

Chapter 1

Conceptualizing Risk and Resilience Following Trauma Exposure

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Mora's sister had cancer for the last 3 years. Periodically throughout the battle, Mora had taken care of her sister's two young children. Mora's own marriage was still intact, but shaky; however, her sister's husband had had an affair and left her during her illness. In the months before Mora's sister's death, Mora had become deeply depressed. She stopped going into town to go to church, stopped attending her spin class, no longer spoke with her friends, and only went out of the house to attend to her sister, get groceries, or shuttle her kids to various activities. After her sister died, Mora's depression only grew worse, and her husband started to worry about whether she would commit suicide. Mora said that her faith and her kids kept her from killing herself, though she saved an old bottle of sleeping pills just in case and thought often about taking the whole bottle and being reunited with her sister.

One day Mora was driving her sister's station wagon. As she was making a left turn off of a country highway, a van tried to pass her on the left-hand side of the road. The van crashed into the side of Mora's car, sending it into a large utility pole. She hardly knew what had happened. She felt the impact and may have even temporarily blacked out. When she regained her senses, her first thought was for her kids in the back seat, but she couldn't move. The windshield had shattered and there was glass and blood everywhere. She screamed for her kids,

telling them to get out of the car. The kids responded, saying they were okay, but they weren't going to leave her. Fearing the car catching on fire, she again screamed for them to go. By that time, another car pulled over, and the man in the car came over and helped the children out. Still another man came up and tried to get Mora out of the car but couldn't. As she sat there, she couldn't feel anything and was terrified that the car was going to catch on fire. She kept thinking to herself, "I'm going to die. I'm going to die." The man held her hand, told her that they had called 911, and the fire department should be there shortly. Mora didn't know how much time had passed, feeling at times disconnected from what was going on around her, but the man never left and kept on talking to her. The fire department eventually came and cut her out of the vehicle. At the hospital, she was treated for facial lacerations; rib, femur, and pelvic fractures; and a hemothorax. Her son, who was also on the struck side of the vehicle, had multiple facial and arm lacerations but sustained no serious injuries. Her daughter, who was in the rear, nonstruck side of the vehicle, was shaken up but also sustained no serious injuries.

In the days after the crash, Mora was in the hospital. Her friends from church, her spinning class, and her kids' friends' parents all came to visit and chipped in together to help with food and taking care of the kids. The driver of the van had left the scene of the accident, and the investigation was still ongoing. She couldn't get over the fact that the driver of the other vehicle had left her and her family after the crash. She wondered if he or she had been drunk. Most of all she felt grateful that she was alive and her kids were okay. She also cherished each day she had been given. However, whenever she thought about what happened, a wave of fear would come over her. She would wake up at night, having dreamed that the crash was happening again; she had a hard time watching anything with car accidents on TV; and she did not like riding in cars. However, as soon as she was able, she started going to church, reaching out to her friends, and began physical rehabilitation. Although her marriage was still having difficulties, she was committed to improving it. Her earlier depression dissipated, and she threw out the bottle of pills. Similarly, over the next few months, her fears around having another car accident also started to disappear. Although she thought about the crash on occasion, she started to drive as soon as she was medically cleared.¹

Contrary to popular belief, resilience is the norm following trauma exposure (e.g., natural disaster, rape, car accident, combat). Indeed, this is

¹This case represents a mixture of various clients whom we have seen in our clinical work. Any resemblance to a specific individual is purely coincidental.

one of the remarkable findings emerging from the study of psychological reactions to traumatic events. These events do have profound impacts on people's lives, but, for the majority of trauma survivors, long-term psychiatric problems and impaired psychosocial functioning are unlikely. In fact, some trauma survivors like Mora actually experience improved psychological and social functioning. By all accounts, Mora was at risk for developing long-term psychological consequences: being a woman, having a previous psychiatric history, having a sense of life threat and dissociation during the event, being severely injured, and having ongoing life stress after the event (e.g., ongoing physical rehabilitation, ongoing crime investigation, marriage problems).

How then do we understand varying trajectories following trauma exposure, and how do we promote psychological health and functioning after such events? In this book, we focus on two things: (1) understanding the nature of resilience, natural recovery, and therapeutic recovery; and (2) understanding common and unique principles underlying these processes of resilience and recovery, particularly focusing on principles that are modifiable either by trauma survivors themselves, others, and the community surrounding trauma survivors, or by professionals or paraprofessionals providing active interventions or treatment. It is through our understanding of these processes of resilience and recovery that we will be better able to promote psychological health and functioning in the aftermath of trauma exposure.

RESILIENCE, NATURAL RECOVERY, AND THERAPEUTIC RECOVERY FOLLOWING TRAUMA EXPOSURE

Resilience

When we see or hear the word *resilience*, we all assume we know what it means. *Is Mora resilient?* If resilience means little or no immediate reaction to the traumatic event, then Mora is decidedly not resilient. If resilience means the absence of initial psychological reactions or functional impairment after a traumatic event, then Mora is also not resilient. However, if resilience means the absence of long-term psychopathology or impairment after a traumatic event, then Mora is resilient. Similarly, if resilience means an ability to cope with and adapt to adversity, then Mora is also resilient. And, if resilience means the ability to move beyond pretrauma levels of functioning to improved levels of functioning, then Mora is indeed resilient. Defining this term we all assume we know is actually complicated.

The *Oxford English* and *Merriam-Webster* dictionaries provide similar definitions for the term. In fact, both dictionaries give two definitions. In the *Oxford English Dictionary*, resilience is defined as (1) the ability of a substance or object to spring back into shape; elasticity; and (2) the

capacity to recover quickly from difficulties; toughness. In the *Merriam-Webster Dictionary*, resilience is defined as (1) the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress; and (2) an ability to recover from or adjust easily to misfortune or change. In neither definition does resilience reflect a lack of reaction or impairment. Rather, resilience reflects rebounding, with the words *quickly* and *easily* being used as modifiers. Furthermore, in no definition does resilience imply anything more than recovery or a return to a previous state.

These points are critical when additional terms such as *psychological resilience* or *posttraumatic growth* are used to describe processes after trauma exposure. Probably the most commonly used definition of psychological resilience comes from Bonanno (2004, p. 20), reflecting “the ability of adults in otherwise normal circumstance who are exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning.” For Bonanno, resilience and recovery are not the same thing. Recovery implies a moderate-to-severe initial reaction followed by a return to psychological health and functioning; resilience implies little or no initial reaction and no real change in psychological health or functioning. As noted by Litz (2004), Bonanno also intimates a degree of equivalence between bereavement and trauma. It is relatively easy to agree with Bonanno’s definition of resilience after relatively common events such as the death of a loved one from a chronic illness or old age. However, the vast majority of individuals following an acute, personally life-threatening trauma of a given magnitude (e.g., torture, rape) have initial profound reactions, which, as will be discussed below, are expected and normal. By Bonanno’s definition, the presence of a temporary, normative reaction to a personally life-threatening event would make the person not resilient. Posttraumatic growth, in contrast, refers to a shift toward more optimal functioning as a result of a traumatic event (e.g., Calhoun & Tedeschi, 2006; Linley & Joseph, 2004). This shift typically refers not just to recovering previous functioning but ending up with *more* adaptive functioning and a change in the way an individual views his or her place in the world. The term *posttraumatic growth*, then, refers to positive changes in functioning and personal meaning for the individual (e.g., Janoff-Bulman, 2004).

Clearly, some of the confusion in the traumatic stress field comes from the overlap and imprecise usage of these terms. In this overlap, psychopathology (e.g., depression, posttraumatic stress disorder [PTSD], anxiety), functioning (e.g., work, social, and family functioning), and belief systems (e.g., about the world, self, others) are not always distinguished. And in the real world, they do not always covary with one another. Further precision in construct definition and longitudinal studies in our field will

undoubtedly help in understanding resilience, recovery, and growth processes after traumatic events.

Is Mora resilient? We would say “yes.” Mora experienced a relatively “quick” (e.g., within a few months) and “easy” (e.g., no formal intervention) recovery (e.g., psychopathology, functioning) and likely also experienced posttraumatic growth (e.g., improved functioning, more adaptive personal beliefs). Our definition of resilience allows for an initial profound reaction to a traumatic stressor. A lack of a reaction to a personally life-threatening event (e.g., rape, torture) would not be normative and could even indicate an abnormal reaction. For us, resilience also includes a pattern of recovery to prior functioning that occurs naturally in the initial months following trauma exposure. So, one can experience disruptive, trauma-related difficulties that resolve relatively quickly and still be resilient.

Natural Recovery

Prospective studies consistently document a natural recovery process that occurs for the majority of trauma-exposed individuals regardless of the type of traumatic events. Notably, immediately after trauma exposure, many individuals show symptoms consistent with PTSD, anxiety, and depression and related functional impairment. However, within the first 3 months, in particular, and through the first year after trauma exposure, for the majority of individuals, these symptoms decrease without formal psychological or psychiatric treatment (e.g., Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Riggs, Rothbaum, & Foa, 1995; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). Based on these data, the likelihood of recovery is the strongest in the first 3 months and continues through 1 year; however, after 3 months, the slope of recovery flattens considerably, suggesting that if an individual has not recovered during this initial period, the likelihood of natural recovery decreases substantially. Approximately one-third of trauma-exposed individuals do not recover with time (Kessler et al., 1995).

Two large meta-analyses have examined factors underlying natural recovery (e.g., Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weise, 2003). Although these meta-analyses are dated, they pooled data from thousands of trauma-exposed individuals and explored a variety of predictors of PTSD. Across both studies, pretrauma factors (i.e., prior trauma, prior adjustment, history of psychopathology, family history of psychopathology, female gender, lower socioeconomic status, lack of education, low intelligence, child abuse, and adverse childhood) carried only a small amount of the variance in predicting who developed PTSD. This is in stark contrast with common clinical lore, which suggests that these factors are primarily responsible for who will and will not develop long-term psychopathology after trauma exposure. Most notably, trauma-related factors

(i.e., trauma severity, perceived life threat, peritraumatic emotions, and peritraumatic dissociation) and posttrauma factors (i.e., perceived support, lack of social support, life stress) carried more of the variance of who will develop long-term psychopathology. Since these meta-analyses, the role of peritraumatic dissociation has been questioned (e.g., Marshall & Schell, 2002). New studies have highlighted the role of hyperarousal after trauma exposure (e.g., Solomon, Horesh, & Ein-Dor, 2009) and have replicated the importance of event and postevent factors such as trauma severity, perceived lack of support, and ongoing stressful life events (e.g., Smid, van der Velden, Gersons, & Kleber, 2012). Clearly, no single factor consistently predicts the development of chronic psychopathology and impaired functioning after trauma exposure with a high degree of accuracy. As suggested by Brewin and colleagues (2000), the impact of pretrauma factors on later PTSD is likely mediated by responses to the trauma or pretrauma factors that interact with responses to the trauma to increase the risk of PTSD. This is consistent with an earlier resilience–recovery model put forth by King, King, Fairbank, Keane, and Adams (1998) highlighting the mediational role of postevent hardiness (e.g., sense of control, commitment, and change as challenge), postevent structural and functional social support, and additional negative life events posttrauma. Taken together, there are a number of postevent factors that may reduce the likelihood of PTSD, anxiety, depression, and impaired functioning that occur in the immediate aftermath or months after the trauma that are *potentially modifiable and may have the ability to enhance natural recovery*.

Therapeutic Recovery

For those who do not naturally recover and suffer trauma-related problems (e.g., PTSD, depression, anxiety) months and years after such an event, specific psychotherapies (e.g., cognitive-behavioral therapy) and pharmacotherapies (e.g., selective serotonin reuptake inhibitors [SSRIs]) have been found to reduce psychological difficulties and improve overall quality of life, while other therapies such as general support and relaxation do not produce clinically meaningful changes (e.g., Institute of Medicine, 2007; National Institute for Health and Clinical Excellence, 2005; U.S. Department of Defense and Department of Veterans Affairs, 2003). Clearly, though, individuals differ in their likelihood to respond to therapeutic interventions. However, predictors of therapeutic outcome for chronic PTSD have been relatively elusive. Bradley, Greene, Russ, Rusta, and Westen (2005), in their meta-analysis of psychotherapy approaches for PTSD, found that trauma type, specifically combat trauma, showed lower effect sizes than heterogeneous or assault samples; however, this study did not examine other patient-related moderators. This latter finding also has not been replicated, where in another meta-analysis for prolonged

exposure, a type of cognitive-behavioral therapy, factors such as time since the trauma, therapeutic dosage, or type of trauma did not reliably alter the observed effects (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010). Taken together, seemingly disparate therapeutic approaches such as various cognitive and behavioral therapies and SSRIs are able to meaningfully reduce trauma-related psychopathology and improve functioning for many. The similar efficacy of these different approaches may point to both unique and shared principles underlying therapeutic recovery.

SHIFTING FOCUS TO UNDERLYING PRINCIPLES

Comorbidity and Heterogeneity

For well over 20 years, our field has recognized that we suffer from twin challenges (e.g., Clark, Watson, & Reynolds, 1995): comorbidity between disorders and heterogeneity within disorders. Reactions following trauma exposure and resultant psychopathology such as PTSD, depression, substance abuse, and anxiety are no exception. For example, PTSD shares diagnostic symptoms with major depressive disorder (MDD), including anhedonia, difficulty sleeping, irritability, and difficulty concentrating. Not surprisingly, epidemiological data shows that between 48 and 55% of people with PTSD have comorbid MDD (e.g., Elhai, Grubaugh, Kashdan, & Frueh, 2008; Kessler et al., 1995). PTSD and MDD are significantly associated with one another (.50), showing a similar degree of association to other anxiety disorders with MDD (.42–.60; Kessler, Chiu, Demler, & Walters, 2005). Indeed, some have suggested that PTSD and co-occurring PTSD and MDD after trauma exposure may be the same construct and that their separation may be arbitrary (e.g., O'Donnell, Creamer, & Pattison, 2004). Although depressive disorders are the most common comorbidity with PTSD, substance disorders and anxiety disorders are also commonly seen with PTSD (Kessler et al., 1995), highlighting that comorbidity in PTSD, like many other disorders, is normative.

Besides substantial comorbidity, there is also significant heterogeneity within PTSD. The diagnosis of PTSD in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), indeed, has been criticized for being too heterogeneous (Rosen & Frueh, 2007). The PTSD diagnosis uses polythetic criteria (e.g., 1 of 5, 2 of 7), which allows for considerable variability. Specifically, using this polythetic criterion, there are 79,794 possible ways to have the diagnosis of PTSD. With MDD, which is also often criticized for being too heterogeneous, there are only 126 minimal and 256 possible combinations (Miller, 2010). Notably, with the increase in number of PTSD symptoms in the fifth edition (DSM-5) resulting in even more possible combinations, this problem of observed heterogeneity within PTSD will only increase. Accordingly, the variability of

symptom combinations of who will qualify for a diagnosis of PTSD will increase; and both clinicians and researchers will need to pay better attention to the varying *processes* driving various observed symptom presentations.

Emerging Scientific Advances

Given these patterns of high levels of observed comorbidities and within-diagnosis heterogeneity, both clinicians and researchers are recognizing the need to better understand common principles underlying the presence and reduction of psychopathology. Two emerging scientific developments provide the backdrop for our focus on principles underlying resilience and recovery following trauma exposure and, although not explicitly stated up to now, our focus on broader outcomes beyond PTSD as the sole psychiatric response following trauma exposure. These specific scientific advancements are the development of research-domain criteria aimed at identifying transdiagnostic constructs and a growing emphasis on empirically supported principles underlying therapeutic recovery. Although these scientific shifts are not the explicit focus of this book, they underlie the core thinking behind our focus on broad principles of recovery/resilience and merit a brief discussion to highlight our scientific foundation.

The National Institute of Mental Health has started the development of research domain criteria, called RDoC (see Insel et al., 2010). RDoC seeks to define basic transdiagnostic constructs across multiple units of analysis from genes to neural circuits to behaviors in order to rapidly develop an integrative understanding of psychopathology and improve treatment development. This shift to a dimensional system that is agnostic to disorder categories is largely motivated by the failure of our current classification system to identify and align with advances in genetics and neuroscience (Simpson, 2012). The initiative proposes a series of domains such as negative valence systems (e.g., acute threat, loss), positive valence systems (e.g., reward valuation, habit), cognitive systems (e.g., attention, perception, memory), systems for social processes (e.g., affiliation, social communication), and arousal and regulatory systems (e.g., resting state activity). Each of these domains will be addressed at varying units of analysis, including genes, molecules, cells, circuits, physiology, behavior, self-reports, and paradigms. By evaluating multiple domains at various units of analysis, RDoCs will be better able to identify the effect of dysregulation in one domain upon the functioning of another, developing a more comprehensive understanding of the complexity and heterogeneity of symptom manifestation (Craske, 2012a).

Ultimately, the R-DoC approach is considered to have direct clinical applicability. The overall approach should help produce treatments that

are more precisely targeted to underlying dysfunctions, that better identify subgroups of individuals who will respond to targeted interventions, and whose mechanisms are better understood as actual mediators of therapeutic change (Craske, 2012a). With this move to shift our study of psychopathology to a matrix of domains and units of analyses, this also encourages us as clinicians to similarly focus less on discrete diagnostic entities and more on the processes associated with underlying observed symptoms. This is what we are seeking to do in this book.

As the focus has begun to shift in our study of psychopathology, so has the implementation of psychological or psychiatric treatment. This shift is toward identifying and disseminating empirically supported principles of change (ESPs). ESPs refer to principles or techniques that are empirically demonstrated to be contributors to clinical improvement and can be applied in a flexible manner based on clinician judgment (e.g., Beutler, Clarkin, & Bongar, 2000; Beutler, Moleiro, & Talebi, 2002; Rosen & Davison, 2003). ESPs are thought to reflect “research-informed principles that cut across both different theories of change and variations that exist among different techniques” (Beutler et al., 2002, p. 1203). Notably, empirically supported treatments (ESTs), often either confusingly referring to specific treatment packages or sets of treatment techniques, are not the same things as ESPs. Different treatment packages or ESTs may actually rely on the same underlying ESPs, arguing that that they may not represent truly distinct treatment alternatives (Herbert, 2000; Rosen & Davison, 2003).

Notably, the shift in focus from ESTs to ESPs may provide clinicians with research-supported interventions that can be better integrated into treatment in a flexible manner that allows for individual variability, diversity of treatment setting, and the application of therapy nonspecifics (Beutler et al., 2002). Emphasizing principles of change over ESTs further minimizes the focus on trademarked therapy packages and potentially returns the focus to scientific mechanisms (Rosen & Davison, 2003). However, applying ESPs in practice can be challenging, as it assumes that the clinician possesses a high level of proficiency in both clinical knowledge and in the theory that guides the principles (Beutler et al., 2002). This, however, is beginning to change with the emergence of transdiagnostic treatment approaches, which focus on teaching ESPs. Within the context of a broad transdiagnostic model, therapists match specific treatment strategies to specific emotional, cognitive, behavioral, or functional domains that are most dysregulated for a given patient (Craske, 2012b). This type of personalized transdiagnostic approach may actually ease dissemination burdens and additionally may better personalize and improve patient outcomes. This focus on principles underlying change is also what we are seeking to do in this book.

FACILITATING RESILIENCE AND RECOVERY FOLLOWING TRAUMATIC EVENTS

We find ourselves at an exciting crossroads. This crossroads reflects a shift in our scientific understanding of psychopathology following trauma exposure, moving toward understanding distinct and shared features within and across disorders, and a shift in our focus away from empirically supported treatments for trauma-related psychopathology toward understanding empirically supported principles that target specific underlying dysfunctions. In the case of Mora, we do not see a particular disorder or a particular intervention promoting recovery. Instead, we see a pattern of reactions to a life-threatening motor vehicle accident, in the broader context of a life and a culture, and a pattern of resilience, recovery, and posttraumatic growth following this horrific event.

Being at a crossroads is always an interesting place because it is here where older and newer ideas intermix. This “communication” will be seen across the chapters in this book, where sometimes authors refer to a disorder specifically, such as PTSD, while at other times they refer to trauma-related psychopathology in general (suggesting a range of symptoms that commonly co-occur after trauma exposure, such as lack of positive affect, reexperiencing of the traumatic event, avoidance of trauma reminders, anxious arousal). Similarly, authors may refer to specific name-branded treatment packages such as trauma-focused cognitive-behavioral therapy (TF-CBT), or to therapeutic principles such as addressing avoidance of the trauma memory. These variations simply reflect our field being at this crossroads. We have encouraged the authors to highlight key principles that promote either natural or therapeutic recovery or both.

As you read through this book, consider this: Mora exists, albeit as a combination of remarkable men and women who have shared their lives with us. In our research and in our clinical work, we see the effects of trauma on men and women every day. We see profound sorrow, shattered lives, horrendous memories invading every aspect of life, and an ever-present fear that this event or events could happen again. However, we also see men and women rising above their circumstances, putting their fear and sorrow behind them, and building new and, potentially, better lives for themselves. Resilience and recovery after trauma are possible—we see it everyday.

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