CHAPTER 1

Why Exposure?

Decades of treatment research, fueled in large part by federal funding, has identified what specific treatments work for which psychological problems that people experience. Although the bulk of this work has focused on adults, there has been considerable progress in understanding which treatments work best for children and adolescents. We now have a scientific literature with more than 1,040 randomized controlled trials (RCTs) comparing treatments for child and adolescent mental health problems, with hundreds more open trials and single case studies.[1]

Some problems have received more of our scientific efforts than others. It will surprise few readers to learn that almost 20% of RCTs have focused on treating disruptive behavior disorders in children. The problem in second place is anxiety, with 166 RCTs. The battle for third place is a close one, with autism spectrum disorders (99 RCTs) edging out attention-deficit/hyperactivity disorder (98); depression (87), substance abuse (70), and traumatic stress (66) round out the top six.

Treating anxiety has been a major focus of treatment research for children and adolescents, outpacing studies of any problem except for disruptive behavior. As a result, we know quite a bit about treating anxiety in children. One big lesson is apparent: many studies support the idea that cognitive-behavioral therapy (CBT) is effective for treating anxiety. Setting the bar for success at either (1) two studies showing a treatment is superior to no treatment or (2) one study showing a treatment is superior to another active treatment, almost 90% of treatments that clear the bar are CBT. We have more than 75 RCTs that document the effectiveness of CBT for child anxiety. As a result, those in the field who work

[1]As of November 2018.

with anxious children may find knowing CBT is a benefit. Thankfully, there have been a number of excellent articles and books published to spread the word on CBT to those who might benefit from it (e.g., Bunge, Mandil, Consoli, & Gomar, 2017; Chorpita, 2007; Kendall, 2012).

I have chosen to focus on one behavioral element found in CBT programs: exposure. Let me take a few minutes to explain why. First, treatments are like recipes. A recipe includes a set of ingredients one needs to prepare a dish along with the instructions for how and when those ingredients are combined and prepared. Treatments are similar. They typically include specific strategies designed to be delivered in a particular order, at a particular dosage level, and in particular ways. With that cooking metaphor in mind, I turn to the ingredients of treatments that work for dealing with anxiety in children. Research by Bruce Chorpita and his colleagues reveals that over 87% of effective treatments include exposure (e.g., Higa-McMillan, Francis, Rith-Najarian, & Chorpita, 2016). These data do not tell us that exposure is the key ingredient; however, the near ubiquity of the technique suggests that it is an important one. Furthermore, when we inspect these studies more carefully, by diagnosis, we find that exposure is included in recipes across all of the anxiety disorders, from specific phobias to generalized anxiety disorder to panic disorder, as well as obsessive–compulsive disorder (OCD) and posttraumatic stress disorder (PTSD).

Exposure Is Deceptively Simple

That the ingredient of exposure is so prominent in effective treatments might alone be reason enough to consider a book devoted to exposure. However, there is more to consider. First, exposure is a strategy that is deceptively simple. In a nutshell, the exposure intervention posits that if you are afraid of something and it is not dangerous, then approaching and engaging with that something will reduce your fear of it. The intervention represents the application of basic and fundamental scientific findings related to how humans and other animals develop fears. The deceptive part of the technique is that despite how simply one can describe it, exposure is one of the more difficult therapeutic interventions to implement.

Why? Although subsequent chapters will make this clearer, let me offer a few preliminary points to keep in mind. First, the client who seeks treatment for a fear or anxiety has spent a lot of time being afraid and avoiding the feared stimuli. This means that there has been a history of that sneaky kind of learning you may remember from college

or graduate school: negative reinforcement. Avoidance leads to almost immediate anxiety reduction. As a result, our client has learned that avoidance works. Complicating this reality is the fact that the clients are children and adolescents. They do not usually consider themselves as having problematic levels of anxiety and many will have low motivation to participate in treatment. Furthermore, we can assume that the client has been able to convince most full-grown adults to permit them to avoid things they fear.[2] Our client might be missing school, or sleeping with a parent, or not engaging in any social interactions, and more. All this occurs with the tacit permission of most if not all of the adults in their life. How are you, a therapist, going to change all of that?

Further, exposure is a deceptively challenging intervention to deliver because it requires a variety of technical skills that are not obvious. For example, exposure requires repetition. It is not enough to expose a person to a feared situation one time. The one-off does not permit the sort of transformational change we are going for with exposure. To do exposure, clients have to experience the anxiety-provoking situation many times—so many times that they learn that the situation is not dangerous and that they can handle their anxiety in the situation. That repetition requires a therapist to have a high degree of self-discipline. Without repetition, the client only learns to white-knuckle through tough situations, using the grin-and-bear-it approach that will not likely lead to lasting behavioral changes.

Exposure also requires an accurate assessment of what I call the *drivers* for the fear. By drivers,[3] I mean what it is about the particular situation or stimulus that creates the fear or anxiety. Understanding the underlying drivers will maximize the potency of the exposures, whereas failing to do so can mean choosing exposure tasks that are irrelevant to a client. Let's take an example. Imagine we know that Leo[4] is afraid to eat in his school lunchroom. Without knowing *why* he is afraid (i.e., what factors *drive* the fear), we could stumble our way, trial-and-error style, through exposures such as asking him to observe others eat lunch

[2] A note on language: In the book, I have given careful thought to pronoun use. In specific case examples, though they are all changed and amalgamated, I used the pronoun preferred by the individuals in the example. For all other situations in which pronoun use was needed, I used the "they/them/their" to indicate a gender-neutral pronoun.

[3] I adopt this term from the work of Scott Henggeler and colleagues in their books on multisystemic therapy (e.g., Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009).

[4] All case material contained in this book is fictional, composite from multiple cases, or disguised.

in a lunchroom, eating lunch in simulated lunchrooms, and then eating in the client's actual lunchroom. But what if Leo's fears were related to the cleanliness of the tables? Or what if they were related to fearing social interactions in the lunchroom? You can easily see how a little more detail on *why* the client is afraid would lead to big shifts in what the exposure tasks looked like.

Hopefully I have established that exposure is a major ingredient in most effective treatments for anxiety and that exposure is a tough intervention to deliver. But wait, there's more!

Therapist Concerns about Exposure

Despite its well-established potency across multiple decades of study, exposure raises many concerns about using it among many therapists. I have conducted dozens of trainings around the world on CBT since the mid-1990s. Sometimes in these trainings, I solicit a top-10 list of reasons that folks are wary about using exposure. The reasons often include concerns that exposure will be harmful to the client, that exposing the client to feared stimuli is not helpful, or that the client will refuse to participate. There are survey data (e.g., Becker, Zayfert, & Anderson, 2004; Deacon et al., 2013) that suggest therapist concerns about exposure are common and interfere with therapists' willingness to learn and/or use the intervention, despite knowing that it has a strong evidence base. As a result, another reason to dedicate a book to exposure is to coax more child and adolescent therapists to consider using the technique despite their concerns.

A book that focuses solely on exposure has a lot of boxes to check. It must provide clear instructions for how to plan and deliver exposure interventions. It must do so across a number of different problem types, diagnostic categories, and feared stimuli. It must also clarify for which problems exposure is appropriate and for which it is *not* appropriate. Finally, a book on exposure must anticipate and address concerns that the reader may bring to the book about the intervention. My goal for this book is to check all those boxes. I hope that, in the end, you will agree that I did.

For Which Clients and Anxieties Is Exposure Appropriate?

For whom is exposure appropriate? This book was written with children and adolescent clients in mind, roughly ages 5–18, and their families.

My experience with this population is extensive. I also have experience with adult populations, though I do not focus on those experiences in this book. There are some excellent books for using exposure with adults (e.g., Abramowitz, Deacon, & Whiteside, 2019; Barlow, 2014). Even limiting the focus to children and adolescents creates some practical challenges because there is great developmental variability from age 5 to age 18. As a result, throughout the book, I will attempt to make clear how one might adapt a particular strategy to fit the age of the child.

For which fears and anxieties should one use exposure? There is a simple answer to this question: exposure is appropriate if a client is afraid of something and the following criteria are met:

1. It is *not* dangerous.

AND

2. Approaching or engaging with the stimulus/situation may be any or all of the following:
   a. Necessary/required
   b. Helpful or beneficial

AND/OR

3. The fear and/or avoidance of the stimulus/situation is interfering with optimal functioning.

If criterion 1 is not met or either or both of criteria 2 and 3 are not met, then exposure is not likely to be the right approach. If criterion 1 and either or both of 2 and 3 are met, then *game on*. Let me provide a few examples.

Riding an elevator to the 25th floor is not dangerous. Yes—sometimes elevators get stuck. But there are very few elevator-related fatalities. Recent data suggested that there are about 18 billion (that's 12 zeros!) elevator trips annually in the United States; these trips result in fewer than 30 deaths annually. Your chances of winning the lottery are 1,000 times better. Elevator rides can also be necessary or helpful. I know: stairs are good for our health. However, 25 floors of them may not always be convenient and avoiding the elevator may lead to being late to an appointment as well as missing out on lots of interesting opportunities only found on high floors of buildings. Thus, fear of elevators is a legitimate focus for exposure.

Consider a dramatic alternative: being shot by a firearm. Being shot (or even shot at) creates *a lot* of justifiable fear. Being shot is dangerous. In some neighborhoods and schools there is the possibility of gunfire. For almost all people, being shot is something they strive to avoid, and

for good reason. A similar example would be the experience of childhood physical abuse. This is also a true danger situation. Neither of these life examples are appropriate targets for exposure therapy. Instead, I would recommend safety planning, self-defense training, problem solving, and crisis management as possibly useful interventions.

Let's pause a moment, though, and consider a person who was shot or abused in the past. We know that those acts (being shot or abused) do not meet our criteria as a legitimate focus for exposure. However, what about the *memory* of being shot or abused? That is a more perplexing question and one that we regularly encounter in clinical practice. Let's walk through the criteria.

1. Are the memories dangerous? They are definitely painful, distressing, and upsetting. Few of us look forward to remembering such events and many of us will work hard to avoid such memories. However, is the memory itself dangerous? The answer is no. The memory itself will hurt emotionally but cannot harm you like the actual event did.
2. Is remembering the memory necessary and/or will it be helpful? The answer here is probably yes. Many of us get stuck avoiding thinking about these painful memories and cannot move forward as a result.
3. Finally, avoiding the memory often creates problems and interference, especially when some of the memories about the event are distorted. For example, a person may avoid many situations in life to reduce the chance of thinking about or recalling the traumatic event, thereby missing out on important opportunities.

Checking all three criteria as *yes,* we can conclude that memories of having been the victim of gun violence or of child abuse are good targets for exposure.

Most examples are not quite this obvious. Take social interactions. Sometimes, social interactions are painful experiences. People can be real jerks sometimes. Rarely, these interactions can turn violent. For the most part, though, social interactions are not dangerous, thereby meeting our first criterion. Although some clients will disagree, social interactions also nearly always meet both criterion 2 and criterion 3. Often with social fears, the key is to ascertain the true danger posed by specific individuals or social situations. Most are not dangerous and exposure will be helpful. Some few, though, are not good candidates

for exposure. I spend a bit more time on this theme in the chapter on social anxiety.

An even less obvious example is spiders. Many people are afraid of spiders. Indeed, there is good reason to be afraid of a very small number of spiders, as a few are venomous and dangerous to humans. However, for the most part, spiders rarely pose a true danger to humans. As I like to joke with my clients and students, rare is the spider who hunts humans for food. More realistic would be a spider fearing humans, as we can easily and even accidentally kill them with one step. However, as to criteria 2 and 3, there is a lot of potential for variability. Some of us may encounter spiders regularly, through being outside frequently for work or recreation or living in climates with a lot of spiders and other insects that cohabitate with us, despite our best efforts to keep a pest-free home. A recent census study in North Carolina found that the average urban and suburban home has between 24–128 spiders and other arthropods living in it (Bertone et al., 2016). Some of us rarely encounter spiders. Or, more likely, we may share space with spiders and not notice them. As a result, a fear of spiders is a reasonable target for exposure therapy, but for many people, the lack of impairment associated with the fear may be so negligible as to make exposure or any treatment a low priority. It is possible many of us could cultivate a better relationship with our friends the spiders. However, for some of us with strong fears, such work may yield few benefits and remove no problems, leading one to conclude: Why bother treating that fear?

The main takeaway here is that exposure is a potent tool for treating fears of nondangerous stimuli and situations for clients whose fears are interfering with their optimal functioning. Spending time with those stimuli and in those situations will lead to a reduction of fear and, if the engagement is persistent, a corrective learning experience. However, if the situation or stimulus is dangerous, exposure is not the preferred treatment. Instead, consider other options including safety planning, crisis management, and problem solving.

What Is Exposure?

Mary Cover Jones's case of Peter, published in 1924, is one of the first documented examples of behavior therapy being used to treat fears. Almost 3-year-old Peter had developed a fear of small animals including rats and rabbits. To combat the fear, Cover Jones engaged in a process of what she referred to as *unconditioning,* in which she presented

the feared stimulus (she used a rabbit) along with a pleasant stimulus (she used food). Cover Jones opined that by pairing the pleasant stimulus with the feared stimulus, over time, the fear would decrease. Her approach was a gradual one. At first, the rabbit was quite distant from young Peter as he was fed a food he liked. Over time, the rabbit was brought closer and closer. By the end of their work together, Peter was fondling the rabbit closely.

Cover Jones's approach included some of the key elements that we now associate with exposure therapy. First, she targeted a fear that was irrational and a stimulus that was not dangerous. Second, she exposed the client directly to the feared stimulus. Third, her approach to exposure was gradual and used a fear ladder or hierarchy of sorts. In short, Mary Cover Jones can be credited for devising some of the most important underlying intellectual property for the technology of exposure therapy. She also included a procedure that can be considered a forerunner to that used in systematic desensitization (popularized by Joseph Wolpe, 1958), whereby a feared stimulus is paired with a pleasant and/or relaxing stimulus. Though this procedure was an important one in the history of exposure, the inclusion of the paired pleasant/relaxing stimulus is no longer used by most therapists who do exposure.

Around the time of CBT's first ascendance, Edna Foa and Michael Kozak (1986) published an important paper that provided a robust rationale for the centrality of activating what they called the "fear structure" for treatment of anxiety to be effective. Drawing on Peter Lang's (e.g., 1977) bioinformational theory, their concept of fear structure referred to the biological, cognitive, and behavioral complexity of our fear-related memory. Specifically, they noted that the fear structure was composed of three components: (1) data about the stimulus or situation, (2) data about the person's reactions (e.g., actions, thoughts, feelings) to the stimulus at the time of fear acquisition, and (3) the person's interpretation of these two sets of data. They posited that for the fear to be adequately treated, the fear structure *in toto* must be activated and processed, leading to new learning about the fear stimulus. They provided examples of how failures to engage in this exposure and deep-processing approach lead to less-than-adequate treatment responses.

There is one more theoretical point to consider. In the last decade of the 20th century and into the 21st century, research and theory began to suggest that clients with anxiety problems not only feared specific stimuli but the experience of fear itself. This phenomenon sometimes

generalized to emotional experiences more broadly and was referred to as *experiential avoidance* (i.e., the avoidance of unpleasant internal experiences), a phrase coined by Steve Hayes and colleagues (e.g., Hayes, Strosahl, & Wilson, 2012). Subsequently, theoretical and empirical work made exposure to the experience of anxiety itself, rather than to specific stimuli alone, an important goal. In other words, there was an emerging understanding that the client's fundamental relationship with their own anxiety had to change such that they learned that they could handle the anxious feelings, even when extreme. To accomplish this goal, exposure approaches emphasized the importance of the client experiencing their anxiety without distraction or avoidance.

Taken together, one can see how all of these advances in our understanding of how anxiety problems develop and change led to exposure as a preferred treatment approach. That does not mean that relaxation and other coping strategies, common techniques found in systematic desensitization and many CBT programs, are not considered legitimate components of effective treatment. I will cover these strategies later in the book. The important takeaway lesson here is that exposure alone—without paired relaxation or other coping strategies—has come to be viewed as a potent (and the most potent by some) ingredient in treatment for anxiety.

Goals of Exposure

One main goal of exposure therapy is for the client *to approach and engage with previously feared stimuli with reduced or even no anxiety or fear.* This will be apparent when the client's fear of the stimulus or stimuli is reduced across most of the ways that the stimulus is manifested. The client will be doing things they have not done in a long time, if ever. And doing them with little or no anxiety. The client and their family will report notable functional gains. These gains are one goal of exposure therapy. And they are an important one.

Another goal of exposure is to help the client see that the process of achieving mastery over one set of feared stimuli can be abstracted as a tool that they use as they move forward and encounter new fears and anxieties. In other words, the goal of exposure is not just to climb one or two fear ladders that the client faces now. It is for the client to learn how to build and climb their own fear ladders so that future feared situations become ones that are mastered. My colleague Bruce Chorpita (2007) has

coined a great phrase for this goal: *the exposure lifestyle*. If we are afraid of things in our lives and they are not dangerous and could even be good for us, then exposing ourselves to them is the way forward.

The third goal is inspired by a talk I once heard from one of the world's most well-known anxiety treatment scientists, David Barlow. Barlow spoke of exposure being not just as an approach used for addressing specific feared stimuli but rather as an approach that could help a person grapple with and develop a better relationship with their own anxiety. In other words, exposure helps us to learn not just about the stimuli that we fear but with the stimulus of fear itself. Our own internal experience of fear is something that we learn to master. These three goals are the overarching aims of exposure treatment.

There is an additional goal that warrants mention. Learning involves the acquisition of new behaviors whether those behaviors are overt or covert. Therefore, fears are acquired through learning and must be overcome through more and different learning. Learning occurs through a repeated pattern of thoughts, feelings, and behaviors. Through each repetition of the pattern, a particular learned behavior is strengthened. When we are dealing with fears and anxieties, we are often confronted with uprooting long-held patterns of thought, feeling, and action. And not just thought, feeling, and action of one individual but often of the whole system in the family. This relates to the concept of habituation and its two types: within-trial and between-trial habituation.

Habituation

First, let's start with the word *habituation*. It is a term derived from research on sensation and perception, wherein some stimuli become invisible to us over time if they do not have informational value, like the sound of an air conditioning system in an office or the sight of a small stain on the carpet after you have seen it dozens of times. They just disappear from your awareness because paying attention to them does not help you. The same basic notion applies to feared stimuli in exposure. Our goal is for the client to learn that the stimulus is not dangerous, that the anxiety experienced is out of proportion to it. The goal is that the client habituates to the stimulus *and* to the fear it produces. We accomplish this through within-trial and across-trial habituation.

A trial of exposure involves the presentation of the stimulus a single time. For example, 13-year-old Angel, who is socially anxious, says "Hello" to my receptionist once. That is one trial. By within trial, I mean

within that single event. To understand whether the client is experiencing within-trial habituation, I must measure their anxiety level at the start and then again at the end of that single event. Within-trial habituation occurs when the anxiety at the start of the event is higher than the anxiety at the end of the event. In short, the client's anxiety level has decreased during the event. And just like that, they have achieved within-trial habituation. With within-trial habituation, the client learns that if they approach and engage with the stimulus, their anxiety level will decrease eventually.

Figure 1.1 depicts this situation across four trials. You can see that in the first two trials, the ratings were the same before and after, with a mild reduction. In trial 3, you can see the starting anxiety rating stayed the same but the reduction was more extreme. In trial 4, the starting and ending points were both lower. The reduction in the initial rating in trial 4 is excellent news and is a good time to transition to the other kind of habituation.

With across-trial (or between-trial) habituation, the focus is the experience of anxiety *at the beginning of each trial*. That is, from trial 1 to trial 2 did the initial anxiety rating decrease? How about from trial 1 to trial 4? Not only does anxiety go down if the client approaches and engages with the stimulus, anxiety gets lower the more the client does it. The more we do something we are afraid of, the less anxious we will be when we go to do it the next time. In short, it keeps getting easier.

Figure 1.2 depicts across-trial habituation using the data from our first four trials in Figure 1.1 and adding the next two trials. Here, the dotted trend line represents across-trial habituation. Another important thing to note in the data here will be a theme throughout the book—namely, that it takes time to see habituation. It is imperative not to give up if exposure does not seem to work the first few times you try it. After

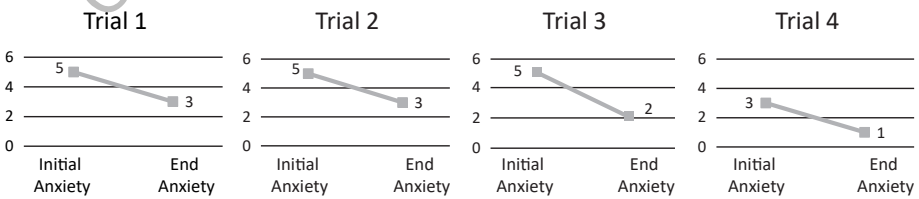

FIGURE 1.1. Within-trial habituation across four trials.

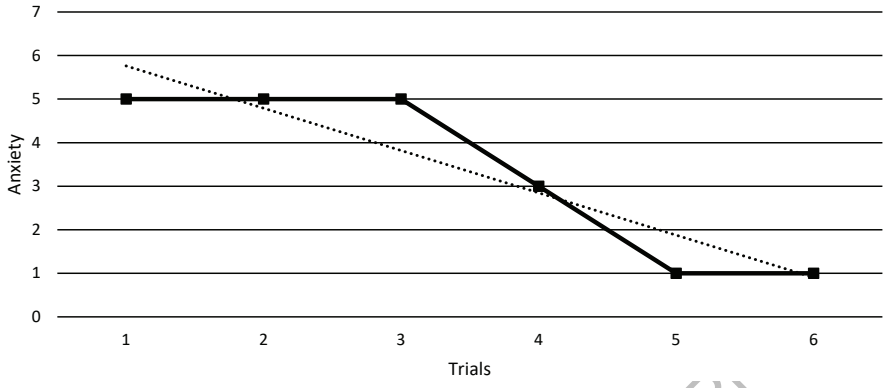

FIGURE 1.2. Across-trial habituation across six trials.

three trials, one might have been tempted to abandon ship. However, only three trials later: what a difference!

The Focus of This Book

I trust that this chapter not only has you convinced that exposure warrants a standalone book, but also has persuaded you to read on. Let's turn now to what to expect in the subsequent chapters. Chapter 2 introduces you to how to present some basic psychoeducational concepts that underlie exposure to clients. Chapter 3 focuses on the central role of assessment and monitoring in exposure therapy. Here, the emphasis is on building the fear ladder, an essential preparatory and ongoing part of exposure treatment, and on monitoring progress in treatment.

The job of Chapter 4 is a monumental one. Here, you will find the *basics* of exposure—that is, a practical guide to how you will do exposure with a client, from start to finish. The basics covered here are expansive and the chapter is one of the longest in the book—and with good reason. There is a lot to know about exposure.

Chapter 5 takes a quick break from exposure and focuses on how to integrate coping skills training into exposure work. These skills include relaxation, cognitive, and problem-solving skills. The chapter is not meant to provide full coverage of these skills—there are whole volumes dedicated to them. Instead, the chapter provides a taste of each, including how they can be used while *doing exposure* and how they can be used as a way to cope and take a brief break from exposure.

The final five chapters focus on five different anxiety disorder categories, providing more specific guidance and examples for how exposure is used for phobias, separation anxiety, social anxiety, worries, and panic. Though some of the principles presented in Chapter 4 are relevant for PTSD and OCD, I do not include chapters on these two subjects and refer the reader now to some excellent books on those topics for more detailed information (e.g., PTSD: Cohen, Mannarino, & Deblinger, 2012; OCD: March & Mulle, 1998; Fleshner & Piacentini, 2017).

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