change at this age. Although this age group is not well-represented in outcome studies of CBT for adult ADHD, there is every reason to expect that they will benefit from it.

Senior adults are defined as individuals who are 60 years old and older, which creates a near end that could be deemed emerging senior adulthood and a far end that extends a few decades and beyond. Those at the younger end of this spectrum include adults who are still in the middle of professional, relationship, and personal activities with no foreseeable need to change things. However, matters will likely to crop up that are typical for this period of life, such as managing work demands (e.g., adjusting to changes in a field of work and personal coping), relationship and family issues (e.g., caring for spouses with health problems), plans and goals for semiretirement or retirement, and personal health.

Planning, organization, and implementation of activities is as much an issue for senior adults with ADHD as at any other age. Unique to senior adults, though, is the effect of pending retirement and other roles on the structure of days and weeks. The prospect of retirement often involves a shift in the number, types, and ratio of competing demands of work and personal life. The roles of parenthood change, including adding the title of grandparent, as children are adults with families of their own. Many senior adults with ADHD describe having to work harder to keep up with the same responsibilities in their jobs. This process may be complicated by typical work stressors, such as reduction in support staff while facing increased performance demands, adjustments to new procedures and technologies, or the physical demands of certain jobs. With retirement, there is a loss of the scaffolding of work that may have anchored a client's schedule inside and outside of work. There may be unexpected stressors such as an adult child and grandchildren moving in due to divorce, a spouse/partner or parent with a severe medical condition, or assuming childcare for grandchildren.

The loss of the work scaffolding is like facing that most difficult grade school essay on any topic of a student's choosing—there are so many options that it is hard to select one. The issue with clients can be framed as how they want to spend themselves. From this plan, which itself can take a while to specify, the typical coping and implementation strategies for adult ADHD are useful. The cognitive issues that emerge for this cohort affect follow-through (e.g., self-doubts, facing the uncertainty of new or different roles and endeavors). Any doubts are magnified by ADHD as retirement or other new roles involve leaving a comfort zone and adopting a beginner's mind.

As with adults with ADHD of any age, senior adults with ADHD look to use coping strategies for managing typical household and administrative tasks. There may be more time to devote to some tasks (e.g., home improvement projects) or needed to face new demands (e.g., managing Medicare or retirement benefits). In some cases, despite having more free time, senior adults with ADHD find it more difficult to keep up with these matters than when they worked (e.g., “I know it has to be done, but I don’t have to do it now”). Retired couples may face a reorganization of their division of labor and simply the day-to-day choreography of being around each other in the same physical space when they would have typically been at work. In some cases, certain duties may suddenly fall to an adult with ADHD that had previously be handled by a partner who is now incapacitated or deceased, adding grief and loss to such difficulties magnified by ADHD.

A thought sometimes voiced by late identified seniors with ADHD relates to impatience (e.g., “I’ve waited so long to deal with this; I cannot waste time”). This urgency can be marshaled as motivation for coping; on the other hand, it may create frustration when facing typical setbacks. It is important to acknowledge the realities of the change process, which requires persistence and patience. There also may be stress with coming to terms with normative age-linked cognitive changes or medical issues that may affect progress. As with any client, it is important to examine and affirm incremental improvements to facilitate follow-through on plans.

Coping strategies for managing adult ADHD, particularly cognitive interventions, are geared to promote adaptive optimism and hope that things can be different and better, coupled with strategies designed to promote change. However, ADHD itself and when coupled with a mood disorder and other complexities and stressors may lead some adults with ADHD to lose hope, including considering suicide, which is addressed in the next section.

SUICIDALITY

ADHD is not a diagnosis for which suicide risk leaps to mind as an issue to consider, unlike depression or bipolar disorder. However, EF deficits across conditions are a risk factor for suicidality, with clients who attempt suicide reporting much worse EF deficits than clients who express suicidal ideation

(Saffer & Klonsky, 2017). There is growing evidence that a lifetime history of ADHD is associated with heightened risk for suicidal ideation, suicide attempts, and completed suicide when compared with nonclinical control groups (Barbarese et al., 2013; Barkley, Murphy, & Fischer, 2008; Salvatore et al., 2018; Taylor, Boden, & Rucklidge, 2014; Van Eck et al., 2015). The risk for completed suicide is higher in complicated cases, namely when ADHD, another psychiatric diagnosis (usually a mood disorder), and substance use coexist.

Another consideration is that adults with moderate to severe ADHD may face sudden, unexpected life disruptions and distress, such as a relationship breakup, academic dismissal, or job termination. In many cases, seemingly out-of-the-blue crises may have been foreshadowed by warning signs that were dismissed or overlooked; adults with ADHD may also face common unforeseen dilemmas, such as the death of a loved one, but for which they may be prone to impulsive, potentially dangerous overreactions.

ADHD is associated with disorganization, impulsivity, emotional dyscontrol, and poor problem-solving, which are key skills for handling crises and trying to avoid them. When crises are coupled with failure or shame reactions, there is risk for suicidal ideation and suicidal acts. Alternatively, some adults with ADHD experience a gradual erosion of functioning and mounting difficulties and respond with a slow withdrawal from different facets of life, which leads to isolation. They may endure a creeping sense of pessimism and hopelessness that kindles escalating thoughts of suicide over time while losing touch with support networks.

Regardless of the scenario, focused inquiry about hopelessness and suicidal ideation (and past attempts) is indicated when adults with ADHD report such pulling away, as well as when describing circumstances consistent with suicide risk (e.g., facing a sudden life stressor) if not already reporting suicidal thoughts. Most clients will respond to this inquiry with an emphatic denial of any suicidality or cite fleeting thoughts on which they would never act and offer up deterrents such as children, family, or pets that would prevent them from following through. It is still useful to periodically reassess for suicidal ideation, particularly if clients face mounting stressors, mood changes, or other risks (e.g., substance use) that could undercut the sway of deterrents in a vulnerable moment.

A benefit of CBT for adult ADHD is that it targets the very life domains, roles, and EF deficits from which such life crises emanate, which can address and reduce these risks. Attention still needs to be paid to risk management, including eliciting ideation, discussing existing plans and means, and taking therapeutic steps to promote safety. Coordination with a prescribing physician, referring for a medication consultation, or other such steps represent good treatment and risk management. However, there will be cases in which suicidal ideation is at the forefront of sessions.

Addressing suicidal ideation is another domain in which the therapeutic alliance is a source of support with which to face and deal with distress. Cognitive interventions focus on modifying the client's justifications for suicide and considering such all-or-nothing views considering the finality of death. Such thoughts and accompanying distress can be acknowledged without acting on them while taking steps to cope with the immediate situation (accompanied by specific skills). Perspective taking considers that life stressors do not warrant a death sentence, and the therapist can draw on examples of individuals who have faced similar problems and have been able to move through them. The prolongation afforded by CBT sessions allows for the assessment of suicidal thoughts, perceived justifications for them, other meanings attributed to activating stressors, and thinking through the implications of suicide, including assumptions about what it would accomplish. Laying out these issues, including emotional labelling, serves to externalize and defuse them, which can promote coping outlooks and options that foster hope. Active, adaptive coping is another risk management strategy that builds problem management, emotional management, and efficacy skills for working through troubles.

In higher risk cases, more frequent sessions, phone check-ins, coordinating with clients' support systems, consulting with a prescribing physician, and possible hospitalization in cases of imminent risk are proven strategies, as is copious documentation of clinical decision making. It also is important to assess and deal with any specific suicidal plans and means and intent for acting on said plans. These risks include access to medications in type and amount that could be used for overdose, access to firearms, or access to any other means.

The risk management steps discussed here are standards for mental health fields (see Bongar & Sullivan, 2013; Jobes, 2016, for more detailed

coverage and tools). An issue for adults with ADHD is the use of strategies outside the consulting room. A coping plan is ideally recorded in an externalized format, which may include relevant suicide hotlines, on-call therapist information, friends or family to contact for support, and other resources without clients having to generate them in a crisis. These plans can be kept on mobile devices, printed and posted at home, or any other means that make them readily available when they are needed most. [Figure 6.1](#) shows an example of a form used to externalize coping plans for managing suicide risk.

FIGURE 6.1. Crisis Plan Form for Managing Suicidal Ideation

Emergency Contact Information:

National Suicide Hotline: 1-800-273-TALK (8255) /
<https://suicidepreventionlifeline.org> (online chat
available) / via Twitter @800273TALK

Local Emergency Contact Information:

| | |
|------------------|----------|
| Clinic/Therapist | Office: |
| | On-call: |

| | |
|------------------------|----------|
| Physician/Psychiatrist | Office: |
| | On-call: |

Other counselors, professional support:

Nearest hospital/9-1-1:

Support System Contacts:

Family or other relatives:

Friends:

Acquaintances:

Neighbors:

Sponsors, community group, support group, church, etc.:

What are steps I can take to keep myself safe right now? (e.g., let someone hold my pills)

What are my deterrents for ending my life? (e.g., family, children, pets, knowing I will feel better)

Reasons for living:

Emotional management steps I can take right now: (e.g., What has helped in the past?)

Specific coping strategies I can use right now: (e.g., What has helped in the past?)

Steps I can take to manage problems and make things better:

Hopeful plans for living and for the future:

Risk management strategies help to deal with suicidal ideation once it is activated. Preventing and handling problems before they become crises is preferred. A strong therapeutic alliance is very helpful for handling such difficulties. The next section addresses challenges to this alliance, namely, oppositional behaviors by clients.

MANAGING OPPOSITIONAL BEHAVIOR

Oppositional defiant disorder commonly coexists with ADHD in children and teenagers. Emotional dyscontrol is proposed as the thread connecting these diagnoses, as children and teenagers with poor emotional control coupled with settings without sufficient checks and balances on behavior can

result in an escalation of acting out behaviors (Barkley, 2015b). Although not typically identified as such, oppositionality can persist into adulthood, causing rifts with treatment providers, educators, and other helping professionals. At the very least, there may be cases of externalization of blame in situations that can be trying for significant others and providers.

There is often truth in the frustrations voiced by adults with ADHD. There are reasonable adjustments or accommodations for task expectations at work or school, or in-home matters that can ease the burden of clients in these settings. Even in such circumstances, the way adults with ADHD react to typical stressors and apparent slights is what creates conflict and hard feelings, such as negativistic, angry reactions (Robin et al., 2008).

For example, during a CBT session, a college student with ADHD voiced anger about a professor who refused to grant him a second extension on an assignment. The student said the professor still expected him to submit the overdue assignment along with other items due earlier in the semester; the student was furious that the professor refused to “let them slide.” The therapist was soon included as a player in the scenario—“And I cannot believe that you will not write a letter to the dean about how this professor is undermining my ADHD treatment by not granting me these reasonable accommodations!”

Such delicate clinical matters require tending to the alliance, counterbalanced by the fact that this alliance must continue to be therapeutic. In the previous example, the therapist defined his role and managed discomfort to recount the series of facts as stated by the student. This summary included facts not mentioned by the student, like how the professor offered to meet with the student outside office hours to provide extra help and how the professor had already adjusted assignment requirements in addition the extension on the current project. The therapist reiterated that CBT is designed to support coping, such as facing, handling, and learning from natural consequences but not necessarily engineering them. The therapist suggested that they strategize a plan for handling the overdue project. As the student pressed for a letter to the dean, the therapist outlined the types of documentation that he considered within his role to provide (e.g., updates for the student disability office). The purpose was to clarify the limits for handling the current quandary and create a spirit that the therapist

and the student could disagree and still work together to manage the predicament.

At a subsequent session, the scenario was reviewed to understand the student's expectations for this extra level of alteration of assignments (already having secured formal academic accommodations). The student said that he had been accustomed to getting what he viewed as reasonable, on-the-fly adjustments to schoolwork of the sort he received in high school. He felt overwhelmed by the view that he was left to fend for himself alone while facing mounting work. This grasping of past overaccommodation was leveraged to frame and promote the need for better self-advocacy skills and the use of existing coping resources and strategies for assignments. These insights also helped the therapist better conceptualize and align with the student's emotions and vulnerability and anticipate bumps in the road the student might face. It was a tense but ultimately important few sessions that became a turning point for the student and how he managed college.

Self-advocacy can be overwhelming and frightening. As was noted above, the frustrations of managing ADHD may come out in CBT sessions and be directed at therapists. Therapy offers a supportive, safe place to address such issues, but therapists are people too, and they must monitor their reactions to clients, which is the focus of the next section.

THERAPIST REACTIONS/MISCONCEPTIONS

A benefit of the therapeutic relationship in CBT is that clients work with therapists who are versed in the nature of ADHD. However, therapists and other helping professionals and educators are prone to any and all forms of distorted thoughts when working with adults with ADHD.

CBT sessions provide a natural laboratory for testing out thoughts from clients (e.g., "You must be sick of the fact that I'm still struggling with procrastination after a month of CBT"). After exploring any assumptions by the client, a therapist might reframe the thought (e.g., "Procrastination is tough to manage and is a good use of session time; I'm glad that you are willing to focus on it"). This sort of judicious self-disclosure (M. S. Barrett & Berman, 2001) can be helpful to address issues like comparative thinking (e.g., "You said that no one else seems to need a to-do list—here's mine").

Some clients respond with surprise to this notion, but it may prompt reactions such as “But you probably get things done—I still don’t,” which becomes a therapeutic item.

On the other hand, therapists will have reactions to apparent lack of progress, attendance or timeliness issues, and various other realities of treating adult ADHD. Therapists will have to self-assess whether reactions reflect their own countertransference or beliefs about themselves that must be managed, such as unrelenting standards for helping people change (e.g., “She’s right, we have been spending a lot of time on procrastination; I’m a so-called ADHD expert but I’m not helping her”). At the same time, it can be useful to assess whether a change in approach is warranted (e.g., “I thought about what you said about our time spent on procrastination, and I want to check with you and ask if there is something else going on for you that I might be missing”). Such nondefensive reactions can be used to aid treatment.

Therapists’ reactions can be understood as how others are likely to react. This understanding can be used to promote empathy, review of the case conceptualization, and identifying compensatory strategies such as excessive apology for lateness (e.g., “I’m so sorry that I’m late again; I understand if you no longer want me as a patient”) or externalization (e.g., “Why can’t I have a full hour? You’re supposed to help me be on time”). In either case, the issue helps therapists get it in terms of the mind-sets of adults with ADHD and their influences to better support their ongoing therapeutic efforts.

Therapists are normalizing for clients that ADHD requires ongoing efforts to manage it. This reminder is apropos for therapists too, as they continue to partner with adults with ADHD on this worthwhile and meaningful undertaking of CBT for adult ADHD.

CONCLUSION

This chapter focused on less common but relevant clinical issues for therapists working with adults with ADHD. These issues run the gamut from suicidality and comorbidities to issues inherent in different phases of adult life to managing sleep, technology, and relationships. For the most part, interventions focus on navigating pivot points and fostering engagement and reducing escape. Nonetheless, the cognitive domain of CBT was emphasized

to promote clients' belief in the ability to implement plans, get the most out of various forms of treatment, and develop self-regulatory efficacy for follow-through on various coping skills and life endeavors.

KEY CLINICAL POINTS

- **Although medications are highly effective in treating symptoms of ADHD, adults with ADHD may hold some unrealistic expectations for these benefits or how much providers will be able to help, underestimating the need for additional treatments and coping skills.**
- **Emerging adults are launching into new roles in academics and in workplaces, in addition to assuming other responsibilities.** While doing so, they are navigating the need for support from family with the desire for increased independence, which often creates family stress. Existing coping strategies for adult ADHD can be modified to navigating this phase of life, including sessions addressing family issues for parents and their adult children.
- **CBT is well positioned to manage the most common coexisting factors in adult ADHD, namely anxiety, depression, and substance use problems.** Interventions for fostering engagement can easily be adapted to exposure-based and behavioral activation strategies for anxiety and depression, respectively. A harm reduction approach for substance use can identify problems for which clients are self-medicating or otherwise are motivated to change.
- **Sleep is a problem area for many adults with ADHD for a variety of reasons.** Very often a manifestation of self-regulatory difficulties is a problem transitioning to sleep mode. Adults with ADHD often report difficulties winding down and turning off their minds in addition to delaying sleep.

Creating a sleep script for the transition to sleep mode can be helpful.

- **Managing technology is an important topic for adults with ADHD.** Identifying settings in which technology use is particularly problematic (e.g., studying or other priority tasks) helps to craft specific coping and implementation plans. Stimulus control (e.g., putting an item on airplane mode or in a book bag) can help reduce distraction.
- **The effects of ADHD on various relationships and social bonds has only recently received attention.** Parents of emerging adults often provide useful information during the evaluation phase. They may be involved in treatment of their adult children during college and particularly afterward if the young adult still lives at home. Similarly, spouses and committed partners witness and can provide information about the functioning of partners with ADHD. As part of CBT for adult ADHD, partners may attend periodic sessions to provide insights and to gain an understanding of the effects of ADHD to make sense of it and their reactions. There are some useful coping strategies couples can use (e.g., daily check-in) but specialized couples therapy may be needed.
- **Senior adults with ADHD face unique coping issues at this stage of life.** Those at the younger end of this spectrum are still in their careers but face an increase in typical life stressors associated with aging and family matters. With retirement and beyond, there is a loss of the structure provided by work and a need to redefine plans, which includes implementing the steps to pursue new endeavors and goals while dealing with life changes.
- **A lifetime diagnosis of ADHD is associated with elevated risk for suicidal ideation and attempts, particularly in complex cases.** Adults with ADHD may experience precipitous setbacks (e.g., job loss; academic suspension). A thorough risk assessment, including management plans, is

good practice, as is consultation with other providers and family members.

- **The therapeutic alliance is an essential facet of CBT for adult ADHD.** A strong alliance provides a foundation for conceptualizing and responding to oppositional behaviors and negativity outside and inside the therapy room. Therapists reactions may have to do with self-doubts about whether the therapist is being helpful or frustrations with behaviors common to adult ADHD (e.g., lateness). These cognitions can provide useful information that help inform and strengthen the case conceptualization and treatment for the benefit of clients.

Case Examples

This chapter presents extended case examples to illustrate how cognitive interventions fit within a course of cognitive behavior therapy (CBT) for adults with attention-deficit/hyperactivity disorder (ADHD). All identifying information has been changed to protect privacy and confidentiality; the case examples presented here are drawn from actual clinical encounters but represent a hybrid of cases for illustrative purposes. All clients underwent a thorough diagnostic evaluation for ADHD. Therapist commentary is provided throughout the description of the cases.

GRACE-ANN

Grace-Ann is a 42-year-old married mother of two, who sought CBT due to recently having been placed on a performance improvement plan at work. She works in an administrative support position within a large health care organization. She had previously worked part-time for a local medical practice but sought a full-time position once her children entered middle school.

Grace-Ann anticipated that she would struggle with the shift to a faster-paced position, but after 2 years her disappointing performance reviews could not be blamed on an adjustment issue. She had been diagnosed with ADHD in college after being placed on a 1-year academic leave. Although

needing three extra semesters, she graduated college with a combination of a prescribed stimulant and regular meetings at the campus learning center. Grace-Ann still takes medication, which helps, but the problems in her current job have escalated to the point that she is concerned about potential dismissal.

Grace-Ann identified her primary goal for CBT as better organization and follow-through with tasks at work. When asked for a specific example of this, she cited a current delay on her supervisor's request for patient-visit data. She said that her boss requested it days ago, but she had not yet acted or even responded despite knowing it is a priority.

THERAPIST: Would it be fair to say that this is a relatively common example of the type of issue that you want to improve?

GRACE-ANN: Yes. Today it's the visit data, but I seem to put off tasks like this all the time when I know full well it doesn't make sense.

THERAPIST: We can use this as an example of how you can break down this sort of task and figure out how you do not do things to set the stage for better follow-through on this and other tasks. Would that be a good use of our time today?

GRACE-ANN: Yes. This is exactly what I need help with.

THERAPIST COMMENTARY: This is an example of starting small with a relevant problem that is likely representative of larger, more pervasive issues. In addition to clarification of broader therapy goals, this issue provides an opportunity to socialize Grace-Ann to the CBT approach using the structure of the How You Don't Do Things [HYDDT] form, including its cognitive elements [see [Chapter 5](#), this volume]. This form and task also are a good initial homework task.

THERAPIST: First, what is your overarching goal for wanting to handle this task in a timelier manner? Why is this of value to you?

GRACE-ANN: Right now, I want to survive my next performance review and keep my job. But it would be nice to get things done and not have the stress of them hanging over my head. I want to know that I can rely on myself to do these things simply because I need to do them.

THERAPIST: Those are some good reasons. So, you're saying that follow-through on this and similar tasks would reflect well on your job performance and help you to feel less stressed and more confident in yourself, in general. Focusing on this project, what exactly do you have to do?

GRACE-ANN: There is a sorting feature in the electronic medical records system that allows me to organize and analyze data to give my boss.

THERAPIST: Even before getting to the sorting feature, what would be the smallest first step that you would need to take to get started, to actually "touch" the task?

GRACE-ANN: What do you mean?

THERAPIST: Are there steps you must do on the computer before even getting to the sorting step?

GRACE-ANN: I need to get the department identification numbers before I run the sorting features. It is only a couple of steps to make sure I have the right numbers.

THERAPIST: Okay, even though it is a small step, it is one to factor into your planning. On an even more basic level, though, when you walk into the office, what would have to do to even get access to these department numbers and patient data? If you were scripting this out in a series of instructions for a robot, what would the robot have to do once it entered the office doors?

GRACE-ANN: Well, the very first thing I'd have to do is go to my desk and log on to the computer.

THERAPIST: Once logged on, what is the next step directly related to the project?

GRACE-ANN: There is a drop-down menu for analytics which is what I use for data sorting. There is another drop-down menu that I can use to find the department numbers I need for the data search.

THERAPIST: Okay. What we are doing here in terms of a portable skill is one that we all know—break down a task into small steps. This sort of scripting helps lay out a sequence of steps like a recipe. Despite knowing this, it is the doing, the implementation where problems arise for most people.

GRACE-ANN: I know, I beat myself up at the end of each day when I look back at all the times when I could have taken care of this. It sounds so simple sitting here talking about it.

THERAPIST: This is a challenge for anyone with a human brain, but even more so when dealing with ADHD. By simply taking some time, as we are doing here, to lay out some actionable steps you can increase the likelihood you will start and follow through. There are a few more details that can help increase the odds. When will you do this? What is a specific day and time that you can commit to devoting to this task, an appointment for doing it?

THERAPIST COMMENTARY: This guided discussion provides Grace-Ann with a framework for understanding her procrastination and corresponding high-yield pivot points for engagement, which is the goal of the HYDDT form. This process reflects the prolongation of these moments and the personalization of strategies for better navigating them.

GRACE-ANN: I can do it first thing tomorrow morning when I arrive at the office.

THERAPIST: Specificity helps with follow-through because it gives an exact target. What time tomorrow?

GRACE-ANN: I get there at 8:30 a.m.

THERAPIST: Let me play devil's advocate—is that a realistic plan? It sounds feasible now but are there other things that might get in the way of this plan at 8:30 a.m. tomorrow?

GRACE-ANN: Well, I typically spend time taking care of pressing emails and simply settling in. I'm usually not up and running on things right at 8:30 a.m. I guess 9:00 a.m. is probably more realistic.

THERAPIST: Okay, 9:00 a.m. tomorrow morning. How long do you think it will take to sort through the data and be ready to give it to your boss? Can it be done in one sitting or will you need more time?

GRACE-ANN: It really should only take about 30 or 45 minutes, though sometimes these things take longer than expected because of missing data or other issues that come up.

THERAPIST: Focusing on tomorrow at 9:00 a.m., what is a realistic expectation for a minimum amount of time you can devote to this task, even if you encounter difficulties?

GRACE-ANN: I'd say 45 minutes should be more than adequate.

THERAPIST: Again, at 9:00 a.m. tomorrow will the prospect of working on this task until 9:45 a.m. look realistic? Would it be better to start with 30 minutes?

GRACE-ANN: I have a 10:00 a.m. meeting that includes my boss, so 45 minutes is realistic and gives me time to prepare for the

meeting. It would be nice to tell her I'm done or at least update her.

THERAPIST: That sounds good. So, the plan is to start on the task at 9:00 a.m. tomorrow by logging on to your computer, accessing the drop-down menus, and working on the data until 9:45 a.m.

GRACE-ANN: Yes, that sounds good.

THERAPIST: Where will you do this?

GRACE-ANN: My desk.

THERAPIST: I'm going to again raise the question of whether this is the best place for this task because I would guess there are a lot of distractions and people looking for you.

GRACE-ANN: There are, but I should be able to make myself do it there. It's my desk.

THERAPIST COMMENTARY: Grace-Ann's use of a *should* statement in this case is an opportunity to shed light on the role of cognitions at various pivot points. This relatively innocuous *should* thought is an example of the influence of such thoughts for adults with ADHD in terms of choices that affect pivot points and moving from being off task to being on task.

THERAPIST: Fair point. Though, let me propose that even though you *should* be able to work at your desk, are there better options for limiting distractions, even as a back-up? This is one of the ways automatic thoughts, this one being a *should* statement, can arise and even subtly limit options.

GRACE-ANN: Well, people do stop by my desk and ask me for things, especially in the morning. There is a floating office with a

desk and computer that I can use. I can close the door and hide out there.

THERAPIST: For this plan tomorrow, which do you think is the better option, desk or floating office?

GRACE-ANN: I'll give the floating office a try.

THERAPIST: So, at 9:00 a.m. tomorrow the first step of the plan is to go to the floating office, close the door, sit at the desk, log on to the computer, and click on the analytics tab.

GRACE-ANN: Yes.

THERAPIST: And the stop time of 9:45 a.m. still seems realistic? It gives you time before the meeting?

GRACE-ANN: Yes.

THERAPIST: With this plan in place, let's consider the barriers to follow-through. At 8:59 a.m. tomorrow, what could go through your mind, what thoughts might you have that would interfere with it?

THERAPIST COMMENTARY: Introduction of task-demoting thoughts using the HYDDT.

GRACE-ANN: I know myself, and it sounds good now, but when it comes time to work on it, I won't feel like doing it and I might put it off and take care of other details.

THERAPIST: That is a great example. You have a very good action plan, but we are trying to ensure that you carry it out, it's all about the implementation. What other tasks will seem more important than the data sorting and how will you handle this impulse to keep to the plan?

GRACE-ANN: I'm not sure. These other tasks eventually must be done, too.

THERAPIST: Yes, that's true. But how do you stick up for the importance of the data sorting? Another way to think about it is viewing justifications for putting off the data sorting as a thought or case against your plan made by a prosecuting attorney in court: "Your Honor, Grace-Ann should not work on the data task right now. She can accomplish many other tasks in those 45 minutes." While there is some truth to this argument, it leaves out important information. This is the nature of the automatic thoughts we discussed in our first meeting. These thoughts are the case made by the prosecutor and the judge renders a decision not because the case is strong, but because only one side is argued. The cognitive element, the C in CBT, focuses on examining these thoughts and their effects on us and our options for handling things, which is like the role of a defense attorney on our side, but still bound by the evidence. Does this make sense?

GRACE-ANN: Yes, I like that example.

THERAPIST: So, how would your defense attorney respond to the prosecutor's claim that the small tasks you will likely encounter tomorrow should be done first?

GRACE-ANN: The data sorting is the priority. I only need to work on it for 45 minutes, and then I can update my boss, which is more important for my performance review. I'll do the other tasks later.

THERAPIST: Nice. I like the view that the task is only 45 minutes, which is why we try to specify bounded work blocks so that it is more manageable. To keep perspective, are there other things that you do for "only" 45 minutes that can remind you that it is a manageable length of time?

THERAPIST COMMENTARY: The various names of the coping strategies are used as part of the socialization to CBT for adult ADHD but also to personalize it. Such names serve as hooks and reframes that increase the likelihood that clients will remember and use skills, such as defense attorney, bounded task, and others. Grace-Ann's use of "only 45 minutes" can be recruited as such.

GRACE-ANN: What do you mean?

THERAPIST: Thoughts about time required of a task affect our belief of our ability to carry it out. For example, if someone must do something for 5 minutes, we will reframe it as 300 seconds, which sounds more manageable and increases the likelihood of follow-through.

GRACE-ANN: My train ride to work is about 45 minutes and is not that bad. I can think about the data sorting as the length of the train ride I do every day. If nothing else, I know I'll be done at 9:45 a.m.

THERAPIST: Those are good ones. What about the thought that you won't feel like doing the task?

GRACE-ANN: That's tougher. I worry a lot about not doing a good job or my boss pointing out something I've missed, particularly now with being placed on probation.

THERAPIST: So, when facing the plan tomorrow morning you might have thoughts of uncertainty that you might not do a good job and might miss something, made worse by the performance plan.

GRACE-ANN: Yes, and these things have happened before to me. Even when I think I've done a good job, I can't fully trust my work. It can make it hard to even start.

THERAPIST: Then it makes sense that part of you may not feel in the mood for the project, but this increases the likelihood of escape to easier tasks. Is there a mind-set to help you get started? Have you had experiences facing other challenges that might be helpful in this case?

GRACE-ANN: Well, if my boss keeps asking for the data, this will not help my standing with her. I can at least get to the point at which I run the analyses. I almost did not apply for this job in the first place, but I figured I had nothing to lose. I can do the same here and take my best shot.

THERAPIST: Nice. In effect what I hear you saying is that you do not yet know if you will have problems, so go ahead, face it, and trust the plan. How can you use these reminders tomorrow?

THERAPIST COMMENTARY: This section highlights the externalization of information, motivation, and coping plans to increase their use at the point of performance.

GRACE-ANN: I'm going to put a note in my planner right now to remind me.

THERAPIST: While you're doing that, I'd suggest making a task appointment in your planner for the 9:00 a.m. to 9:45 a.m. time. Recording plans and referring to them in a planner or elsewhere are prompts for engagement and follow-through. You mentioned that you might not feel like working on the sorting data project. How do you experience those sorts of feelings?

GRACE-ANN: I don't have panic attacks or anything, but I get a sinking feeling when I'm given a project and it's like, ugh, even

for basic ones. Once I get started, though, it usually goes okay.

THERAPIST: That last part is a good defense attorney thought for managing your emotional reaction, the fact that once started, these feelings improve. Based on your past and recent frustrations, this not-in-the-mood reaction makes sense. You used a word that I've heard used to describe discomfort about tasks, the *ugh* feeling. How might you handle your *ugh* tomorrow?

GRACE-ANN: Yes! *Ugh* is a good description! I know that once I start, it is not that bad and it will feel good to get it done but it is like I feel . . . ugh, just not wanting to do it.

THERAPIST: How long does it take to get to that point at which it is not so bad? Do you think you will be tense and uncomfortable the whole 45 minutes tomorrow or not that long?

GRACE-ANN: No, no, no, maybe a couple of minutes, if that. In fact, some days I feel stressed on the way to the office but by the time I get to my desk, I'm fine.

THERAPIST: That's a good reminder that facing discomfort is a good way to relieve it. In fact, it sounds as though the tension you describe some mornings before work gets relieved by facing it with your get-to-work plan or script.

GRACE-ANN: I never thought of it that way.

THERAPIST: Yes, exactly, that is what we are doing here—defining the data task in actionable, doable steps. Many clients learn that they can face a task while feeling discomfort and having negative thoughts, noticing them, rather than expecting to be discomfort-free. Any other reminders that might be helpful for managing the gut feelings?

GRACE-ANN: I think the idea that I'll feel better getting something done on it will be helpful.

THERAPIST: That is important—we underestimate the positive feeling of getting things done, even by getting started, through discomfort, and making headway. All this being said, what are some escape behaviors that you might anticipate—things that would signal that you got off task?

GRACE-ANN: As I mentioned, checking emails, returning phone calls or texts, or answering questions.

THERAPIST: These are signs that you are avoiding the task. What is a good reminder to help increase the likelihood you will get started on your plan?

GRACE-ANN: There is nothing that will be so important that it cannot wait until 9:45. I can put my phone in a pocket or in my purse. I'm feeling confident I'll get started.

THERAPIST: What about other people seeking you out for help?

GRACE-ANN: I just need to get to the other room and close the door. If I can do that, I can get started.

THERAPIST: So, if you go to that room and close the door, then you can log on to the computer and start.

GRACE-ANN: Yes.

THERAPIST: This sort of if-then statement is called an implementation intention strategy. It is part of an interesting line of research on turning intentions into actions. We boil down a goal or a difficulty with that goal into an if-X-then-Y reminder for a specific coping plan. What about recording your if-then reminder in your planner?

GRACE-ANN: Let me get it down now: "If I go to the floating office, then I can log on and start."

After running through the scenario for her data entry, the therapist recorded the planned strategies on the HYDDT form and gave it to Grace-Ann as a reminder and a tool for facing the data task the next day. It also

provided a template that Grace-Ann later used to good effect in other situations, including work, home, and personal endeavors.

Grace-Ann completed the data-sorting task as planned and over the next sessions made progress on the timelier performance of work duties, with some ups and downs. The ups were used to point out her skills and gains; the downs were used to focus on and hone coping skills (e.g., her planner as a tool) and interpersonal skills for self-advocacy and the clarification of details and expectations with her boss.

A cognitive theme across domains was Grace-Ann's assumption that she let down others. First and foremost was her concern about meeting expectations at work, per her probationary status at work. At various times, though, she worried that her poor follow-through was a letdown to her family. This issue came to a head in an unexpectedly emotional session.

GRACE-ANN: It might seem silly, but I want to talk about Halloween today.

THERAPIST: That's right, it's today. What's going on?

GRACE-ANN: I need to stay late at work today because we process billing and other matters at the end of the month. As of now, I'll get home just in time to take my kids trick-or-treating. But I haven't gotten candy yet to give out to trick-or-treaters who come to our door, not to mention having no time to give my kids dinner before they go out.

At this point, Grace-Ann becomes genuinely upset and tearful.

THERAPIST: This is obviously important for you, Grace-Ann. I'm glad you chose to share this. Take your time, when you're ready, let me know what's going on for you right now.

GRACE-ANN: (Sniffing back tears) This is stupid for me to take up therapy time with this, but I should have taken care of the candy before now. I can't believe I waited until today. I need to go to work right after the session, so I can't get the candy now. Even if I stop by the store on my way home, there's only going to be crap candy left. I'll be one of "those people" who wait until the last minute. Then I'll be

late and make the kids wait for me, or I'll have to catch up with them and explain what happened in front of their friends and other parents. I'm sure [my husband] Jim will give me that disappointed, not-again look. I'm sorry to be unloading all of this in here. I must be your most messed-up client.

THERAPIST COMMENTARY: There are a host of thoughts and assumptions voiced by Grace-Ann, but this sort of situation reflects the benefit of a case conceptualization. The strong emotions and theme of disappointing others suggests schema-activation. This emotional moment and related meanings of it were explored in detail after empathically witnessing Grace-Ann's account of the full picture. Where needed, the therapist clarified various statements (or thoughts) and had Grace-Ann elaborate on feelings to better understand of how they fit together before intervening.

THERAPIST: Briefly, what do you mean when you said you'd be one of "those people"?

GRACE-ANN: Someone who's totally disorganized and wrecks things for other people—a loser.

THERAPIST: Grace-Ann, remember when during our first meeting I mentioned how we procrastinate on the little stuff the same way we do the big stuff?

GRACE-ANN: Yes.

THERAPIST: This is one of these times. Just because some matters may seem small this does not mean that they are trivial. The small stuff matters in big ways. I want to hear more but also make sure that we reserve time to come up with a plan for when you leave here today.

GRACE-ANN: But the fact of the matter is that I messed up and didn't get the candy! That's not a distorted thought. It's a fact. I waited until the last minute and I might still wreck things, somehow.

THERAPIST: You're right, it is Halloween and you did not get candy yet. That cannot be undone. How you handle this situation is within your control now and moving forward.

GRACE-ANN: I know but it's just frustrating. It's candy today, but everything goes like this.

THERAPIST: There are many moving parts here. Let me ask whether you think that when you go to the store, no one will be anywhere near the candy section, and the only candy available will be, how did you put it, "crap candy?" What is a kind of crap candy, anyway?

GRACE-ANN: Those orangey circus peanut things.

THERAPIST: That the candy bins will only be filled with crappy, orangey, circus peanut things? Have you been in a store after Halloween, Valentine's Day, or other candy holiday? What's on sale?

GRACE-ANN: Candy.

THERAPIST: Right, my guess is others will need to buy candy tonight and the store will have some in stock, which is why so much is left over.

GRACE-ANN: Yes, but they probably have good reasons; I have no excuse.

THERAPIST: Grace-Ann, I want to be clear that this in no way minimizes the importance of this matter for you. I imagine it feels similar to your emotions about the work issues you've been facing. I hear your frustration at having to face this sort of thing.

GRACE-ANN: This comes everywhere in my life! I should have a shirt that says “I’m sorry” on the front and “Thanks for understanding” on the back to handle all the times I’ve disappointed people.

THERAPIST COMMENTARY: At this point, the therapist acknowledges Grace-Ann’s desire to handle the immediate Halloween issue, but uses the collaborative approach to explore the strong emotions and self-criticisms in more detail to clarify hypothesized schema that may be operating and interfering with coping, specifically using the Downward Arrow technique (Burns, 1989).

THERAPIST: Like I said, I could not keep my CBT union card if we do not try to learn something from this situation and have a plan for handling it before you leave today. First, would it be okay if we take a moment to unpack this situation even more because it may be relevant to other situations.

GRACE-ANN: Yes, okay.

THERAPIST: For this exercise, we are going to take one of your thoughts and assume that it is true and accurate and look at what this means for you. Are you okay with doing this?

GRACE-ANN: Yes.

THERAPIST: One of the thoughts you mentioned was having to explain to Jim and your kids why you were late and seeing Jim’s “not-again” look. If this thought is true, what does this mean for you or what does it say about you?

GRACE-ANN: I’m disorganized and unreliable at work and even to my family, way more disorganized than is normal.

THERAPIST: Assuming that this is true, what does this mean for you or say about you?

GRACE-ANN: It means that my family, my job, my friends . . . nobody can rely on me to do what I need to do. Jim and the kids will see again how much worse I am than their friends' parents.

THERAPIST: Assuming then that this is true? What does this mean for you or say about you?

GRACE-ANN: That they shouldn't depend on me and I don't follow through on promises. I might lose my job, which affects them. They can't trust me, and I can't even trust myself to do things that I set out to do, even just for me. This is what happened in college, why I'll lose this job, and why my family is probably already fed up with me. I've messed up and failed everyone and everything that is important in life. Why should they expect that I will change? I know I don't.

THERAPIST: Let's stop the exercise there. How are you feeling?

GRACE-ANN: (tearfully) Sad, angry at myself, rotten. I'm being hard on myself, but I deserve it.

THERAPIST: (waiting a few moments for Grace-Ann to sit with her feelings) This exercise is called a Downward Arrow. It takes a thought that seems plausible on the surface and digs down to see the deeper theme or core belief. If automatic thoughts are the weed, the core belief is the root of the weed. Based on what you said, underneath the candy issue, you believe that you failed and that no one in your life can trust you. In fact, you said you don't trust yourself.

GRACE-ANN: Hearing it like that it feels harsh, but it's justified and true in a lot of situations.

THERAPIST: You were diagnosed with ADHD in college when you were on academic leave, right?

GRACE-ANN: Yes.

THERAPIST: What happened after you resumed school?

GRACE-ANN: I struggled. I needed more than a year extra to finish, more than any of my friends.

THERAPIST: But you finished with your degree.

GRACE-ANN: Yes, but I had a good learning specialist at the learning center and I couldn't have done it without the medications.

THERAPIST: Yes, but you finished, right?

GRACE-ANN: Yes.

THERAPIST: What made you persist?

GRACE-ANN: Part of me knew that I was capable of doing the work and figured I needed a degree, but it wasn't easy and my grades were not great. I wanted to finish to show that I could.

THERAPIST COMMENTARY: This piece of the session highlights the therapist's role to point out incremental gains and the client's strengths that may be minimized by the client, like with Grace-Ann's yes-but thoughts. Within this context of eliciting and affirming the negative reactions but expanding and reframing them, seeds are dropped for the long-range goals of understanding and coping with this and other such situations to kindle hope and self-compassion along with the necessary strategies and skills.

THERAPIST: That last part sounds like one of the goals you had from Day 1, to know that you could finish things. Apart from the reality of any of your frustrations at college, you showed an ability to face them, make good use of supports, and move ahead, even if not in the way you planned. I'm not saying it was easy or even ideal but to point out that this

part of your story is true too. I'm guessing you had harsh thoughts about yourself when you were put on academic leave.

GRACE-ANN: Yes, that was a low point. It was really embarrassing to tell my parents. I could tell they were disappointed.

THERAPIST: None of this is to dismiss your strong feelings and try to put a happy face on all this—they are valid but also show how much you care, for yourself and your family. It is to point out that you also were able to adapt, use resources, and do the work to finish college.

GRACE-ANN: I'm tired of having to go through all this and work so hard. It shouldn't be this hard.

THERAPIST: I can only imagine, especially right now when you are amid another frustration.

GRACE-ANN: This is nowhere near as bad as college, but it doesn't change the fact I messed up Halloween.

THERAPIST: You're right that this is the most immediate matter. But, about tonight, do you think Jim and your children will be fed up with you and have nothing to do with you?

GRACE-ANN: No, not really. But I'll be asked why I didn't get candy earlier and I still need to deal with it.

THERAPIST: Yes, that is how we work through these deeper beliefs, changing moments at a time. About tonight, whenever you go to the store, if you see someone else in line buying candy, would your thought be "Loser," "What an awful parent," or "Oh, that poor family"?

GRACE-ANN: Other people probably have better reasons for being there.

THERAPIST: Such as?

GRACE-ANN: Maybe they're divorced, a working parent. Maybe they don't have kids and don't worry about what candy they hand out to trick-or-treaters.

THERAPIST: You're a working parent. Could Jim have gotten candy? You also mentioned guilt about crap candy. I'm not up with the particulars of candy giving but is there candy shaming on Halloween?

GRACE-ANN: Jim offered but he already does so much, I felt I should at least do this, but once I'm home and after making dinner it's hard to go back out, though that is what I should have done.

THERAPIST: So, even though there is some truth in your reactions, what you just said suggests there is more nuance. I hear you feeling guilt about Jim chipping in and offering to help, and you may discount how much you do at home. This is how schemas operate—they lay dormant but then a trigger like candy sets off a cascade of feelings and thoughts, like a hibernating bear getting hit on the head with a stick and awakening growling and attacking.

GRACE-ANN: (with a smile) I guess my bear got hit by Halloween candy.

THERAPIST: Yeah, maybe some crappy, orangey, circus peanuts. (Grace-Ann laughs) Kidding aside, it will be important to see how this failure-mistrust reaction is triggered in other situations and might undermine your many strengths as part of working on your follow-through and trust in yourself.

The session wrapped up with Grace-Ann's plan to ask Jim to get candy on his way home. To address mind reading and comparative thoughts, she crafted some adaptive reminders, such as "Once home, I can focus on the children and our family time." She took heart from her positive schema, that she strives to be a good parent and partner, even caring about Halloween candy.

Grace-Ann made a lot of progress in CBT and was an active collaborator. Although her probationary status at work was not lifted, she was not fired; instead, her performance plan was extended another 6 months, her boss noting improvements but there remained areas in need of improvement. Grace-Ann weighed the fit between her skills, weaknesses, and the ongoing

demands and stresses of the job. She decided to look for a new job, eventually finding one as a practice manager for a small, local dental practice. The smaller, more personalized setting with a more manageable work pace offered a better fit for Grace-Ann and her skills.

EVAN

Evan is a 24-year-old college student who is two courses shy of earning his degree. He was diagnosed with ADHD after his first semester of college, during which he failed or withdrew from all but one of his classes. Because his final two courses were offered online during the summer session, he decided to move back home rather than continue to pay for on-campus housing. He has two part-time jobs (found for him by his parents) to earn money and add structure to his schedule.

In addition to the problems in his first semester, Evan has ended up with a less than full-time course load most semesters because of dropped classes. He had his best academic year just prior to moving home, when he started both semesters with a part-time schedule by design. Evan passed his courses, did not violate attendance policies, and was on-time with assignments. He was helped by formal academic accommodations and a prescribed ADHD medication. As Evan was now focused on completing his degree and finding a postgraduation job, he was referred to a nearby therapist for CBT for adult ADHD.

At his first session, Evan said that he had initially resisted CBT because he felt as though he had turned a corner in the past year. The medication helped him focus and his online courses promised to be relatively easy. He resigned himself to a course of CBT to appease his parents, although he conceded their concerns were justified, and he admitted that he had struggled with an online course in past, which he eventually dropped. Evan now was preparing to face two such courses while working part-time and living at home.

THERAPIST COMMENTARY: Evan’s case represents issues engaging in treatment [see [Chapter 5](#), this volume] common for emerging adults with ADHD [see [Chapter 6](#)]. Normative adult transition issues are complicated by ADHD and changing dynamics with parents. Early sessions focused on Evan’s “buy-in” for treatment and the goals he found useful and relevant to him.

When discussing therapy goals, Evan said that he felt behind his peers, as he would soon be 25 years old and was unsure of his “adulting” skills. As a first homework task, the therapist invited Evan to select examples of the kind skills he would like to develop as well as to look up the syllabus for the coming online course to sketch out his semester plan.

Evan’s initial goal was to cultivate better money habits such as opening and using a savings account so he could eventually live on his own. He had two part-time jobs but wanted to start to look for a full-time job for after graduation. His primary goal, though, was to pass his online courses and, in doing so, earn his degree and take a big step toward independence.

Evan had never worked while taking a class. The concentrated summer schedule is fast paced compared with schedules for the fall and spring semesters. Evan and his therapist used an activity chart (e.g., a weekly calendar) to outline Evan’s obligations over the first week or two of the summer session. The 168-hour week was reframed as a budget of \$168, and Evan’s schedule was a spending plan. This template was prepopulated with classes, work hours, meals, sleep needs, and other obligations such as CBT sessions and a dental visit. Slots tentatively earmarked for studying were logged as “appointments” as were those for time for hanging with friends, practicing guitar, or undedicated down time. The chart allowed Evan to see his week laid out in front of him.

Evan’s first reaction to this external representation of his week was, “Wow, this looks really busy.” The therapist agreed that it was ambitious but pointed out ample pockets devoted to self-care, sleep, and down time. Taking a page out of motivational interviewing, the therapist asked Evan whether, in fact, he wanted to take on such a schedule. Evan was determined to finish

school. As he reviewed the schedule, he saw that he could manage work around his study needs and each facet of the plan was within his capability to achieve.

The therapist asked Evan for positive examples of how he had handled the past academic year. Evan said that it was useful to keep in mind that he did not have to do everything all at once. The therapist used this observation to highlight the various key pivot points in Evan's schedule—plans for attending the online course, deadlines for uploading assignments, and arrival times for work. Plans for studying at a public library and navigating other transitions were pinpointed, including those for discretionary time.

Over the first couple weeks, Evan generally kept up with class and work. In addition to reinforcing these steps, initial examples of task delays, even minor ones, were reviewed using the HYDDT form to help Evan stay on track. Evan found the idea of bounded tasks useful, particularly for assignments. This coping tactic provided Evan with an alternative mind-set from his typical approach to schoolwork, which was to wing it and wait to be in the mood to study. He took to the idea of reframing time (e.g., study for 1 hour), which he tracked with a 60-minute study-music playlist he compiled. In fact, Evan noticed that he ended up with much more and higher quality down time by starting and keeping up with schoolwork.

THERAPIST COMMENTARY: Given Evan's initial ambivalence about CBT, many of these early successes resulted from his personalization of skills, which spurred his use of them. This was boosted by the therapist's recognition of them and highlighting where Evan exhibited skills that he doubted (e.g., to keep to a study plan), along with noting his other strengths.

At the end of the first summer session, Evan faced his only serious delay while working on his final paper. He already had a rough idea of main points but had not yet started a draft. Evan found himself distracted at the public library, which had been a good study space. He came up with the idea to use

the library's separate conference room, which was unused most days. He was friendly with the library staff and has secured permission to use it.

Evan struggled to organize and record his ideas because he was trying to get the ideas “just right” the first time, which led to procrastination. The therapist reviewed the three writing modes (see [Chapter 6](#)) to help him get unstuck. Evan agreed to first jot down bullet points to touch an outline. This would be followed by generative or free writing, getting ideas down, though not necessarily in their final form. The final writing mode would be editing. Evan admitted that he often tried to free write and edit, simultaneously.

At the very end of the session, Evan offhandedly mentioned that his father had caught him smoking marijuana late one night. Evan mentioned that he smoked to help with sleep, which he had done while living on campus. He knew his parents did not approve, but they only asked that he not smoke at the house. Evan said that he wanted to cut down his use of marijuana apart from any social use out with friends. It was agreed to discuss this further after Evan returned from a between-semester beach trip with friends. In the interim, he had informed the therapist that he finished the final paper on time and easily passed the class.

Evan's next CBT session came just before the next summer semester began. After a review of Evan's progress, the agenda turned to his use of marijuana as a sleep aid. The therapist asked Evan whether he viewed it as a problem separate from being caught by his father—“If you had your own place and smoked when you had trouble sleeping, would this be something that you would want to change?” The therapist respected the rules and concerns from Evan's parents but wanted an honest account from Evan about his view on the matter.

THERAPIST COMMENTARY: The discussion of substance use in emerging adults with ADHD can be a sensitive one. There is a balance of maintaining the alliance with determining if there is evidence of use issues that require a higher level of treatment or an agenda item in CBT. CBT provides a forum to explore Evan's thoughts about his marijuana use (in the context of various negative effects and other clinical

misgivings [see [Chapter 6](#)]). The spirit of informed decision making and an analysis of the client's use pattern is a good starting point for collaboration, review of clinical data, and motivation and prospects for change.

Evan said that sleep was a longstanding issue that worsened in college. He had an erratic sleep schedule at school because he often stayed up late; he would put off sleep until he could not stay awake. He said that he had trouble waking up, getting out of bed, and starting his day after a night of smoking, and this was beyond his typical sleep inertia.

Evan shared a new wrinkle in his view of smoking after his beach vacation with friends. He said that his friends eschewed their old party mindset and partook much more modestly than in the past; instead, they focused on work and other aspects of their lives. Evan said that he stayed up and slept in later than any of his other friends, and he had the sense that his friends did more before he got up than he did all day. Evan vacillated between envy of their adult lives and confusion about whether he wanted that life for himself, both sides were relevant to the question of whether he smokes too much marijuana. Evan and the therapist discussed that emerging adulthood is a daunting time devoted to defining what is important and meaningful for him. This was set out as a theme to explore while finishing his class, starting his job search, and facing other adulting issues.

The focus was on how Evan wanted to spend himself. He did not want to stop smoking; instead, he agreed to focus on times marijuana use seemed obligatory (i.e., for sleep). The goal was framed as improving his sleep patterns and making informed choices about smoking rather than it being the default option. Evan agreed to track his sleep.

The next few sessions focused on a combination of managing his new online course and reviewing his sleep habits. Evan said that the local public library was again his classroom and study station. He sat in the public area (though in a remote back corner) to view lectures using headphones with the conference room reserved for assignments requiring more focus. These go-to places were now habitual implementation targets (e.g., "If I go to the conference room, then I can spend 10 minutes on the assignment"). He said

that the library staff showed an interest in his progress toward graduation and encouraged him, which he said helped him get on task.

Evan set a 12:00 a.m. get-in-bed target time and an 8:00 a.m. wake-up-and-get-out-of-bed time for most days. Although allowing for sufficient sleep, he still had difficulties winding down, often lying awake in bed for over an hour. The therapist reviewed with Evan his experience leading up to getting into bed. Even when working evenings, he was home by 10:30 p.m. and had ample down time. However, his lead up activities before getting into bed were all over the place, including sleep-disrupting distractions from being online.

Noting that Evan had been able to create routines to promote studying, the therapist wondered whether some sort of sleep script might help. Evan was initially resistant, claiming he should not have to put this much effort into sleep and waking up. Probing this thought revealed Evan's doubts about his ability to maintain the strategies and tactics once he had to do so on his own. He viewed them as "weird," noting his beach friends did not seem to work as hard to be "normal." Even though he was confident that he would pass his last class, he cited a series of yes-but thoughts about postcollege plans (e.g., "Yes, I'll have a degree, but I'm not qualified for most jobs"; "Yes, I may find a job, but then I'll have to do it every day, and it's not like school where they help you"; "Yes, I can perform a job like the ones I have now, but these are not careers and do not pay enough to live on my own").

The understandable concerns about full-time work would be sorted out by ongoing coping with academics and adult skills, eventually adapted to specific job demands. The therapist pointed out that Evan had gained skills that he used habitually and had personalized, a fact that was leveraged to target his existing sleep habits and how he ends up in sleep-interfering patterns at night. The point was made that all the strategies and tactics for adult ADHD are tools meant to help him or anyone, including his beach friends, to make informed choices and to act with intention in accord with personally meaningful goals, including sleep.

THERAPIST COMMENTARY: This section illustrates the therapist's highlighting incremental coping improvements and client

strengths, which implicitly focus on Evan's budding self-regulatory efficacy and residual mistrust. Although not identified as such, Evan's doubts about his sleep and finding work after college reflect a hypothesized overgeneralization of his self-mistrust. As it was more immediately relevant, sleep strategies were prioritized, which offer opportunities for modifying thoughts, behaviors, and beliefs that can be used in a job search.

Evan's sleep script for getting into a sleep mode focused on readying for the next day (e.g., laying out work clothes or study materials). He also made sure his electronics were charging before getting ready for bed as part of the wind-down routine. In fact, Evan recognized how tired he was once he finally got into bed but thoughts coursed through his mind, which were not racing or disturbing but still kept him awake. Some basic relaxation and meditation exercises were reviewed, though he found light stretching easier to do. Evan's use of his smartphone at night was reviewed to distinguish uses that were sleep promoting versus sleep interfering. He listened to recordings (podcasts or music), which quieted his thoughts. It was advised that he only listen to familiar works for sleep (e.g., comfort media) so as not to be kept awake by novel content.

Evan had periodic awakenings at night, during which he assumed his sleep was ruined, and this triggered his marijuana use. He was open to coping plans for such times (e.g., get up for a short time before returning to bed, write out distracting thoughts, cover clock to avoid sleep math) and, as important, modifying sleep thoughts (e.g., "Even if I wake up, I will still be rested enough for the day"). Evan was helped by psychoeducation about historical accounts of first and second sleep, which normalized middle of the night wakings. Various principles of CBT for insomnia were used to structure sleep, including the notion of getting up and out of bed at the appointed time regardless of the amount or quality of sleep, supported by the finding that individuals typically underestimate how much sleep they have had in comparison with awakenings (see [Chapter 6](#)).

Evan did not always fall asleep quickly but more often got into bed as planned and kept to his wake-up time. His use of marijuana as a sleep aid virtually stopped during the semester, though it remained an option. The therapist invited Evan to note his smoking at other times to discern when he smoked due to stress as opposed to when he smoked socially, in the spirit of informed decision making.

Evan's final online course turned out to be more straightforward than the previous one, with no written assignment other than a final reflection paper. This was a fortunate turn of events, as Evan's focus during the summer shifted to his job search, with graduation now guaranteed.

Evan faced the fact that his college struggles meant he was not as competitive a job candidate as other graduates with better grades and stronger resumés. He introduced a self-imposed abstinence from marijuana due to possible preemployment drug screenings, which led to a greater focus on skills for managing triggers, risk factors, and justifications for smoking.

Evan eventually found a job with a friend's local start-up company that promised interesting work and personalized mentorship and support. He shed one of his part-time jobs after a few months once the start-up provided paid hours. Evan continued to put money in his savings account while he lived at home and embarked on his unique, winding adult path.

KURT

I have all these things I have to do but I can't make myself focus! I sit down and try to do what we discuss in here but it doesn't work! My mind goes all over the place and then I get up and do something else and I know I'm not doing what I need to do! I have people asking me for the things I promised them, and I say I'll do them ASAP but my word means s*** because I still don't do it! They must be thinking I'm not trustworthy and not worth paying—and they're right! The meds don't help, and I don't do what we talk about in here! I sometimes think this is a waste; I'm going to f*** up anyway, so why not just f***** give up?!

Kurt spewed these frustrations during his 10th session of CBT at sufficient volume that therapists in adjacent offices heard his tirade loud and

clear. Kurt is in his mid-30s and lives in a rented house with four younger roommates. He grew up near Philadelphia but moved to Los Angeles when he was accepted to a prestigious college videography program. His high school academic record was unremarkable, but he had a singular talent for film and video. He said that his portfolio likely got him into the program, even though his high school grades included Cs and Ds due to procrastination and disorganization; he simply preferred A/V work to school.

Kurt said the college program was the best possible fit, as it was almost wholly based on hands-on learning and projects, but he was still overdue on deadlines and late to classes, meetings, and video shoots. He was nearly suspended during his first semester because he was late providing his final high school transcript. The videography program required a bare minimum of traditional classes; Kurt was granted extensions on all of them and barely passed, but he graduated.

Kurt stayed in Los Angeles, where the status of the program and recommendations from faculty helped him to get jobs. Initial projects were relatively low impact but allowed him to quickly build his body of work and reputation. He supplemented his income with part-time jobs, which he claimed were easy. However, he invariably quit or was fired because he would fail to show up for shifts when a competing video/film job came up; he was confident that he would soon support himself solely with paid work in his field.

Video/film work is very project based, providing interesting, time-limited ventures. Kurt had a defined role in each project, accountability to others, and a clear, final product at which point he could jump to a new project. The downside was that he had to be organized to find new projects and field inquiries for his services. It was difficult for him to respond to inquiries and set up his next job while hyperfocused on a project at hand.

Kurt was undiagnosed with ADHD and struggled with the organization and time management needed to arrive on time, meet deadlines, and keep up with administrative details (e.g., submitting invoices for payment). He also found it difficult to curb his frustrations with others and acted impetuous and ill-tempered when facing hassles involved in projects; he was similarly snarky when confronted on these matters, which also affected project schedules.

Over the next few years, Kurt's video/film work slowly declined, in part due to poor follow-through on inquiries, which forced him to devote more time to other jobs. This created a vicious loop of having less time to network and seek out projects, tasks already difficult for him. He eventually fell behind on rent, amassed substantial credit card debt, and was forced to move home with his parents before he turned 30 years old.

After moving back to Philadelphia and finding a room in a rented house, Kurt pieced together a couple of part-time jobs. His parents supported him financially as he tried to revive his career, hoping to return to Los Angeles but also seeking work in Philadelphia and New York. About a year ago, he was hired for a New York project on the recommendation a former classmate. Kurt did the work but never submitted an invoice for it. He grew increasingly depressed by what he viewed as self-sabotaging behavior.

Kurt's parents encouraged him to seek out help for his mood. After a few meetings, his therapist suggested that Kurt's mood issues and ongoing problems might be from undiagnosed ADHD. She prescribed an ADHD medication and recommended a thorough evaluation, which led to a diagnosis and referral for CBT for adult ADHD.

Apart from other executive function problems, emotional dyscontrol is a relevant factor in Kurt's case. Whereas his passion for film and video served him well, he had little patience for details that did not interest him and overreacted to various hassles he encountered. He recognized his reactions as over-the-top and he got over them relatively quickly, but this pattern had damaged relationships and his reputation with others.

During the session in which Kurt unloaded his frustrations, the therapist tried to summarize and steer the discussion toward problem management. The therapist settled back and absorbed the outpouring until Kurt paused, took a few breaths, and apologized for his outburst, and then Kurt noted his exasperation at his circumstances. The therapist said an apology was not necessary, recapped Kurt's aggravations, noted that it was likely only a snapshot of how frustrating his difficulties and their effects have been for him, and affirmed that behavior change is hard work.

THERAPIST COMMENTARY: Emotional dyscontrol seen in adult ADHD is often more restrained than in Kurt's case but may still manifest in relatively short, sharp outbursts that are disruptive and distracting to the client's overarching objectives. Impulsivity and emotional dyscontrol likely overlap insofar as adults with ADHD often describe reaching a point of feeling overwhelmed by stressors or setbacks. In addition to an empathic summary, it is useful to explore whether there is anything else pertinent to the client's emotional reactions in session.

The therapist inquired about any other feelings Kurt wanted to voice. Kurt said that his ongoing poor follow-through is the main difficulty that interferes with moving forward in his life outside of work (e.g., dating, health, finances). He felt shame each time he needed money from his parents, like when a piece of equipment recently stopped working and he needed to replace it. This was viewed by Kurt as further evidence he cannot catch a break. He described haste to catch up to how his life was in Los Angeles, but since he had been home now for several years, Kurt worried that he might turn 40 or 50 years old and still be mired in the same situation.

Kurt calmed down but was still antsy and distressed by all he had to do. As it was the end of the session, he quickly drew up a task plan with the therapist that involved logging into a weblink Kurt needed to review and sitting and looking at it, even if he could not focus as well as he would like; they lowered the bar as much as possible to foster Kurt's engagement. The purpose was to see if Kurt could marshal enough focus to make headway, albeit imperfectly. Kurt still doubted his ability to face even this single task but agreed to try.

Although he was calmer at the next session, Kurt had his typical bouncy leg and showed other signs of restlessness. He apologized again for the previous session and said he quickly got over it afterward. In fact, he used the homework plan to good effect and was somewhat productive at home after the session. The therapist noted the fact that Kurt's plans and his ability

to implement them could be hijacked by his strong emotions. He agreed and noted that a roommate pointed out Kurt's defensiveness when he gave Kurt a reminder that rent was due; the roommate said that Kurt was very impatient and pushy when he needed something.

Kurt conceded that the roommate's observation was accurate. The therapist provided some psychoeducation about ADHD and emotions, including their role in procrastination. To this end, Kurt said that despite his productivity since last time, he continued to find pretexts to put off working on the long overdue invoice from the New York job, which was still a therapy goal. Although he could not argue if the employer did not want to pay him, Kurt still wanted to submit an invoice to close the loop on the project and reconnect with the contact person there.

Kurt and the therapist revisited the HYDDT form, which had been used before for this invoice, to recraft a plan for facing it. At the next session, Kurt said he still had not submitted the invoice, though he shared an interesting observation. When thinking about the invoice, he tried to touch the task by double checking some particulars of the project, including contact information for the agency. While sorting through digital files and emails, Kurt felt a wave of embarrassment and shame at the prospect of reaching out to someone whom he had presumably disappointed. He described anger at himself and a sense of sadness and regret at the loss of the opportunity the New York project had offered him and that he had, in fact, completed the job without being paid. Logic told him the worst outcome of sending a belated invoice was that it would be ignored or unpaid, but Kurt expected it to confirm his failure and ruined reputation. This flood of feelings and thoughts resulted in walking away from the task and created low spirits and morale for the rest of the afternoon.

Kurt and his therapist discussed how his emotions and corresponding beliefs added another layer of difficulty to managing ADHD. The interactions of these factors and his ongoing problems further eroded Kurt's sense of self and trust in his coping abilities. Kurt said that he felt like an impostor during the videography program. He was one of a few students from outside Los Angeles, New York, or San Francisco. Despite his strong work, he recalled "squeaking by" with low grades. Kurt saw his current plight as his comeuppance and a sign that he really was a fraud.

The therapist summarized back and illustrated a conceptualization of Kurt's description of how ADHD and past and current difficulties fit together. This included the beliefs he voiced and their link to his experiences and how these magnify his already strong emotional reactions. Finally, the avoidance of the invoice was outlined using this understanding.

THERAPIST COMMENTARY: The case conceptualization is a synopsis of the CBT model that has been modified for adult ADHD. It provides an opportunity to look at how different facets of the client's experiences and subsequent cognitive, behavioral, and emotional patterns fit together. In the spirit of collaboration, Kurt and the therapist decided together how to best move forward toward Kurt's goals using this conceptualization in the here and now to guide coping plans and skill-based strategies.

The therapist's summary led Kurt to the "Okay, this makes sense but what do I do about it?" question. The therapist put it back on Kurt whether he still wanted to submit the invoice; if so, what was a realistic first step for him? Whatever his decision, it was framed as an opportunity to face the invoice or let it go, and work toward experiences with which to rebuild efficacy. They reviewed examples of Kurt's experiences and mind-sets when actively engaged in projects that provided evidence counter to his failure belief and illustrated his talents. These examples included the New York job, for which he said the product he delivered was great and admitted that the overdue invoice overshadowed this fact. Kurt spoke of the resilience he had in Los Angeles that allowed him to tolerate critiques of his work and use them to hone his skills and craft. The therapist pointed out that Kurt exhibited this trait recently by taking to heart his roommate's feedback, which was evidence of his ability to face and tolerate discomfort to grow and improve.

Kurt said that although he still wants to return to Los Angeles, he could do more to seek out work on the East coast, including smaller jobs, and he recognized that he has been avoiding steps he could take to improve his

employability. He and the therapist discussed how Kurt might reach out to old contacts and friends to network. Kurt worried it would look weird and inappropriate to suddenly reach out after so much time has passed, but when asked whether he would view it as weird or inappropriate if they contacted him, Kurt smirked and said that he would be pleasantly surprised to hear from them.

Kurt decided that he still wanted to close the loop with the New York invoice, if nothing else to simply face it for his own sake. He realized what he had viewed as small first steps were still too big with respect to his shame reactions. Kurt agreed to view the video he sent to the New York agency to remind him of the quality of his work, like an exposure task. He later noted that after doing so, he posted some other video footage on his social media accounts.

Emotions played a prominent role in these experiments. Kurt gained practice noticing and tolerating feelings that arose but endured them to stay engaged in an endeavor, and found that his emotional fortitude slowly improved. As he took such steps, he observed mixed emotions that could be discerned and labelled, including positive feelings of pride in his work and pangs of remorse about lost opportunities. Cognitive defusion strategies added another layer to coping with strong thoughts and feelings. He found it helpful to view intrusive thoughts and feelings as critiques for which he could use his resilience to tolerate without abandoning a plan.

THERAPIST COMMENTARY: This phase of Kurt's CBT reflects the sufficiency reframes of being able to do enough and tolerate discomfort while engaging in endeavors. In addition to tolerating discomfort, Kurt was able to notice and discern adaptive, task-promoting emotions and mind-sets. He developed more trust in his abilities to face priority tasks that were the building blocks for higher order goals related to seeking projects as well as fostering more adaptive beliefs and schemas about himself.

By no means was Kurt a Zen master, but he coped better. He adopted a method acting approach living in Los Angeles, which was that he tried to act like someone who already possessed the emotional flexibility he was trying to muster. The baseball film *Bull Durham* was a favorite of Kurt's, in which a young pitcher was advised to play the game with "fear and arrogance" as he left his minor league team to play in the major leagues. Kurt used this as a reminder he could hold competing feelings. He often had to have such faith in his work and ideas during the editing process in past jobs, unsure of how the product would turn out but trusting his vision. He said he now viewed CBT as editing his outlooks, habits, and emotions.

Several weeks later, Kurt submitted the invoice by email. He received a notice that it was past the submission deadline and would not be paid. He was initially bothered by the impersonal response but ultimately gave himself credit for facing the task. In fact, he later sent a message to his contact in the agency and received a cordial response and an invitation to "keep in touch." Kurt felt that he had not only closed the loop on the invoice, but also perhaps opened a line communication.

The fact that Kurt's therapeutic gains continue to outpace his functional gains is not uncommon. His difficulties reestablishing his career despite improved coping efforts are akin to improving spending behaviors while still paying down large credit card debts—it is progress but requires persistence to maintain, including facing periodic setbacks, and reach benchmarks on the way to an ultimate desired outcome.

Kurt is still prone to mood funks when faced with obstacles such as ongoing financial support or reading accounts on social media. When reviewing options for side jobs or prospects for steady income as he pursues video/film work, Kurt still rigidly insisted that he must be fully devoted to his field or he will be out of the loop, which limited some potential avenues. In the meantime, Kurt established a website through which he has secured some jobs, including a wedding (a prospect he would have viewed as an anathema, which reflects some flexibility in at least entertaining work options). Nevertheless, he has gained confidence enough to engage in and follow through on such tasks and to do what he sets out to do more consistently, although he may have more hurdles to face and endure as he moves forward.

CONCLUSION

These wide-ranging case examples reflect the clinical diversity in the psychosocial treatment of adult ADHD. CBT provides a flexible model for helping clients understand and recognize how features of ADHD unfold in daily life to create the functional difficulties for which they seek psychosocial treatment. This model also provides a therapeutic framework for fashioning personalized interventions targeting key pivot points in a client's life at which the implementation of coping strategies can be most beneficial. Although the use of such behavioral skills is the main outcome goal, the cognitive component of CBT was highlighted in the cases reviewed in this chapter.

Grace-Ann faced difficulties following through on work endeavors that were informed by deeper schemas related to self-mistrust and belief that she had disappointed others. Evan faced similar self-doubts as he finished his degree requirements while navigating emerging adulthood. He dealt with self-comparisons with his peers who seemed better at being an adult and dealt with longstanding sleep problems managed with marijuana. Finally, Kurt's case reflected the role of emotional dyscontrol in adult ADHD. His emotions and other executive functioning difficulties magnified and were magnified by his frustrations with trying to reestablish his career and to establish newfound trust in his ability to consistently face endeavors. For each of these individuals, the cognitive domain of CBT for adult ADHD served to personalize their unique barriers to follow-through and foster engagement in more adaptive coping approaches that increased follow-through and led to some degree of progress.

FINAL THOUGHTS

As was noted in the [Introduction](#), this book is the long-delayed answer to a question posed during the Q&A of a workshop in 2002 about the central cognitive theme in adult ADHD. The answer offered throughout the pages of this book is that impaired self-regulatory efficacy (and distrust thoughts and mistrust beliefs) is the central theme underlying the thoughts and beliefs of

adults with ADHD, which has ripple effects on functioning, particularly attempts to transform intentions into actions.

The broader goal of this book was to outline the role of thoughts and beliefs in the lives of adults with ADHD and within psychosocial treatment. Its unique contribution is its emphasis on the role of cognitive change principles within a CBT approach modified for adult ADHD, chiefly to effect behavior change in settings in which adults with ADHD have coping and functional difficulties.

CBT for adult ADHD turns managing ADHD into managing pivot points, with cognitions representing an essential ligament or mediator between intention and action at these points. This approach serves the same function for therapists helping adults with ADHD by offering a way to frame and deliver tools, skills, tactics, and strategies in distinct and doable units of action that clients believe they can use. Treatment is personalized to the array of individuals and their unique life circumstances, histories, temperaments, roles, and personal goals, all of which influence and are influenced by their thoughts and beliefs. As reportedly said by Hall of Fame baseball player Yogi Berra, “If I hadn’t believed it, I wouldn’t have seen it.”

APPENDIX

Credible Sources of Information About Adult ADHD

The following is a list of reputable websites and sources of credible information related to adult attention-deficit/hyperactivity disorder (ADHD) for both professionals and consumers:

- AADD-UK: <https://aadduk.org/>
- ADHD in Adults (Agency for Healthcare Research and Quality): <http://adhdinadults.com/>
- The American Professional Society of ADHD and Related Disorders: <https://apsard.org/>
- Association on Higher Education and Disability[®] (AHEAD): <https://www.ahead.org/home>
- Attention Deficit Disorder Association (ADDA): <https://add.org/>
- Canadian ADHD Resource Alliance (CADDRA): <http://www.caddra.ca/>
- Children and Adults With Attention-Deficit/Hyperactivity Disorder (CHADD): <https://www.chadd.org/>

- Learning Disabilities Association of America (LDA):
<https://ldaamerica.org/>
- National Attention Deficit Disorder Information and Support Service (ADDISS): <http://www.addiss.co.uk/>
- National Institute of Mental Health (NIMH):
<https://www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml>; <https://www.nimh.nih.gov/news/science-news/science-news-about-attention-deficit-hyperactivity-disorder-adhd.shtml>
- National Resource Center on ADHD (NRC):
<https://chadd.org/about/about-nrc/>
- Totally ADD: <https://totallyadd.com/>
- UK Adult ADHD Network (UKAAN): <https://www.ukaan.org/>
- World Federation of ADHD: <https://www.adhd-federation.org/>

REFERENCES

- Abramovitch, A., & Schweiger, A. (2009). Unwanted intrusive and worrisome thoughts in adults with attention-deficit/hyperactivity disorder. *Psychiatry Research*, 168, 230–233. <http://dx.doi.org/10.1016/j.psychres.2008.06.004>
- Adler, L. A., Faraone, S. V., Spencer, T. J., Berglund, P., Alperin, S., & Kessler, R. C. (2017). The structure of adult ADHD. *International Journal of Methods in Psychiatric Research*, 26, e1555. <http://dx.doi.org/10.1002/mpr.1555>
- Agnew-Blais, J. C., Polanczyk, G. V., Danese, A., Wertz, J., Moffitt, T. E., & Arseneault, L. (2016). Evaluation of the persistence, remission, and emergence of attention-deficit/hyperactivity disorder in young adulthood. *JAMA Psychiatry*, 73, 713–720. <http://dx.doi.org/10.1001/jamapsychiatry.2016.0465>
- Ahmad, S. I., Owens, E. B., & Hinshaw, S. P. (2019). Little evidence for late-onset ADHD in a longitudinal sample of women. *Journal of Consulting and Clinical Psychology*, 87, 112–117. <http://dx.doi.org/10.1037/ccp0000353>
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Alexandria, VA: Author.
- Anastopoulos, A. D., & King, K. A. (2015). A cognitive-behavior therapy and mentoring program for college students with ADHD. *Cognitive and Behavioral Practice*, 22, 141–151. <http://dx.doi.org/10.1016/j.cbpra.2014.01.002>
- Anastopoulos, A. D., King, K. A., Besecker, L. H., O'Rourke, S. R., Bray, A. C., & Supple, A. J. (2018). Cognitive-behavioral therapy for college students with ADHD: Temporal stability of improvements in functioning following active treatment. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054717749932>
- Antshel, K. M., Hier, B. O., & Barkley, R. A. (2014). Executive functioning theory and ADHD. In S. Goldstein & J. A. Naglieri (Eds.), *Handbook of executive functioning* (pp. 107–120). New York, NY: Springer. http://dx.doi.org/10.1007/978-1-4614-8106-5_7

- Antshel, K. M., & Olszewski, A. K. (2014). Cognitive behavioral therapy for adolescents with ADHD. *Child and Adolescent Psychiatric Clinics of North America*, 23, 825–842. <http://dx.doi.org/10.1016/j.chc.2014.05.001>
- Arnett, J. J. (2000). Emerging adulthood. A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469–480. <http://dx.doi.org/10.1037/0003-066X.55.5.469>
- Asherson, P., & Trzaskowski, M. (2015). Attention-deficit/hyperactivity disorder is the extreme and impairing tail of a continuum. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54, 249–250. <http://dx.doi.org/10.1016/j.jaac.2015.01.014>
- Bandura, A. (1997). *Self-efficacy*. New York, NY: W. H. Freeman.
- Barbarelli, W. J., Colligan, R. C., Weaver, A. L., Voigt, R. G., Killian, J. M., & Katusic, S. K. (2013). Mortality, ADHD, and psychosocial adversity in adults with childhood ADHD: A prospective study. *Pediatrics*, 131, 637–644. <http://dx.doi.org/10.1542/peds.2012-2354>
- Barkley, R. A. (1997). *ADHD and the nature of self-control*. New York, NY: Guilford Press.
- Barkley, R. A. (2001). The executive functions and self-regulation: An evolutionary neuropsychological perspective. *Neuropsychology Review*, 11, 1–29.
- Barkley, R. A. (2012). *Executive functions: What they are, how they work, and why they evolved*. New York, NY: Guilford Press.
- Barkley, R. A. (Ed.). (2015a). *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed.). New York, NY: Guilford Press.
- Barkley, R. A. (2015b). Emotional dysregulation if a core component of ADHD. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed., pp. 81–115). New York, NY: Guilford Press.
- Barkley, R. A. (2015c). Health problems and related impairments in children and adults with ADHD. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed., pp. 267–313). New York, NY: Guilford Press.
- Barkley, R. A. (2016). Attention-deficit/hyperactivity disorder and self-regulation: Taking an evolutionary perspective on executive functioning. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (3rd ed., pp. 497–513). New York, NY: Guilford Press.
- Barkley, R. A. (2017). *When an adult you love has ADHD: Professional advice for parents, partners, and siblings*. Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/15963-000>
- Barkley, R. A. (2019). Neuropsychological testing is not useful in the diagnosis of ADHD: Stop it (or prove it)! *The ADHD Report*, 27(2), 1–8. <http://dx.doi.org/10.1521/adhd.2019.27.2.1>
- Barkley, R. A., & Fischer, M. (2019). Hyperactive child syndrome and estimated life expectancy at young adult follow-up: The role of adult ADHD persistence and other potential predictors. *Journal of Attention Disorders*, 23, 907–923. <http://dx.doi.org/10.1177/1087054718816164>
- Barkley, R. A., Fischer, M., Smallish, L., & Fletcher, K. (2002). The persistence of attention-deficit/hyperactivity disorder into young adulthood as a function of reporting source and definition of disorder. *Journal of Abnormal Psychology*, 111, 279–289. <http://dx.doi.org/10.1037/0021-843X.111.2.279>

- Barkley, R. A., Murphy, K. R., & Fischer, M. (2008). *ADHD in adults: What the science says*. New York, NY: Guilford Press.
- Barrett, L. F., Gross, J., Christensen, T. C., & Benvenuto, M. (2001). Knowing what you're feeling and knowing what to do about it: Mapping the relation between emotion differentiation and emotion regulation. *Cognition and Emotion*, 15, 713–724. <http://dx.doi.org/10.1080/02699930143000239>
- Barrett, M. S., & Berman, J. S. (2001). Is psychotherapy more effective when therapists disclose information about themselves? *Journal of Consulting and Clinical Psychology*, 69, 597–603. <http://dx.doi.org/10.1037/0022-006X.69.4.597>
- Baumeister, R. F., & Tierny, J. (2012). *Willpower: Rediscovering the greatest human strength*. New York, NY: Penguin.
- Beck, A. T. (1972). *Depression: Causes and treatments*. Philadelphia: University of Pennsylvania Press. (Original work published 1967)
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York, NY: Meridian.
- Beck, A. T., & Bredemeier, K. (2016). A unified model of depression: Integrating clinical, cognitive, biological, and evolutionary processes. *Clinical Psychological Science*, 4, 596–619. <http://dx.doi.org/10.1177/2167702616628523>
- Beck, A. T., & Haigh, E. A. P. (2014). Advances in cognitive theory and therapy: The generic cognitive model. *Annual Review of Clinical Psychology*, 10, 1–24. <http://dx.doi.org/10.1146/annurev-clinpsy-032813-153734>
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York, NY: Guilford Press.
- Beck, A. T., & Steer, R. A. (1990). *Beck anxiety inventory manual*. San Antonio, TX: The Psychological Corporation.
- Beck, A. T., Wright, F. D., Newman, C. F., & Liese, B. S. (1993). *Cognitive therapy of substance abuse*. New York, NY: Guilford Press.
- Beck, J. S. (2011). *Cognitive therapy: Basics and beyond* (2nd ed.). New York, NY: Guilford Press.
- Biederman, J., Chan, J., Spencer, T. J., Woodworth, K. Y., Kenworthy, T., Fried, R., . . . Faraone, S. V. (2015). Evidence of a pharmacological dissociation between the robust effects of methylphenidate on ADHD symptoms and weaker effects on working memory. *Journal of Brain Science*, 1, 43–53. <http://dx.doi.org/10.18488/journal.83/2015.1.2/83.2.43.53>
- Biederman, J., Faraone, S. V., Spencer, T. J., Mick, E., Monuteaux, M. C., & Aleardi, M. (2006). Functional impairments in adults with self-reports of diagnosed ADHD: A controlled study of 1001 adults in the community. *The Journal of Clinical Psychiatry*, 67, 524–540. <http://dx.doi.org/10.4088/JCP.v67n0403>
- Biederman, J., Petty, C. R., Clarke, A., Lomedico, A., & Faraone, S. V. (2011). Predictors of persistent ADHD: An 11-year follow-up study. *Journal of Psychiatric Research*, 45, 150–155. <http://dx.doi.org/10.1016/j.jpsychires.2010.06.009>
- Biederman, J., Petty, C. R., Evans, M., Small, J., & Faraone, S. V. (2010). How persistent is ADHD? A controlled 10-year follow-up study of boys with ADHD. *Psychiatry Research*, 177, 299–304. <http://dx.doi.org/10.1016/j.psychres.2009.12.010>

- Biederman, J., Petty, C. R., Woodworth, K. Y., Lomedico, A., Hyder, L. L., & Faraone, S. V. (2012). Adult outcome of attention-deficit/hyperactivity disorder: A controlled 16-year follow-up study. *The Journal of Clinical Psychiatry*, 73, 941–950. <http://dx.doi.org/10.4088/JCP.11m07529>
- Blair, C. (2016). The development of executive functions and self-regulation: A bidirectional psychobiological model. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (3rd ed., pp. 417–439). New York, NY: Guilford Press.
- Bongar, B., & Sullivan, G. (2013). *The suicidal patient: Clinical and legal standards of care* (3rd ed.). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/14184-000>
- Bozhilova, N. S., Michelini, G., Kuntsi, J., & Asherson, P. (2018). Mind wandering perspective on attention-deficit/hyperactivity disorder. *Neuroscience and Biobehavioral Reviews*, 92, 464–476. <http://dx.doi.org/10.1016/j.neubiorev.2018.07.010>
- Brainstorm Consortium. (2018). Analysis of shared heritability in common disorders of the brain. *Science*, 360, eaap8757. <http://dx.doi.org/10.1126/science.aap8757>
- Brook, J. S., Brook, D. W., Zhang, C., Seltzer, N., & Finch, S. J. (2013). Adolescent ADHD and adult physical and mental health, work performance, and financial stress. *Pediatrics*, 131, 5–13. <http://dx.doi.org/10.1542/peds.2012-1725>
- Brooks, J. A., Shablack, H., Gendron, M., Satpute, A. B., Parrish, M. H., & Lindquist, K. A. (2017). The role of language in the experience and perception of emotion: A neuroimaging meta-analysis. *Social Cognitive and Affective Neuroscience*, 12, 169–183. <http://dx.doi.org/10.1093/scan/nsw121>
- Brown, T. E. (2013). *A new understanding of ADHD in children and adults: Executive function impairments*. New York, NY: Routledge. <http://dx.doi.org/10.4324/9780203067536>
- Brown, T. E. (2017). *Outside the box: Rethinking ADD/ADHD in children and adults—A practical guide*. Arlington, VA: American Psychiatric Association.
- Burdick, A. (2017). *Why time flies: A mostly scientific investigation*. New York, NY: Simon & Schuster.
- Burns, D. D. (1989). *Feeling good handbook*. New York, NY: Plume.
- Bush, G. (2010). Attention-deficit/hyperactivity disorder and attention networks. *Neuropsychopharmacology Reviews*, 35, 278–300. <http://dx.doi.org/10.1038/npp.2009.120>
- Castagna, P. J., Calamia, M., & Davis, T. E., III. (2017). Childhood ADHD and negative self-statements: Important differences associated with subtype and anxiety symptoms. *Behavior Therapy*, 48, 793–807. <http://dx.doi.org/10.1016/j.beth.2017.05.002>
- Castellanos, F. X., Margulies, D. S., Kelly, C., Uddin, L. Q., Ghaffari, M., Kirsch, A., . . . Milham, M. P. (2008). Cingulate-precuneus interactions: A new locus of dysfunction in adult attention-deficit/hyperactivity disorder. *Biological Psychiatry*, 63, 332–337. <http://dx.doi.org/10.1016/j.biopsych.2007.06.025>
- Castellanos, F. X., & Proal, E. (2012). Large-scale brain systems in ADHD: Beyond the prefrontal-striatal model. *Trends in Cognitive Sciences*, 16, 17–26. <http://dx.doi.org/10.1016/j.tics.2011.11.007>
- Caye, A., Rocha, T. B., Anselmi, L., Murray, J., Menezes, A. M. B., Barros, F. C., . . . Rohde, L. A. (2016). Attention-deficit/hyperactivity disorder trajectories from childhood to young adulthood: Evidence from a birth cohort supporting a late-onset syndrome. *JAMA Psychiatry*, 73, 705–712. <http://dx.doi.org/10.1001/jamapsychiatry.2016.0383>

- Cherkasova, M. V., French, L. R., Syer, C. A., Cousins, L., Galina, H., Ahmadi-Kashani, Y., & Hechtman, L. (2016). Efficacy of cognitive behavioral therapy with and without medication for adults with ADHD. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054716671197>
- Chomsky, N. (1959). Review: *Verbal behavior* by B. F. Skinner. *Language*, 35, 26–58. <http://dx.doi.org/10.2307/411334>
- Cirillo, F. (2018). *The pomodoro technique: The acclaimed time-management system that has transformed the way we work*. New York, NY: Currency. (Original work published 2006)
- Clark, D. A., & Beck, A. T. (2010). Cognitive theory and therapy of anxiety and depression: Convergence with neurobiological findings. *Trends in Cognitive Sciences*, 14, 418–424. <http://dx.doi.org/10.1016/j.tics.2010.06.007>
- Cook, J., Knight, E., Hume, I., & Qureshi, A. (2014). The self-esteem of adults diagnosed with attention-deficit/hyperactivity disorder (ADHD): A systematic review of the literature. *ADHD Attention Deficit and Hyperactivity Disorders*, 6, 249–268. <http://dx.doi.org/10.1007/s12402-014-0133-2>
- Copps, S. C. (2000, May). *Twice as hard/half as much—The ADD dilemma*. Paper presented at the Attention Deficit Disorder Association National Conference, Atlanta, GA.
- Cortese, S., Adamo, N., Del Giovane, C., Mohr-Jensen, C., Hayes, A. J., Carucci, S., . . . Cipriani, A. (2018). Comparative efficacy and tolerability of medications for attention-deficit/hyperactivity disorder in children, adolescents, and adults: A systematic review and network meta-analysis. *The Lancet Psychiatry*, 5, 727–738. [http://dx.doi.org/10.1016/S2215-0366\(18\)30269-4](http://dx.doi.org/10.1016/S2215-0366(18)30269-4)
- Cortese, S., & Coghill, D. (2018). Twenty years of research on attention-deficit/hyperactivity disorder (ADHD): Looking back, looking forward. *Evidence-Based Mental Health*, 21, 173–176. <http://dx.doi.org/10.1136/ebmental-2018-300050>
- Cortese, S., Faraone, S. V., Bernardi, S., Wang, S., & Blanco, C. (2013). Adult attention-deficit/hyperactivity disorder and obesity: Epidemiological study. *The British Journal of Psychiatry*, 203, 24–34. <http://dx.doi.org/10.1192/bjp.bp.112.123299>
- Crönlein, T., Lehner, A., Schüssler, P., Geisler, P., Rupprecht, R., & Wetter, T. C. (2019). Changes in subjective-objective sleep discrepancy following inpatient cognitive behavior therapy for insomnia. *Behavior Therapy*, 50, 994–1001. <http://dx.doi.org/10.1016/j.beth.2019.03.002>
- Dawkins, R. (1999). *The extended phenotype: The long reach of the gene*. Oxford, England: Oxford University Press. (Original work published 1982)
- Dawson, P., & Guare, R. (2009). *Smart but scattered*. New York, NY: Guilford Press.
- De Crescenzo, F., Cortese, S., Adamo, N., & Janiri, L. (2017). Pharmacological and non-pharmacological treatment of adults with ADHD: A meta-review. *Evidence-Based Mental Health*, 20, 4–11. <http://dx.doi.org/10.1136/eb-2016-102415>
- Dekkers, T. J., Agelink van Rentergem, J. A., Huizenga, H. M., Raber, H., Shoham, R., Popma, A., & Pollak, Y. (2018). Decision-making deficits in ADHD are not related to risk seeking but to suboptimal decision-making: Meta-analytical and novel experimental evidence. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054718815572>

- Demontis, D., Walters, R. K., Martin, J., Mattheisen, M., Als, T. D., Agerbo, E., . . . Neale, B. M. (2019). Discovery of the first genome-wide significant risk loci for attention deficit/hyperactivity disorder. *Nature Genetics*, 51, 63–75. <http://dx.doi.org/10.1038/s41588-018-0269-7>
- Dipeolu, A., Sniatecki, J. L., Storlie, C. A., & Hargrave, S. (2013). Dysfunctional career thoughts and attitudes as predictors of vocational identity among young adults with attention-deficit/hyperactivity disorder. *Journal of Vocational Behavior*, 82, 79–84. <http://dx.doi.org/10.1016/j.jvb.2013.01.003>
- Dittner, A. J., Hodson, J., Rimes, K. A., Russell, A. J., & Chalder, T. (2018). Cognitive-behavioural therapy for adult attention-deficit/hyperactivity disorder: A proof of concept randomised controlled trial. *Acta Psychiatrica Scandinavica*, 137, 125–137. <http://dx.doi.org/10.1111/acps.12836>
- Dobson, K., Poole, J. C., & Beck, J. S. (2018). The fundamental cognitive model. In R. L. Leahy (Ed.), *Science and practice in cognitive therapy: Foundations, mechanisms, and applications* (pp. 29–47). New York, NY: Guilford Press.
- Dweck, C. S. (2006/2016). *Mindsets: The new psychology of success*. New York, NY: Ballantine Books.
- Eddy, L. D., Dvorsky, M. R., Molitor, S., Bouchtein, E., Smith, Z., Oddo, L. E., . . . Langberg, J. M. (2015). Longitudinal evaluation of the cognitive-behavioral model of ADHD in a sample of college students with ADHD. *Journal of Attention Disorders*, 22(4), 1–11. <http://dx.doi.org/10.1177/1087054715616184>
- Emilsson, B., Gudjonsson, G., Sigurdsson, J. F., Baldursson, G., Einarsson, E., Olafsdottir, H., & Young, S. (2011). Cognitive behaviour therapy in medication-treated adults with ADHD and persistent symptoms: A randomized controlled trial. *BMC Psychiatry*, 11, 116. <http://dx.doi.org/10.1186/1471-244X-11-116>
- Faraone, S. V., & Antshel, K. M. (2014). Towards an evidence-based taxonomy of nonpharmacologic treatments for ADHD. *Child and Adolescent Psychiatric Clinics of North America*, 23, 965–972. <http://dx.doi.org/10.1016/j.chc.2014.06.003>
- Faraone, S. V., Asherson, P., Banaschewski, T., Biederman, J., Buitelaar, J. K., Ramos-Quiroga, J. A., . . . Franke, B. (2015). Attention-deficit/hyperactivity disorder. *Nature Reviews: Disease Primers*, 1. <http://dx.doi.org/10.1038/nrdp.2015.20>
- Faraone, S. V., & Biederman, J. (2016). Can attention-deficit/hyperactivity disorder onset occur in adulthood? *JAMA Psychiatry*, 73, 655–656. <http://dx.doi.org/10.1001/jamapsychiatry.2016.0400>
- Faraone, S. V., Biederman, J., Spencer, T., Mick, E., Murray, K., Petty, C., . . . Monuteaux, M. C. (2006). Diagnosing adult attention deficit hyperactivity disorder: Are late onset and subthreshold diagnoses valid? *The American Journal of Psychiatry*, 163, 1720–1729. <http://dx.doi.org/10.1176/ajp.2006.163.10.1720>
- Faraone, S. V., & Larsson, H. (2019). Genetics of attention deficit hyperactivity disorder. *Molecular Psychiatry*, 24, 562–575. <http://dx.doi.org/10.1038/s41380-018-0070-0>
- Fayyad, J., De Graaf, R., Kessler, R., Alonso, J., Angermeyer, M., Demyttenaere, K., . . . Jin, R. (2007). Cross-national prevalence and correlates of adult attention-deficit/hyperactivity disorder. *The British Journal of Psychiatry*, 190, 402–409. <http://dx.doi.org/10.1192/bjp.bp.106.034389>
- Field, S., Parker, D. R., Sawilowsky, S., & Rolands, L. (2013). Assessing the impact of ADHD coaching services on university students' learning skills, self-regulation and well-being. *Journal of*

Postsecondary Education and Disability, 26, 67–81.

- First, M. B., Williams, J. B. W., Karg, R. S., & Spitzer, R. L. (2016). *Structured Clinical Interview for DSM–5 disorders: Clinician Version*. Arlington, VA: American Psychiatric Association.
- Fishman, D. B., Rego, S. A., & Muller, K. L. (2011). Behavioral theories of psychotherapy. In J. C. Norcross, G. R. Vandenbos, & D. K. Freedheim (Eds.), *History of psychotherapy: Continuity and change* (2nd ed., pp. 101–140). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/12353-004>
- Franklin, M. S., Mrazek, M. D., Anderson, C. L., Johnston, C., Smallwood, J., Kingstone, A., & Schooler, J. W. (2017). Tracking distraction. *Journal of Attention Disorders*, 21, 475–486. <http://dx.doi.org/10.1177/1087054714543494>
- Friedman, T. L. (2016). *Thank you for being late*. New York, NY: Farrar, Straus, & Giroux.
- Galéra, C., Bouvard, M. P., Lagarde, E., Michel, G., Touchette, E., Fombonne, E., & Melchior, M. (2012). Childhood attention problems and socioeconomic status in adulthood: 18-year follow-up. *The British Journal of Psychiatry*, 201, 20–25. <http://dx.doi.org/10.1192/bjp.bp.111.102491>
- Garland, S. N., Vargas, I., Grandner, M. A., & Perlis, M. L. (2018). Treating insomnia in patients with comorbid psychiatric disorders: A focused review. *Canadian Psychology/Psychologie Canadienne*, 59, 176–186. <http://dx.doi.org/10.1037/cap0000141>
- Gawrilow, C., Gollwitzer, P. M., & Oettingen, G. (2011a). If-then plans benefit delay of gratification performance in children with and without ADHD. *Cognitive Therapy and Research*, 35, 442–455. <http://dx.doi.org/10.1007/s10608-010-9309-z>
- Gawrilow, C., Gollwitzer, P. M., & Oettingen, G. (2011b). If-then plans benefit executive functions in children with ADHD. *Journal of Social and Clinical Psychology*, 30, 616–646. <http://dx.doi.org/10.1521/jscp.2011.30.6.616>
- Gawrilow, C., Morgenroth, K., Schultz, R., Oettingen, G., & Gollwitzer, P. M. (2013). Mental contrasting with implementation intentions enhances self-regulation of goal pursuit in schoolchildren at risk for ADHD. *Motivation and Emotion*, 37, 134–145. <http://dx.doi.org/10.1007/s11031-012-9288-3>
- Goldstein, S., & Naglieri, J. A. (Eds.). (2014). *Handbook of executive functioning*. New York, NY: Springer. <http://dx.doi.org/10.1007/978-1-4614-8106-5>
- Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54, 493–503. <http://dx.doi.org/10.1037/0003-066X.54.7.493>
- Gollwitzer, P. M., & Oettingen, G. (2016). Planning promotes goal striving. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (3rd ed., pp. 223–244). New York, NY: Guilford Press.
- Grant, P. M., Huh, G. A., Perivoliotis, D., Stolar, N. M., & Beck, A. T. (2012). Randomized trial to evaluate the efficacy of cognitive therapy for low-functioning patients with schizophrenia. *Archives of General Psychiatry*, 69, 121–127. <http://dx.doi.org/10.1001/archgenpsychiatry.2011.129>
- Groß, V., Lucke, C., Graf, E., Lam, A. P., Matthies, S., Borel, P., . . . Comparison of Methylphenidate and Psychotherapy in Adult ADHD Study (COMPAS) Consortium. (2019). Effectiveness of psychotherapy in adult ADHD: What do patients think? Results of the COMPAS study. *Journal of Attention Disorders*, 23, 1047–1058. <http://dx.doi.org/10.1177/1087054717720718>

- Guntuku, S. C., Ramsay, J. R., Merchant, R. M., & Ungar, L. H. (2019). Language of ADHD in adults on social media. *Journal of Attention Disorders*, 23, 1475–1485. <http://dx.doi.org/10.1177/1087054717738083>
- Harpin, V., Mazzone, L., Raynaud, J. P., Kahle, J., & Hodgkins, P. (2016). Long-term outcomes of ADHD: A systematic review of self-esteem and social function. *Journal of Attention Disorders*, 20, 295–305. <http://dx.doi.org/10.1177/1087054713486516>
- Hayes, S. C., Blackledge, J. T., & Barnes-Holmes, D. (2002). Language and cognition: Constructing an alternative approach within the behavioral tradition. In S. C. Hayes & D. Barnes-Holmes (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 3–20). New York, NY: Kluwer Academics. http://dx.doi.org/10.1007/0-306-47638-X_1
- Hayes, S. C., & Hofmann, S. G. (Eds.). (2018). *Process-based CBT: The science and core clinical competencies of cognitive behavioral therapy*. Oakland, CA: Context Press.
- Hayes, S. C., & Smith, S. (2005). *Get out of your mind and into your life: The new acceptance and commitment therapy*. Oakland, CA: New Harbinger.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: Guilford Press.
- Henriques, G. (2011). *A new unified theory of psychology*. New York, NY: Springer. <http://dx.doi.org/10.1007/978-1-4614-0058-5>
- *Hesslinger, B., Philipsen, A., & Richter, H. (2004). *Psychotherapie der ADHS im erwachsenenalter: Ein arbeitsbuch* [Psychotherapy for adults with ADHD: A workbook]. Göttingen, Germany: Hogrefe-Verlag.
- *Hesslinger, B., Philipsen, A., Richter, H., Hirvikoski, T., Drott, C., Waaler, E., . . . Larsson, M. (2010). *Psykoterapi för vuxna med ADHD; En arbetsbok* [Psychotherapy for adults with ADHD: A workbook]. Stockholm, Sweden: Hogrefe Psykologiförlaget.
- Hibbs, B. J., & Rostain, A. L. (2019). *The stressed years of their lives*. New York, NY: St. Martin's Press.
- *Hirvikoski, T., Waaler, E., Carlsson, J., Helldén, G., & Lindström, T. (2013a). *PEGASUS Kurs för vuxna med ADHD och deras närstående: Arbetsbok för kursansvariga* [PEGASUS course for adults with ADHD and their significant others: A workbook for course coordinators]. Stockholm, Sweden: Hogrefe Psykologiförlaget.
- *Hirvikoski, T., Waaler, E., Carlsson, J., Helldén, G., & Lindström, T. (2013b). *PEGASUS Kurs för vuxna med ADHD och deras närstående: Kursbok* [PEGASUS course for adults with ADHD and their significant others: A course book]. Stockholm, Sweden: Hogrefe Psykologiförlaget.
- Hirvikoski, T., Waaler, E., Lindström, T., Bölte, S., & Jokinen, J. (2015). Cognitive behavior therapy-based psychoeducational groups for adults with ADHD and their significant others (PEGASUS): An open clinical feasibility trial. *ADHD Attention Deficit and Hyperactivity Disorders*, 7, 89–99. <http://dx.doi.org/10.1007/s12402-014-0141-2>
- Hupfeld, K. E., Abagis, T. R., & Shah, P. (2019). Living “in the zone”: Hyperfocus in adult ADHD. *ADHD Attention Deficit and Hyperactivity Disorders*, 11, 191–208. <http://dx.doi.org/10.1007/s12402-018-0272-y>
- James, W. (1890). *The principles of psychology* (Vol. 1). New York, NY: Dover.

- Jensen, C. M., Amdisen, B. L., Jørgensen, K. J., & Arnfred, S. M. H. (2016). Cognitive behavioural therapy for ADHD in adults: Systematic review and meta-analyses. *ADHD Attention Deficit and Hyperactivity Disorders*, 8, 3–11. <http://dx.doi.org/10.1007/s12402-016-0188-3>
- Jobes, D. A. (2016). *Managing suicidal risk: A collaborative approach* (2nd ed.). New York, NY: Guilford Press.
- Johnson, S. (2014). *How we got to now: Six innovations that made the modern world*. New York, NY: Riverhead Books.
- Kahneman, D. (2011). *Thinking fast and slow*. New York, NY: Farrar, Straus, & Giroux.
- Kahneman, D., & Tversky, A. (1979). Intuitive predictions: Biases and corrective procedures. *TIMS Studies in Management Science*, 12, 313–327.
- Katzman, M. A., Bilkey, T. S., Chokka, P. R., Fallu, A., & Klassen, L. J. (2017). Adult ADHD and comorbid disorders: Clinical implications of a dimensional approach. *BMC Psychiatry*, 17, 302. <http://dx.doi.org/10.1186/s12888-017-1463-3>
- Kelly, K., & Ramundo, P. (1993). *You mean I'm not lazy, stupid, or crazy?!* New York, NY: Scribner.
- Kessler, R. C., Adler, L., Ames, M., Barkley, R. A., Birnbaum, H., Greenberg, P., . . . Üstün, T. B. (2005). The prevalence and effects of adult attention deficit/hyperactivity disorder on work performance in a nationally representative sample of workers. *Journal of Occupational and Environmental Medicine*, 47, 565–572. <http://dx.doi.org/10.1097/01.jom.0000166863.33541.39>
- Kessler, R. C., Adler, L., Barkley, R., Biederman, J., Conners, C. K., Demler, O., . . . Zaslavsky, A. M. (2006). The prevalence and correlates of adult ADHD in the United States: Results from the National Comorbidity Survey Replication. *The American Journal of Psychiatry*, 163, 716–723. <http://dx.doi.org/10.1176/ajp.2006.163.4.716>
- Kessler, R. C., Adler, L. A., Barkley, R., Biederman, J., Conners, C. K., Faraone, S. V., . . . Zaslavsky, A. M. (2005). Patterns and predictors of attention-deficit/hyperactivity disorder persistence into adulthood: Results from the national comorbidity survey replication. *Biological Psychiatry*, 57, 1442–1451. <http://dx.doi.org/10.1016/j.biopsych.2005.04.001>
- Kessler, R. C., Green, J. G., Adler, L. A., Barkley, R. A., Chatterji, S., Faraone, S. V., . . . Van Brunt, D. L. (2010). Structure and diagnosis of adult attention-deficit/hyperactivity disorder: Analysis of expanded symptom criteria from the Adult ADHD Clinical Diagnostic Scale. *Archives of General Psychiatry*, 67, 1168–1178. <http://dx.doi.org/10.1001/archgenpsychiatry.2010.146>
- Klein, R. G., Mannuzza, S., Olazagasti, M. A. R., Roizen, E., Hutchison, J. A., Lashua, E. C., & Castellanos, F. X. (2012). Clinical and functional outcome of childhood attention-deficit/hyperactivity disorder 33 years later. *JAMA Psychiatry*, 69, 1295–1303. <http://dx.doi.org/10.1001/archgenpsychiatry.2012.271>
- Knouse, L. E. (2015). Cognitive-behavioral therapies for ADHD. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis & treatment* (4th ed., pp. 757–773). New York, NY: Guilford Press.
- Knouse, L. E., & Mitchell, J. T. (2015). Incautiously optimistic: Positively-valenced cognitive avoidance in adult ADHD. *Cognitive and Behavioral Practice*, 22, 192–202. <http://dx.doi.org/10.1016/j.cbpra.2014.06.003>

- Knouse, L. E., Mitchell, J. T., Kimbrel, N. A., & Anastopoulos, A. D. (2019). Development and evaluation of the ADHD Cognitions Scale for Adults. *Journal of Attention Disorders*, 23, 1090–1100. <http://dx.doi.org/10.1177/1087054717707580>
- Knouse, L. E., & Ramsay, J. R. (2018). Managing side effects in CBT for adult ADHD. *The ADHD Report*, 26(2), 6–10. <http://dx.doi.org/10.1521/adhd.2018.26.2.6>
- Knouse, L. E., & Safren, S. A. (2010). Current status of cognitive behavioral therapy for adult attention-deficit/hyperactivity disorder. *Psychiatric Clinics of North America*, 33, 497–509. <http://dx.doi.org/10.1016/j.psc.2010.04.001>
- Knouse, L. E., Teller, J., & Brooks, M. A. (2017). Meta-analysis of cognitive-behavioral treatments for adult ADHD. *Journal of Consulting and Clinical Psychology*, 85, 737–750. <http://dx.doi.org/10.1037/ccp0000216>
- Knouse, L. E., Zvorsky, I., & Safren, S. A. (2013). Depression in adults with attention-deficit/hyperactivity disorder (ADHD): The mediating role of cognitive-behavioral factors. *Cognitive Therapy and Research*, 37, 1220–1232. <http://dx.doi.org/10.1007/s10608-013-9569-5>
- Kolberg, J., & Nadeau, K. G. (2017). *ADD-friendly ways to organize your life* (2nd ed.). New York, NY: Routledge.
- Konrad, K., & Eickhoff, S. B. (2010). Is the ADHD brain wired differently? A review on structural and functional connectivity in attention deficit hyperactivity disorder. *Human Brain Mapping*, 31, 904–916. <http://dx.doi.org/10.1002/hbm.21058>
- Kooij, J. J. S. (2013). *Adult ADHD: Diagnostic assessment and treatment* (3rd ed.). London, England: Springer-Verlag. <http://dx.doi.org/10.1007/978-1-4471-4138-9>
- Kooij, J. J. S., Bijlenga, D., Salerno, L., Jaeschke, R., Bitter, I., Balázs, J., . . . Asherson, P. (2019). Updated European Consensus Statement on diagnosis and treatment of adult ADHD. *European Psychiatry*, 56, 14–34. <http://dx.doi.org/10.1016/j.eurpsy.2018.11.001>
- Kross, E., Bruehlman-Senecal, E., Park, J., Burson, A., Dougherty, A., Shablack, H., . . . Ayduk, O. (2014). Self-talk as a regulatory mechanism: How you do it matters. *Journal of Personality and Social Psychology*, 106, 304–324. <http://dx.doi.org/10.1037/a0035173>
- Langberg, J. M., Dvorsky, M. R., Molitor, S. J., Bouchtein, E., Eddy, L. D., Smith, Z. R., . . . Eadeh, H. M. (2018). Overcoming the research-to-practice gap: A randomized trial with two brief homework and organization interventions for students with ADHD as implemented by school mental health providers. *Journal of Consulting and Clinical Psychology*, 86, 39–55. <http://dx.doi.org/10.1037/ccp0000265>
- Lasky, A. K., Weisner, T. S., Jensen, P. S., Hinshaw, S. P., Hechtman, L., Arnold, L. E., . . . Swanson, J. M. (2016). ADHD in context: Young adults' reports of the impact of occupational environment on the manifestation of ADHD. *Social Science & Medicine*, 161, 160–168. <http://dx.doi.org/10.1016/j.socscimed.2016.06.003>
- *Leskelä, M., Vedenpää, A., Vataja, R., Grönroos, N., Chydenius, E., Heikkilä, M., . . . Iivanainen, M. (2007). *AD/HD-aikuisten psykologinen ryhmäkuntoutus: Vetäjän käsikirja [Psychological group rehabilitation for adults with ADHD: Manual]*. Espoo, Finland: Rinnekoti-Säätiö.
- Li, W., Zhang, W., Xiao, L., & Nie, J. (2016). The association of Internet addiction symptoms with impulsiveness, loneliness, novelty seeking and behavioral inhibition system among adults with

- attention-deficit/hyperactivity disorder (ADHD). *Psychiatry Research*, 243, 357–364. <http://dx.doi.org/10.1016/j.psychres.2016.02.020>
- Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S. M., Pfeifer, J. H., & Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity in response to affective stimuli. *Psychological Science*, 18, 421–428. <http://dx.doi.org/10.1111/j.1467-9280.2007.01916.x>
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press.
- Lopez, P. L., Torrente, F. M., Ciapponi, A., Lischinsky, A. G., Cetkovich-Bakmas, M., Rojas, J. I., . . . Manes, F. F. (2018). Cognitive-behavioural interventions for attention deficit hyperactivity disorder (ADHD) in adults. *Cochrane Database of Systematic Reviews*, 3, CD010840. <http://dx.doi.org/10.1002/14651858.CD010840.pub2>
- López-Pinar, C., Martínez-Sánchez, S., Carbonell-Vayá, E., Fenollar-Cortés, J., & Sánchez-Meca, J. (2018). Long-term efficacy of psychosocial treatments for adults with attention-deficit/hyperactivity disorder: A meta-analytic review. *Frontiers in Psychology*, 9, 638. <http://dx.doi.org/10.3389/fpsyg.2018.00638>
- Lücke, C., Lam, A. P., Müller, H. H. O., & Philipsen, A. (2017). New psychotherapeutic approaches in adult ADHD—Acknowledging biographical factors. *Journal of Neurology & Neuromedicine*, 2(7), 6–10. <http://dx.doi.org/10.29245/2572.942X/2017/7.1138>
- Mackie, S., Shaw, P., Lenroot, R., Pierson, R., Greenstein, D. K., Nugent, T. F., III, . . . Rapoport, J. L. (2007). Cerebellar development and clinical outcome in attention-deficit/hyperactivity disorder. *The American Journal of Psychiatry*, 164, 647–655. <http://dx.doi.org/10.1176/ajp.2007.164.4.647>
- Magill, M., Apodaca, T. R., Borsari, B., Gaume, J., Hoadley, A., Gordon, R. E. F., . . . Moyers, T. (2018). A meta-analysis of motivational interviewing process: Technical, relational, and conditional process models of change. *Journal of Consulting and Clinical Psychology*, 86, 140–157. <http://dx.doi.org/10.1037/ccp0000250>
- Mahoney, M. J. (1974). *Cognition and behavior modification*. Cambridge, MA: Ballinger.
- Manos, M. J. (2013). Psychosocial therapy in the treatment of adults with attention-deficit/hyperactivity disorder. *Postgraduate Medicine*, 125, 51–64. <http://dx.doi.org/10.3810/pgm.2013.03.2641>
- Mapou, R. L. (2019). Neuropsychological testing is not useful in the diagnosis of ADHD, but. . . *The ADHD Report*, 27(2), 8–12. <http://dx.doi.org/10.1521/adhd.2019.27.2.8>
- McKiernan, K. A., Kaufman, J. N., Kucera-Thompson, J., & Binder, J. R. (2003). A parametric manipulation of factors affecting task-induced deactivation in functional neuroimaging. *Journal of Cognitive Neuroscience*, 15, 394–408. <http://dx.doi.org/10.1162/089892903321593117>
- McRae, K., Ochsner, K. N., & Gross, J. J. (2011). The reason in passion: A social cognitive neuroscience approach to emotion regulation. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (2nd ed., pp. 186–203). New York, NY: Guilford Press.
- Meichenbaum, D. (1977). *Cognitive-behavior modification: An integrative approach*. New York, NY: Springer. <http://dx.doi.org/10.1007/978-1-4757-9739-8>
- Michielsen, M., Semeijn, E., Comijs, H. C., van de Ven, P., Beekman, A. T. F., Deeg, D. J. H., & Kooij, J. J. S. (2012). Prevalence of attention-deficit hyperactivity disorder in older adults in The

- Netherlands. *The British Journal of Psychiatry*, 201, 298–305. <http://dx.doi.org/10.1192/bjp.bp.111.101196>
- Miklósi, M., Máté, O., Somogyi, K., & Szabó, M. (2016). Adult attention-deficit/hyperactivity disorder symptoms, perceived stress, and well-being: The role of early maladaptive schemata. *Journal of Nervous and Mental Disease*, 204, 364–369. <http://dx.doi.org/10.1097/NMD.0000000000000472>
- Mitchell, J. T., Benson, J. W., Knouse, L. E., Kimbrel, N. A., & Anastopoulos, A. D. (2013). Are negative automatic thoughts associated with ADHD in adulthood? *Cognitive Therapy and Research*, 37, 851–859. <http://dx.doi.org/10.1007/s10608-013-9525-4>
- Mitchell, J. T., McIntyre, E. M., English, J. S., Dennis, M. F., Beckham, J. C., & Kollins, S. H. (2017). A pilot trial of mindfulness meditation training for ADHD in adulthood: Impact on core symptoms, executive functioning, and emotion dysregulation. *Journal of Attention Disorders*, 21, 1105–1120. <http://dx.doi.org/10.1177/1087054713513328>
- Mitchell, J. T., Nelson-Gray, R. O., & Anastopoulos, A. D. (2008). Adapting an emerging empirically supported cognitive-behavioral therapy for adults with ADHD and comorbid complications: An example of two case studies. *Clinical Case Studies*, 7, 423–448. <http://dx.doi.org/10.1177/1534650108316934>
- Mitchell, J. T., Sibley, M. H., Hinshaw, S. P., Kennedy, T. M., Chronis-Tuscano, A., Arnold, L. E., . . . Jensen, P. S. (2019). A qualitative analysis of contextual factors relevant to suspected late-onset ADHD. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054719837743>
- Mitchell, J. T., Sweitzer, M. M., Tunno, A. M., Kollins, S. H., & McClernon, F. J. (2016). “I use weed for my ADHD”: A qualitative analysis of online forum discussions on cannabis use and ADHD. *PLoS ONE*, 11(5), e0156614. <http://dx.doi.org/10.1371/journal.pone.0156614>
- Moffitt, T. E., Houts, R., Asherson, P., Belsky, D. W., Corcoran, D. L., Hammerle, M., . . . Caspi, A. (2015). Is adult ADHD a childhood-onset neurodevelopmental disorder? Evidence from a four-decade longitudinal cohort study. *The American Journal of Psychiatry*, 172, 967–977. <http://dx.doi.org/10.1176/appi.ajp.2015.14101266>
- Mongia, M., & Hechtman, L. (2012). Cognitive behavior therapy for adults with attention-deficit/hyperactivity disorder: A review of recent randomized controlled trials. *Current Psychiatry Reports*, 14, 561–567. <http://dx.doi.org/10.1007/s11920-012-0303-x>
- Moriyama, T. S., Polanczyk, G. V., Terzi, F. S., Faria, K. M., & Rohde, L. A. (2013). Psychopharmacology and psychotherapy for the treatment of adults with ADHD: A systematic review of available meta-analyses. *CNS Spectrums*, 18, 296–306. <http://dx.doi.org/10.1017/S109285291300031X>
- MTA Cooperative Group. (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. *Archives of General Psychiatry*, 56, 1073–1086. <http://dx.doi.org/10.1001/archpsyc.56.12.1073>
- Neuman, R. J., Lobos, E., Reich, W., Henderson, C. A., Sun, L. W., & Todd, R. D. (2007). Prenatal smoking exposure and dopaminergic genotypes interact to cause a severe ADHD subtype. *Biological Psychiatry*, 61, 1320–1328. <http://dx.doi.org/10.1016/j.biopsych.2006.08.049>

- Newark, P. E., Elsässer, M., & Stieglitz, R. D. (2016). Self-esteem, self-efficacy, and resources in adults with ADHD. *Journal of Attention Disorders*, 20, 279–290. <http://dx.doi.org/10.1177/1087054712459561>
- Nigg, J. T. (2013). Attention-deficit/hyperactivity disorder and adverse health outcomes. *Clinical Psychology Review*, 33, 215–228. <http://dx.doi.org/10.1016/j.cpr.2012.11.005>
- Nigg, J. T. (2018a). *Getting ahead of ADHD*. New York, NY: Guilford Press.
- Nigg, J. T. (2018b). Toward an emerging paradigm for understanding attention-deficit/hyperactivity disorder and other neurodevelopmental, mental, and behavioral disorders: Environmental risks and epigenetic associations. *JAMA Pediatrics*, 172, 619–621. <http://dx.doi.org/10.1001/jamapediatrics.2018.0920>
- Notzon, D. P., Pavlicova, M., Glass, A., Mariani, J. J., Mahony, A. L., Brooks, D. J., & Levin, F. R. (2016). ADHD is highly prevalent in patients seeking treatment for cannabis use disorders. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054716640109>
- Oddo, L. E., Knouse, L. E., Surman, C. B. H., & Safren, S. A. (2018). Investigating resilience to depression in adults with ADHD. *Journal of Attention Disorders*, 22, 497–505. <http://dx.doi.org/10.1177/1087054716636937>
- Oettingen, G. (2014). *Rethinking positive thinking: Inside the new science of motivation*. New York, NY: Penguin.
- Oettingen, G., & Cachia, J. Y. A. (2016). Problems with positive thinking and how to overcome them. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (3rd ed., pp. 547–570). New York, NY: Guilford Press.
- Parker, D. R., Hoffman, S. F., Sawilowsky, S., & Rolands, L. (2011). An examination of the effects of ADHD coaching on university students' executive functioning. *Journal of Postsecondary Education and Disability*, 24, 115–132.
- *Pera, G., & Robin, A. L. (Eds.). (2016). *Adult ADHD-focused couple therapy: Clinical interventions*. New York, NY: Routledge. <http://dx.doi.org/10.4324/9780203069653>
- Peterson, E., & Welsh, M. C. (2014). The development of hot and cool executive functions in childhood and adolescence: Are we getting warmer? In S. Goldstein & J. A. Naglieri (Eds.), *Handbook of executive functioning* (pp. 45–65). New York, NY: Springer. http://dx.doi.org/10.1007/978-1-4614-8106-5_4
- Philipsen, A., Jans, T., Graf, E., Matthies, S., Borel, P., Colla, M., . . . Tebartz van Elst, L. (2015). Effects of group psychotherapy, individual counseling, methylphenidate, and placebo in the treatment of adult attention-deficit/hyperactivity disorder: A randomized clinical trial. *JAMA Psychiatry*, 72, 1199–1210. <http://dx.doi.org/10.1001/jamapsychiatry.2015.2146>
- Philipsen, A., Lam, A. P., Breit, S., Lücke, C., Müller, H. H., & Matthies, S. (2017). Early maladaptive schemas in adult patients with attention-deficit/hyperactivity disorder. *Attention Deficit and Hyperactivity Disorders*, 9, 101–111. <http://dx.doi.org/10.1007/s12402-016-0211-8>
- Pinker, S. (2007). *The stuff of thought: Language as a window into human nature*. New York, NY: Penguin.
- Polanczyk, G., Caspi, A., Houts, R., Kollins, S. H., Rohde, L. A., & Moffitt, T. E. (2010). Implications of extending the ADHD age-of-onset criterion to age 12: Results from a prospectively studied birth

- cohort. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49, 210–216. <http://dx.doi.org/10.1097/00004583-201003000-00004>
- Polanczyk, G., de Lima, M. S., Horta, B. L., Biederman, J., & Rohde, L. A. (2007). The worldwide prevalence of ADHD: A systematic review and metaregression analysis. *The American Journal of Psychiatry*, 164, 942–948. <http://dx.doi.org/10.1176/ajp.2007.164.6.942>
- *Prevatt, F., & Levrini, A. (2015). *ADHD coaching: A guide for mental health professionals*. Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/14671-000>
- Prince, J. B., Wilens, T. E., Spencer, T. J., & Biederman, J. (2015). Pharmacotherapy of ADHD in adults. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis & treatment* (4th ed., pp. 826–860). New York, NY: Guilford Press.
- Proal, E., Reiss, P. T., Klein, R. G., Mannuzza, S., Gotimer, K., Ramos-Olazagasti, M. A., . . . Castellanos, F. X. (2011). Brain gray matter deficits at 33-year follow-up in adults with attention-deficit/hyperactivity disorder established in childhood. *Archives of General Psychiatry*, 68, 1122–1134. <http://dx.doi.org/10.1001/archgenpsychiatry.2011.117>
- Puente, A. N., & Mitchell, J. T. (2016). Cognitive-behavioral therapy for adult ADHD: A case study of multimethod assessment of executive functioning in clinical practice and manualized treatment adaptation. *Clinical Case Studies*, 15, 198–211. <http://dx.doi.org/10.1177/1534650115614098>
- Purper-Ouakil, D., Ramoz, N., Lepagnol-Bestel, A.-M., Gorwood, P., & Simonneau, M. (2011). Neurobiology of attention deficit/hyperactivity disorder. *Pediatric Research*, 69, 69R–76R. <http://dx.doi.org/10.1203/PDR.0b013e318212b40f>
- Ramsay, J. R. (2010a). CBT for adult ADHD: Adaptations and hypothesized mechanisms of change. *Journal of Cognitive Psychotherapy*, 24, 37–45. <http://dx.doi.org/10.1891/0889-8391.24.1.37>
- Ramsay, J. R. (2010b). *Nonmedication treatments for adult ADHD: Evaluating impact on daily functioning and well-being*. Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/12056-000>
- Ramsay, J. R. (2011a). Cognitive behavioral therapy for adult ADHD: Case study and commentary. *Journal of Clinical Outcomes Management*, 18, 526–536.
- Ramsay, J. R. (2011b). Cognitive behavioral therapy, invisible fences, and adult ADHD. *Attention*, 18(6), 14–17.
- Ramsay, J. R. (2012). “Without a net”: CBT without medications for an adult with ADHD. *Clinical Case Studies*, 11, 48–65. <http://dx.doi.org/10.1177/1534650112440741>
- Ramsay, J. R. (2015). Psychological assessment of adults. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed., pp. 475–500). New York, NY: Guilford Press.
- Ramsay, J. R. (2016a). CBT for ADHD-affected couples. In G. Pera & A. Robin (Eds.), *Adult ADHD-focused couple therapy* (pp. 77–98). New York, NY: Routledge.
- Ramsay, J. R. (2016b). “Turning intentions into actions”: CBT for adult ADHD focused on implementation. *Clinical Case Studies*, 15, 179–197. <http://dx.doi.org/10.1177/1534650115611483>
- Ramsay, J. R. (2017a). Assessment and monitoring of treatment response in adult ADHD patients: Current perspectives. *Neuropsychiatric Disease and Treatment*, 13, 221–232. <http://dx.doi.org/10.2147/NDT.S104706>

- Ramsay, J. R. (2017b). The relevance of cognitive distortions in the psychosocial treatment of adult ADHD. *Professional Psychology: Research and Practice*, 48, 62–69. <http://dx.doi.org/10.1037/pro0000101>
- Ramsay, J. R., Rosenfield, B. M., & Harris, L. H. (2011). Assessment of psychiatric status and personality qualities. In S. Goldstein, J. A. Naglieri, & M. DeVries (Eds.), *Learning and attention disorders in adolescence and adulthood: Assessment and treatment* (2nd ed., pp. 189–207). Hoboken, NJ: Wiley.
- Ramsay, J. R., & Rostain, A. L. (2003). A cognitive therapy approach for adult attention-deficit/hyperactivity disorder. *Journal of Cognitive Psychotherapy*, 17, 319–334. <http://dx.doi.org/10.1891/jcop.17.4.319.52537>
- Ramsay, J. R., & Rostain, A. L. (2005a). Adapting psychotherapy to meet the needs of adults with attention-deficit/hyperactivity disorder. *Psychotherapy: Theory, Research, Practice, Training*, 42, 72–84. <http://dx.doi.org/10.1037/0033-3204.42.1.72>
- Ramsay, J. R., & Rostain, A. L. (2005b). Girl, repeatedly interrupted: The case of a young adult woman with ADHD. *Clinical Case Studies*, 4, 329–346. <http://dx.doi.org/10.1177/1534650103259741>
- Ramsay, J. R., & Rostain, A. L. (2006). Cognitive behavior therapy for college students with attention-deficit/hyperactivity disorder. *Journal of College Student Psychotherapy*, 21, 3–20. http://dx.doi.org/10.1300/J035v21n01_02
- *Ramsay, J. R., & Rostain, A. L. (2008). *Cognitive behavioral therapy for adult ADHD: An integrative psychosocial and medical approach*. New York, NY: Routledge.
- Ramsay, J. R., & Rostain, A. L. (2011). CBT without medications for adult ADHD: An open pilot study of five patients. *Journal of Cognitive Psychotherapy*, 25, 277–286. <http://dx.doi.org/10.1891/0889-8391.25.4.277>
- *Ramsay, J. R., & Rostain, A. L. (2015a). *The adult ADHD tool kit: Using CBT to facilitate coping inside and out*. New York, NY: Routledge.
- *Ramsay, J. R., & Rostain, A. L. (2015b). *Cognitive behavioral therapy for adult ADHD: An integrative psychosocial and medical approach* (2nd ed.). New York, NY: Routledge.
- Ramsay, J. R., & Rostain, A. L. (2016a). Adult attention-deficit/hyperactivity disorder as an implementation problem: Clinical significance, underlying mechanisms, and psychosocial treatment. *Practice Innovations*, 1, 36–52. <http://dx.doi.org/10.1037/pri0000016>
- Ramsay, J. R., & Rostain, A. L. (2016b). College students with ADHD. In L. A. Adler, T. J. Spencer, & T. E. Wilens (Eds.), *Attention-deficit/hyperactivity disorder in adults and children* (pp. 366–377). Cambridge, England: Cambridge University Press.
- Robbins, M. (2017). *The 5-second rule: Transform your life, work, and confidence with everyday courage*. Brentwood, TN: Savio Republic.
- Robin, A. L., Tzelepis, A., & Bedway, M. (2008). A cluster analysis of personality style in adults with ADHD. *Journal of Attention Disorders*, 12, 254–263. <http://dx.doi.org/10.1177/1087054708316252>
- Rogers, D. C., Dittner, A. J., Rimes, K. A., & Chalder, T. (2017). Fatigue in an adult attention deficit hyperactivity disorder population: A trans-diagnostic approach. *British Journal of Clinical Psychology*, 56, 33–52. <http://dx.doi.org/10.1111/bjc.12119>

- Rosen, G. M., & Davison, G. C. (2003). Psychology should list empirically supported principles of change (ESPs) and not credential trademarked therapies or other treatment packages. *Behavior Modification*, 27, 300–312. <http://dx.doi.org/10.1177/0145445503027003003>
- Rosenfield, B., Ramsay, J. R., & Rostain, A. L. (2008). Extreme makeover: The case of a young adult man with severe attention-deficit/hyperactivity disorder. *Clinical Case Studies*, 7, 471–490. <http://dx.doi.org/10.1177/1534650108319912>
- Rostain, A. L., & Ramsay, J. R. (2006). A combined treatment approach for adults with ADHD—Results of an open study of 43 patients. *Journal of Attention Disorders*, 10, 150–159. <http://dx.doi.org/10.1177/1087054706288110>
- Saffer, B. Y., & Klonsky, E. D. (2017). The relationship of self-reported executive functioning to suicide ideation and attempts: Findings from a large U.S.-based online sample. *Archives of Suicide Research*, 21, 577–594. <http://dx.doi.org/10.1080/13811118.2016.1211042>
- Safren, S. A., Otto, M. W., Sprich, S., Winett, C. L., Wilens, T. E., & Biederman, J. (2005). Cognitive-behavioral therapy for ADHD in medication-treated adults with continued symptoms. *Behaviour Research and Therapy*, 43, 831–842. <http://dx.doi.org/10.1016/j.brat.2004.07.001>
- *Safren, S. A., Perlman, C. A., Sprich, S., & Otto, M. W. (2005). *Mastering your adult ADHD: A cognitive-behavioral treatment program—Therapist guide*. Oxford, England: Oxford University Press.
- Safren, S. A., Sprich, S., Mimiaga, M. J., Surman, C., Knouse, L., Groves, M., & Otto, M. W. (2010). Cognitive behavioral therapy vs relaxation with educational support for medication-treated adults with ADHD and persistent symptoms: A randomized controlled trial. *JAMA*, 304, 875–880. <http://dx.doi.org/10.1001/jama.2010.1192>
- *Safren, S. A., Sprich, S., Perlman, C. A., & Otto, M. W. (2017a). *Mastering your adult ADHD: A cognitive-behavioral treatment program—Client workbook* (2nd ed.). Oxford, England: Oxford University Press.
- *Safren, S. A., Sprich, S., Perlman, C. A., & Otto, M. W. (2017b). *Mastering your adult ADHD: A cognitive-behavioral treatment program—Therapist guide* (2nd ed.). Oxford, England: Oxford University Press.
- Salvatore, T., Dodson, K. D., Kivisalu, T. M., Harr, D., Gilbert, B., & Brown, J. (2018). Suicide risks and adults with ADHD. *Forensic Mental Health Practitioner*, 1(1). Retrieved from <https://www.aiafs.com/forensic-mental-health-practitioner.asp>
- Sapolsky, R. M. (2017). *Behave: The biology of humans at our best and worst*. New York, NY: Penguin.
- Sedgwick, J. A., Merwood, A., & Asherson, P. (2019). The positive aspects of attention deficit hyperactivity disorder: A qualitative investigation of successful adults with ADHD. *ADHD Attention Deficit and Hyperactivity Disorders*, 11, 241–253. <http://dx.doi.org/10.1007/s12402-018-0277-6>
- Serine, A. D., Rosenfield, B., DiTomaso, R. A., Collins, J. M., Rostain, A. L., & Ramsay, J. R. (2019). *Of deficits and distortions: The relationship between cognitive distortions and ADHD after accounting for personality pathology, depression, and anxiety*. Manuscript submitted for publication.

- Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J. P., Greenstein, D., . . . Rapoport, J. L. (2007). Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation. *Proceedings of the National Academy of Sciences*, *104*, 19649–19654. <http://dx.doi.org/10.1073/pnas.0707741104>
- Shaw, P., Ishii-Takahashi, A., Park, M. T., Devenyi, G. A., Zibman, C., Kasperek, S., . . . White, T. (2018). A multicohort, longitudinal study of cerebellar development in attention deficit hyperactivity disorder. *Journal of Child Psychology and Psychiatry*, *59*, 1114–1123. <http://dx.doi.org/10.1111/jcpp.12920>
- Shaw, P., Malek, M., Watson, B., Sharp, W., Evans, A., & Greenstein, D. (2012). Development of cortical surface area and gyrification in attention-deficit/hyperactivity disorder. *Biological Psychiatry*, *72*, 191–197. <http://dx.doi.org/10.1016/j.biopsych.2012.01.031>
- Sibley, M. H., Altszuler, A. R., Ross, J. M., Sanchez, F., Pelham, W. E., Jr., & Gnagy, E. M. (2014). A parent-teen collaborative treatment model for academically impaired high school students with ADHD. *Cognitive and Behavioral Practice*, *21*, 32–42. <http://dx.doi.org/10.1016/j.cbpra.2013.06.003>
- Sibley, M. H., Mitchell, J. T., & Becker, S. P. (2016). Method of adult diagnosis influences estimated persistence of childhood ADHD: A systematic review of longitudinal studies. *The Lancet Psychiatry*, *3*, 1157–1165. [http://dx.doi.org/10.1016/S2215-0366\(16\)30190-0](http://dx.doi.org/10.1016/S2215-0366(16)30190-0)
- Sibley, M. H., Rohde, L. A., Swanson, J. M., Hechtman, L. T., Molina, B. S. G., Mitchell, J. T., . . . Stehli, A. (2018). Late-onset ADHD reconsidered with comprehensive repeated assessments between ages 10 and 25. *The American Journal of Psychiatry*, *175*, 140–149. <http://dx.doi.org/10.1176/appi.ajp.2017.17030298>
- Sidlauskaitė, J., Sonuga-Barke, E., Roeyers, H., & Wiersma, J. R. (2016). Altered intrinsic organisation of brain networks implicated in attentional processes in adult attention-deficit/hyperactivity disorder: A resting-state study of attention, default mode and salience network connectivity. *European Archives of Psychiatry and Clinical Neuroscience*, *266*, 349–357. <http://dx.doi.org/10.1007/s00406-015-0630-0>
- Silberstein, R. B., Pipingas, A., Farrow, M., Levy, F., & Stough, C. K. (2016). Dopaminergic modulation of default mode network brain functional connectivity in attention deficit hyperactivity disorder. *Brain and Behavior*, *6*, e00582. <http://dx.doi.org/10.1002/brb3.582>
- Silverstein, M. J., Faraone, S. V., Leon, T. L., Biederman, J., Spencer, T. J., & Adler, L. A. (2018). The relationship between executive function deficits and DSM–5-defined ADHD symptoms. *Journal of Attention Disorders*. Advance online publication. <http://dx.doi.org/10.1177/1087054718804347>
- Skinner, B. F. (1957). *Verbal behavior*. New York, NY: Appleton-Century-Crofts. <http://dx.doi.org/10.1037/11256-000>
- Skinner, B. F. (1981). Selection by consequences. *Science*, *213*(4507), 501–504. <http://dx.doi.org/10.1126/science.7244649>
- Smidt, K. E., & Suvak, M. K. (2015). A brief, but nuanced, review of emotional granularity and emotion differentiation research. *Current Opinion in Psychology*, *3*, 48–51. <http://dx.doi.org/10.1016/j.copsyc.2015.02.007>

- *Solanto, M. V. (2011). *Cognitive behavioral therapy for adult ADHD: Targeting executive dysfunction*. New York, NY: Guilford Press.
- Solanto, M. V., Marks, D. J., Wasserstein, J., Mitchell, K., Abikoff, H., Alvir, J. M. J., & Kofman, M. D. (2010). Efficacy of meta-cognitive therapy for adult ADHD. *The American Journal of Psychiatry*, 167, 958–968. <http://dx.doi.org/10.1176/appi.ajp.2009.09081123>
- Solheim, B., Olsen, A., Kallestad, H., Langsrud, K., Bjorvatn, B., Gradisar, M., & Sand, T. (2018). Cognitive performance in DSWPD patients upon awakening from habitual sleep compared with forced conventional sleep. *Journal of Sleep Research*, 2018, e12730. <http://dx.doi.org/10.1111/jsr.12730>
- Sonuga-Barke, E. J. S. (2010). Disambiguating inhibitory dysfunction in attention-deficit/hyperactivity disorder: Toward the decomposition of developmental brain phenotypes. *Biological Psychiatry*, 67, 599–601. <http://dx.doi.org/10.1016/j.biopsych.2010.01.017>
- Sonuga-Barke, E. J. S. (2011). Editorial: ADHD as a reinforcement disorder—Moving from general effects to identifying (six) specific models to test. *Journal of Child Psychology and Psychiatry*, 52, 917–918. <http://dx.doi.org/10.1111/j.1469-7610.2011.02444.x>
- Sonuga-Barke, E. J. S., & Castellanos, F. X. (2007). Spontaneous attentional fluctuations in impaired states and pathological conditions: A neurobiological hypothesis. *Neuroscience and Biobehavioral Reviews*, 31, 977–986. <http://dx.doi.org/10.1016/j.neubiorev.2007.02.005>
- Sprich, S. E., Burbridge, J., Lerner, J. A., & Safren, S. A. (2015). Cognitive-behavioral therapy for ADHD in adolescents: Clinical considerations and a case series. *Cognitive and Behavioral Practice*, 22, 116–126. <http://dx.doi.org/10.1016/j.cbpra.2015.01.001>
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133, 65–94. <http://dx.doi.org/10.1037/0033-2909.133.1.65>
- Steel, P. (2011). *The procrastination equation*. New York, NY: Harper Collins.
- Strohmeier, C. W., Rosenfield, B., DiTomasso, R. A., & Ramsay, J. R. (2016). Assessment of the relationship between self-reported cognitive distortions and adult ADHD, anxiety, depression, and hopelessness. *Psychiatry Research*, 238, 153–158. <http://dx.doi.org/10.1016/j.psychres.2016.02.034>
- Suri, G., & Gross, J. J. (2015). The role of attention in motivated behavior. *Journal of Experimental Psychology: General*, 144, 864–872. <http://dx.doi.org/10.1037/xge0000088>
- Taleb, N. N. (2012). *Antifragile: Things that gain from disorder*. New York, NY: Random House.
- Tamm, L., Epstein, J. N., Lisdahl, K. M., Molina, B., Tapert, S., Hinshaw, S. P., . . . Swanson, J. M. (2013). Impact of ADHD and cannabis use on executive functioning in young adults. *Drug and Alcohol Dependence*, 133, 607–614. <http://dx.doi.org/10.1016/j.drugalcdep.2013.08.001>
- Tassi, P., & Muzet, A. (2000). Sleep inertia. *Sleep Medicine Reviews*, 4, 341–353. <http://dx.doi.org/10.1053/smr.2000.0098>
- Taylor, M. R., Boden, J. M., & Rucklidge, J. J. (2014). The relationship between ADHD symptomatology and self-harm, suicidal ideation, and suicidal behaviours in adults: A pilot study. *ADHD Attention Deficit and Hyperactivity Disorders*, 6, 303–312. <http://dx.doi.org/10.1007/s12402-014-0139-9>

- Torrente, F., López, P., Alvarez Prado, D., Kichic, R., Cetkovich-Bakmas, M., Lischinsky, A., & Manes, F. (2014). Dysfunctional cognitions and their emotional, behavioral, and functional correlates in adults with attention deficit hyperactivity disorder (ADHD): Is the cognitive-behavioral model valid? *Journal of Attention Disorders*, 18, 412–424. <http://dx.doi.org/10.1177/1087054712443153>
- Tsermentseli, S., & Poland, S. (2016). Cool versus hot executive function: A new approach to executive function. *Encephalos: Archives of Neurology and Psychiatry*, 53, 11–14.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453–458. <http://dx.doi.org/10.1126/science.7455683>
- Upadhyaya, H. P., & Carpenter, M. J. (2008). Is attention-deficit/hyperactivity disorder (ADHD) symptom severity associated with tobacco use? *The American Journal on Addictions*, 17, 195–198. <http://dx.doi.org/10.1080/10550490802021937>
- Utevsky, A. V., Smith, D. V., & Huettel, S. A. (2014). Precuneus is a functional core of the default-mode network. *The Journal of Neuroscience*, 34, 932–940. <http://dx.doi.org/10.1523/JNEUROSCI.4227-13.2014>
- Van Eck, K., Ballard, E., Hart, S., Newcomer, A., Musci, R., & Flory, K. (2015). ADHD and suicidal ideation: The roles of emotion regulation and depressive symptoms among college students. *Journal of Attention Disorders*, 19, 703–714. <http://dx.doi.org/10.1177/1087054713518238>
- van Emmerik-van Oortmerssen, K., van de Glind, G., van den Brink, W., Smit, F., Crunelle, C. L., Swets, M., & Schoevers, R. A. (2012). Prevalence of attention-deficit/hyperactivity disorder in substance use disorder patients: A meta-analysis and meta-regression analysis. *Drug and Alcohol Dependence*, 122, 11–19. <http://dx.doi.org/10.1016/j.drugalcdep.2011.12.007>
- Vidal, R., Bosch, R., Nogueira, M., Gómez-Barros, N., Valero, S., Palomar, G., . . . Ramos-Quiroga, J. A. (2013). Psychoeducation for adults with attention-deficit/hyperactivity disorder vs. cognitive behavioral group therapy: A randomized controlled pilot study. *Journal of Nervous and Mental Disease*, 201, 894–900. <http://dx.doi.org/10.1097/NMD.0b013e3182a5c2c5>
- Vine, V., Bernstein, E. E., & Nolen-Hoeksema, S. (2019). Less is more? Effects of exhaustive vs. minimal emotion labelling on emotion regulation strategy planning. *Cognition and Emotion*, 33, 855–862. <http://dx.doi.org/10.1080/02699931.2018.1486286>
- Virta, M., Salakari, A., Anttila, M., Chydenius, E., Partinen, M., Kaski, M., . . . Iivanainen, M. (2010). Short cognitive behavioral therapy and cognitive training for adults with ADHD—A randomized controlled pilot study. *Neuropsychiatric Disease and Treatment*, 6, 443–453. <http://dx.doi.org/10.2147/NDT.S11743>
- *Virta, M., Salakari, A., Vataja, R., Chydenius, E., Heikkilä, M., Partinen, M., . . . Iivanainen, M. (2009). *AD/HD-aikuisten psykologinen yksilökuntoutus—Psykologin käsikirja* [Rehabilitation for adults with ADHD—Manual]. Espoo, Finland: Rinnekoti-Säätiö.
- Visser, S. N., Danielson, M. L., Bitsko, R. H., Holbrook, J. R., Kogan, M. D., Ghandour, R. M., . . . Blumberg, S. J. (2014). Trends in the parent-report of health care provider-diagnosed and medicated attention-deficit/hyperactivity disorder: United States, 2003–2011. *Journal of the American Academy of Child & Adolescent Psychiatry*, 53, 34–46. <http://dx.doi.org/10.1016/j.jaac.2013.09.001>

- Vohs, K. D., & Baumeister, R. F. (Eds.). (2016). *Handbook of self-regulation: Research, theory, and applications*. New York, NY: Guilford Press.
- Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. B. (2014). Adverse health effects of marijuana use. *The New England Journal of Medicine*, 370, 2219–2227. <http://dx.doi.org/10.1056/NEJMr1402309>
- Volkow, N. D., & Swanson, J. M. (2013). Clinical practice: Adult attention-deficit/hyperactivity disorder. *The New England Journal of Medicine*, 369, 1935–1944. <http://dx.doi.org/10.1056/NEJMc1212625>
- Volkow, N. D., Wang, G. J., Kollins, S. H., Wigal, T. L., Newcorn, J. H., Telang, F., . . . Swanson, J. M. (2009). Evaluating dopamine reward pathway in ADHD: Clinical implications. *JAMA*, 302, 1084–1091. <http://dx.doi.org/10.1001/jama.2009.1308>
- Volkow, N. D., Wang, G. J., Newcorn, J. H., Kollins, S. H., Wigal, T. L., Telang, F., . . . Swanson, J. M. (2011). Motivation deficit in ADHD is associated with dysfunction of the dopamine reward pathway. *Molecular Psychiatry*, 16, 1147–1154. <http://dx.doi.org/10.1038/mp.2010.97>
- Wang, X., Cao, Q., Wang, J., Wu, Z., Wang, P., Sun, L., . . . Wang, Y. (2016). The effects of cognitive-behavioral therapy on intrinsic functional brain networks in adults with attention-deficit/hyperactivity disorder. *Behaviour Research and Therapy*, 76, 32–39. <http://dx.doi.org/10.1016/j.brat.2015.11.003>
- Weintraub, J. (Producer), & Avildsen, J. G. (Director). (1984). *The Karate Kid* [Motion picture]. United States: Columbia Pictures.
- Weiss, M., Murray, C., Wasdell, M., Greenfield, B., Giles, L., & Hechtman, L. (2012). A randomized controlled trial of CBT therapy for adults with ADHD with and without medication. *BMC Psychiatry*, 12, 30. <http://dx.doi.org/10.1186/1471-244X-12-30>
- Wenzel, A. (2019). *Cognitive behavioral therapy for beginners: An experiential learning approach*. New York, NY: Routledge. <http://dx.doi.org/10.4324/9781315651958>
- Willcutt, E. G. (2015). Theories of ADHD. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed., pp. 391–404). New York, NY: Guilford Press.
- *Willer, J. (2017). *Could it be adult ADHD? A clinician's guide to recognition, assessment, and treatment*. New York, NY: Oxford University Press. <http://dx.doi.org/10.1093/medpsych/9780190256319.001.0001>
- Wood, B., Rea, M. S., Plitnick, B., & Figueiro, M. G. (2013). Light level and duration of exposure determine the impact of self-luminous tablets on melatonin suppression. *Applied Ergonomics*, 44, 237–240. <http://dx.doi.org/10.1016/j.apergo.2012.07.008>
- World Health Organization. (2018). *International statistical classification of diseases and related health problems* (11th ed.). Geneva, Switzerland: Author.
- Yen, J. Y., Liu, T. L., Wang, P. W., Chen, C. S., Yen, C. F., & Ko, C. H. (2017). Association between Internet gaming disorder and adult attention-deficit/hyperactivity disorder and their correlates: Impulsivity and hostility. *Addictive Behaviors*, 64, 308–313. <http://dx.doi.org/10.1016/j.addbeh.2016.04.024>
- Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach* (3rd ed.). Sarasota, FL: Professional Resource Press.

- Young, J. L. (2013). Chronic fatigue syndrome: Three cases and a discussion of the natural history of attention-deficit/hyperactivity disorder. *Postgraduate Medicine*, 125, 162–168.
<http://dx.doi.org/10.3810/pgm.2013.01.2631>
- *Young, S., & Bramham, J. (2012). *Cognitive-behavioural therapy for ADHD in adolescents and adults: A psychological guide to practice* (2nd ed.). West Sussex, England: Wiley.
<http://dx.doi.org/10.1002/9781119943440>
- *Zylowska, L. (2012). *The mindfulness prescription for adult ADHD*. Boston, MA: Trumpeter.

*Denotes cognitive behavior therapy manual, patient guidebook, or useful clinical guide for adult attention-deficit/hyperactivity disorder.

ABOUT THE AUTHOR

J. Russell (“Russ”) Ramsay, PhD, is a licensed psychologist and associate professor of clinical psychology in psychiatry at the University of Pennsylvania Perelman School of Medicine. In addition to continuing to work as a senior staff clinician at the Center for Cognitive Therapy, in 1999 he cofounded and still serves as the codirector of Penn Medicine’s Adult Attention-Deficit/Hyperactivity Disorder (ADHD) Treatment and Research Program. Dr. Ramsay also has authored numerous professional articles and book chapters and has lectured internationally on various issues related to adult ADHD as well as the principles of cognitive behavior therapy. Follow @cbt4adhd