

The Diagnosis and Treatment of Trauma and Stressor Related Disorders

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## The Diagnosis and Treatment of Trauma and Stressor Related Disorders

Eileen E. Joy & Cynthia L. Turk

Approximately 90% of Americans will experience at least one traumatic event in their lifetime, in addition to other significant stressors such as unemployment, parenthood, and romantic break-ups (Kilpatrick et al., 2013). Histories of stressful and traumatic events are ubiquitous in clinical practice and are associated with the development of a range of disorders (American Psychiatric Association [APA], 2013; Carr, Martins, Stingel, Lemgruber, & Juruena, 2013).

Immediately following a stressful event, distress and psychological symptoms can be considered an adaptive, normal response. For some individuals, however, the trauma-related symptoms can become severe and/or pervasive enough to be categorized as a trauma- and stressor-related disorder according to the *Diagnostic and Statistical Manual of Mental Disorders – 5<sup>th</sup> edition* (DSM-5; APA, 2013). The category of trauma- and stressor-related disorders is new to the DSM-5 and includes reactive attachment disorder (RAD), disinhibited social engagement disorder, adjustment disorder, acute stress disorder, and post-traumatic stress disorder (PTSD). These disorders require exposure to a stressful or traumatic event in order to be diagnosed (APA, 2013). This article will explore issues relevant to the diagnosis and treatment of trauma- and stressor-related disorders, with an in-depth focus on different treatments for PTSD. A case example illustrating an empirically supported treatment for PTSD is included.

### **Defining Trauma and Stressors**

Although the terms trauma and stressor differ colloquially and across theoretical orientations, these terms have specific diagnostic meanings. Traumatic events only include exposure to serious physical injury, sexual violence, threatened death, and the sudden or violent

death of another person (APA, 2013). Car accidents, physical assault, rape, military combat, and natural disasters qualify as traumatic events. Exposure to a traumatic event includes experiencing it directly, witnessing it, learning that a loved one experienced it, or experiencing severe details of a violent incident after it occurs (APA, 2013). In contrast, the definition of stressor is more flexible and reflects a response to a specific event, such as retiring, transferring schools, divorcing, or getting married. Stressors, as defined in the DSM-5, include both traumatic and non-traumatic events and are relevant to the diagnosis of adjustment disorder. While both clients and clinicians may use “trauma” and “stressor” to describe a range of experiences, it is important to be aware of the definitions of these terms when considering diagnoses of trauma- or stress-related disorders.

### **Changes in the DSM-5**

Changes in the descriptions of trauma and stressor related disorders in the DSM-5 (APA, 2013) reflect changes in the conceptualization of these disorders based on research. Trauma and stressor related disorders were separated from anxiety disorders and placed in their own category, reflecting the diverse presentations of these disorders (APA, 2000, 2013). Although anxiety remains a common symptom of these disorders, the move is more inclusive of clients who present with depression, anger, shame, guilt, and other mood changes in response to a traumatic event or stressor (Friedman, 2013).

The definition of trauma in acute stress disorder and PTSD changed to explicitly define direct and indirect exposure and to eliminate the requirement that one experiences fear, helplessness, or horror during the event (APA, 2000, 2013). The PTSD criteria were also restructured to encompass four symptom clusters (separating avoidance symptoms from changes in mood and cognitions). Separate criteria for identifying PTSD in children under 7 years old

have been added (APA, 2013). The diagnosis of RAD also experienced a number of changes in the DSM-5, with disinhibited social engagement disorder – previously a subtype of RAD – added as a distinct diagnosis (APA, 2013). Detailed descriptions of the changes to the DSM-5 diagnoses are described below in the sections for each disorder.

### **DSM-5 Trauma- and Stress-Related Disorders**

#### **Reactive Attachment Disorder (RAD)**

**Case presentation.** Macey was removed from her mother’s home at 24 months after an investigation determined that her mother had severely neglected her. It was discovered that Macey was often left alone while her mother coped with her own history of trauma through persistent opioid use. At the time her neglect was discovered, Macey was below the 5<sup>th</sup> percentile in weight expected for her age. She was placed with her maternal grandmother who had difficulty caring for the toddler who often cried and screamed despite attempts to soothe her. Before she turned four years old, Macey was moved between two other foster placements due to caregiver difficulties managing her emotional outbursts, oppositional behaviors, and frequent attempts to run away. When Macey presented for therapy, she was four years old and had lived with her current foster family for three months. Her foster mother described her as withdrawn – often avoiding interactions with the foster mother and other adults. Macey did not cry or complain when she got hurt; however, she often screamed and cried at other times, particularly in public. Her foster mother had difficulty calming her down as Macey ignored or violently rejected attempts to comfort her. Macey often hit other children in the household or broke toys. She did not seem to enjoy playing or interacting with others. At home and school, Macey does not often speak and, when she does, she usually uses short and simple sentences. She is able to

engage others when she wants or needs something. Macey's foster mother denied that Macey had restricted, fixated interests or excessive adherence to rituals and routines.

**Characteristics and symptoms.** RAD may only be diagnosed in children who, like Macey, have experienced extreme social neglect or limited opportunity to develop stable attachment (APA, 2013). The formation of stable attachment may be disrupted by multiple changes in primary caregivers or settings which do not allow the child to have a primary caregiver, such as institutional orphanages. The lack of stable attachment is associated with behavioral disturbances that exist before the child is five years old. Children with RAD show both little interest in meaningful interactions with caregivers as well as a pattern of socially and emotionally disturbed behavior. When interacting with caregivers, children with RAD are emotionally withdrawn, neither seeking nor responding to comfort when distressed. Social and emotional disturbances are characterized by one or more of the following: limited positive affect, social and emotional unresponsiveness, or unexpected periods of irritability, fearfulness, or sadness (APA, 2013). RAD only describes children who are at least nine months old and who are not diagnosed with autism spectrum disorder. The DSM-5 suggests caution when considering a RAD diagnosis for children older than five due to the limited research on the presentations of the disorder in older children (APA, 2013).

**Specifiers.** RAD may be specified as persistent for those who have experienced symptoms for over one year and severe for those who experience all symptoms at relatively high levels.

**Impairment and distress.** RAD is associated with substantial impairment in socio-emotional functioning, including deficits in social competence and interpersonal relationships (Gleason et al., 2011; Zeanah & Gleason, 2015). These impairments are evidenced across

settings and with peers as well as adults (Gleason et al., 2011). Children with RAD may have difficulty making friends, show poor social judgment, disobey adults, act aggressively, and be anxious or moody (Mayes et al., 2017). RAD is associated with difficulty regulating and expressing emotions, and children with the disorder are often introduced to therapy at a young age (Kay & Green, 2013). As a consequence of these difficulties, caregivers raising children with RAD may have significant difficulty managing their child's symptoms and behaviors (Taft, Ramsay, & Schlein, 2015). Children with RAD might subsequently experience additional instability in foster placements. Specifically, the symptoms of RAD may contribute to frequent changes in foster care due to the difficulty caregivers may have managing the child with RAD.

**Changes in the DSM-5.** There are notable changes in the diagnosis of early attachment disorders in the DSM-5. The two attachment disorders of RAD and Disinhibited Social Engagement Disorder (DSED) were created by the DSM-5 to define distinct clinical presentations children may experience following significant social neglect. In the DSM-IV-TR (APA, 2000), these presentations were categorized as distinct subtypes of Reactive Attachment Disorder – indiscriminately social/ disinhibited and emotionally withdrawn/ inhibited. Due to considerable differences in presentation, course of the disorder, risk factors, and response to treatment, the DSM-5 recategorized these subtypes as distinct disorders (Gleason et al., 2011; Rutter, Kreppner, & Sonuga-Barke, 2009; Zeanah & Gleason, 2010). The DSM-5 classification of RAD defines inhibited behaviors slightly differently and added the criterion of persistent disturbance in social responsiveness or emotional disturbances (APA, 2013). The additional criterion reflects research evidencing that the inhibited behaviors in RAD are associated with depressive symptoms (Gleason et al., 2011). The new RAD criteria also specifies that the child

must be at least 9 months old to restrict the diagnosis to only those who have the developmental ability to exhibit focused attachment behaviors (Zeanah & Gleason, 2015).

**Prevalence.** RAD appears to be a rare, although the prevalence of the disorder is understudied. In a sample of 1,646 children between the ages of 6 and 8 who lived in a low income neighborhood, approximately 1.4% was estimated to have RAD and/or DSED (Minnis et al., 2013). In samples of maltreated children in foster care, the rate of RAD and/or DSED may be as high as 19% to 38% (Lehmann, Havik, Havik, & Heiervang, 2013; Zeanah et al., 2004).

**Course of the disorder.** Social neglect in early development is a necessary feature in the etiology of RAD, and abuse alone is not associated with the disorder (Zeanah & Gleason, 2015). Children who do not have a stable primary caregiver are at risk for RAD, including children raised in institutions or who experience multiple changes in caregivers (e.g. changing foster care placements). The number of placement disruptions and the length of time in institutionalized care have been associated with greater signs of RAD (Humphreys, Nelson, Fox, & Zeanah, 2017). While environmental risk factors are a necessary component of the etiology of RAD, there is also evidence of an underlying genetic component, especially in boys (Minnis et al., 2007). The prevalence and residual effects of RAD in older children are not well studied; however, children as old as 12 with histories of institutionalization or foster care exhibit symptoms of RAD (Humphreys et al., 2017; Lehmann et al., 2016).

**Comorbid disorders.** Children with RAD are likely to experience overall deficits in psychiatric functioning (Gleason et al., 2011). RAD is associated with a concurrent diagnosis of DSED, oppositional behavior, conduct problems, inattention, impulsivity, hyperactivity, and depression (Jonkman et al., 2014; Mayes et al., 2017; Minnis et al., 2013). Although children



who have experienced extensive social neglect often have histories of trauma, the extent to which RAD and PTSD is comorbid is not well understood (Zeanah et al., 2016).

**Differential diagnostic issues.** While depressive disorders, adjustment disorder, and PTSD can result in decreases in positive affect and difficulties regulating emotion, these disorders are not associated with the lack of ability to form attachments characteristic of RAD (APA, 2013). Distinguishing RAD from autism spectrum disorder and other neurodevelopmental disorders can be difficult. The social impairment associated with RAD may change when the child is placed in a healthier environment, which would not be expected for children with other neurodevelopmental disorders like autism (Boekamp, 2008). Children on the autism spectrum can also be differentiated due to the presence of restricted and repetitive interests or behaviors (Mayes et al., 2016). Due to the shared potential etiology of neglect, children with RAD may also experience developmental delays. However, children with an intellectual disability or communication disorder can be differentiated by their ability to form appropriate attachments and express positive affect (APA, 2013).

**Treatment.** Children with RAD appear to respond well to being placed with stable caregivers. In a randomized controlled trial, young children placed in foster care following institutionalized care showed no difference in inhibited attachment behaviors compared to never institutionalized children after an average of 8 months (Smyke et al., 2012). Smyke et al. (2012) note these findings are consistent with the lack of evidence that inhibited attachment behaviors remain after children are adopted. Similarly, institutional settings that limit the number of caregivers children have are associated with lower rates of disordered attachment (Smyke, Dumitrescu, & Zeanah, 2002). Although establishing stable care placements for children appears to be effective at reducing RAD symptoms, clinicians have little control over this decision.

Clinicians who observe symptoms of RAD should assess the safety of the child at their current household.

There is a significant lack of evidence supporting the efficacy of specific psychotherapy treatments (Boekamp, 2008; Shi, 2014). Parent training focusing on building the relationship between the caregiver and child through consistent interactions and limit setting may improve engagement and functionality (Boekamp, 2008). Generally, treatment should focus on the caregiver or the caregiver-child dyad – rather than therapists working with the child alone (Becker-Weidman, 2006; Shi, 2014; Zeanah et al., 2016). This approach is recommended because, regardless of modality, therapy should focus on developing the caregiver and child attachment. Therapy may focus on aiding caregivers in positively engaging with their child, managing their child’s problematic behaviors, and coping with the caregiver’s own distress (Zeanah et al., 2016).

### **Disinhibited Social Engagement Disorder**

**Case presentation.** Kamal is a five year old boy who was brought to therapy by his adoptive mother. She described how Kamal would often wander away from her in public, seeking out strangers to play with him. Specifically, Kamal would climb into the laps of strangers at the mall, and he often asked for hugs from anyone he met. These behaviors were observed in the therapy room, as Kamal immediately tried to engage the therapist in play and initiated physical contact with the therapist multiple times during the intake. His mother warned the therapist that Kamel often becomes angry and frustrated if someone does not pay attention to him. She described Kamal as a clingy and very affectionate child. She said she was worried about his behavior now that he is in kindergarten. In contrast to the way he acts with adults, Kamal was described as “picky” with other children, as sometimes he would play well with them

and other times he would get unexpectedly angry and start fights. Kamal was adopted at three years old from a large orphanage in Nepal. Not much is known about Kamal's history except that he lived at the orphanage between ages one and three.

**Characteristics and symptoms.** Disinhibited social engagement disorder (DSED) may be diagnosed for children who are at least 9 months, developmentally, and who have experienced extreme social neglect or limited opportunity to develop stable attachments (APA, 2013). Consistent with RAD, the social neglect characteristic of DSED may include multiple changes in primary caregivers, severe deficits in meeting the emotional needs of the child, or being raised in a setting where there is no primary caregiver. In contrast to RAD, children with DSED actively seek interactions with unfamiliar adults. This pattern must be evidenced by at least two of the following behaviors: lack of restraint in interacting with unfamiliar adults, culturally inappropriate physical or verbal familiarity, little or no looking back to caregivers when in a new setting, or limited hesitance in leaving with unfamiliar adults (APA, 2013). To be diagnosed with DSED, the child's behavior is believed to be the result of their social neglect and not better explained by impulsivity. Children with DSED may also present with other signs of social neglect, such as developmental delays and malnutrition (Mayes et al., 2017).

**Specifiers.** There are two specifiers for DSED (APA, 2013). The disorder is specified as persistent if symptoms have been present for longer than a year. It is specified as severe if all possible symptoms are present and appear at high levels.

**Impairment and distress.** Children with DSED often experience persistent interpersonal and functional impairment (Gleason et al., 2011). Specifically, DSED is associated with difficulties forming relationships with peers, autism-like presentations, and conduct problems (Kay & Green, 2012; Rutter et al., 2007). These difficulties interfere with the child's ability to

form relationships with adults and peers. The functional impairment experienced by children with DSED may be similar to children with Attention-Deficit/ Hyperactivity Disorder (ADHD) and other externalizing disorders (APA, 2013). While distinct from ADHD, DSED is associated with hyperactivity, conduct problems, or difficulties paying attention in children aged 4-11 (Gleason et al., 2011; Rutter et al., 2007). Consistent with these difficulties, children with DSED symptoms are more likely to receive therapy and special education services than children with similar histories of neglect who do not have DSED symptoms (Gleason et al., 2011).

**Changes in the DSM-5.** As previously discussed, DSED is categorized as a unique disorder in the DSM-5, a change from the DSM-IV-TR, which categorized DSED symptoms as a subtype of RAD (APA, 2000; APA, 2013). DSED is not described as an attachment disorder in the DSM-5 due to research showing that DSED is characterized by disinhibited behaviors towards unfamiliar adults, not impaired attachment behaviors (Lawler, Koss, Doyle, & Gunnar, 2016; Zeanah & Gleason, 2015). The new criteria specifies that DSED can only be diagnosed in children who are developmentally at least 9 months old to prevent the diagnosis of children too young to have the opportunity to form attachments (APA., 2013). The DSM-5 also requires that the pattern of indiscriminant social behavior is exhibited in at least two of four specified ways (e.g., approaching unfamiliar caregivers or inappropriately familiar behavior with others).

**Prevalence.** The prevalence of DSED is not well known, although it appears to be rare in the general population and clinical settings (APA, 2013). Approximately 1.4% of children living in one low income United Kingdom neighborhood were reported to have RAD and/or DSED ( $n = 1,646$  children; Minnis et al., 2013). Studies with high risk samples of maltreated children raised in foster care report prevalence rates of DSED between 19% and 49% (Giltaij,

Sterkenburg, & Schuengel, 2017; Lehmann, Havik, Havik, & Heiervang, 2013; Zeanah et al., 2004).

**Course of the disorder.** DSED follows early social and emotional neglect in childhood, which may be the result of multiple foster placements, institutionalized care, or maltreatment by caregivers (APA, 2013). Longer stays in institutionalized care appear to predict DSED (Humphreys et al., 2017; Lawler et al., 2016). DSED symptoms appear stable over time in early childhood, with little change in disinhibited social behaviors between 21 and 54 months old (Gleason et al., 2011). Although symptoms may persist into school age, there is a significant drop in disinhibited attachment behaviors between 6 and 11 years old for children adopted from institutionalized care (Rutter et al., 2007). DSED can continue into middle childhood and is not well documented in adults (APA, 2013; Humphreys et al., 2017; Mayes et al., 2017).

**Comorbid disorders.** Children with DSED may have comorbid diagnoses which share the etiology of severe social neglect in childhood. Subsequently, DSED may be diagnosed along with RAD and cognitive or language delays (Giltaij et al., 2017; Jonkman et al., 2014; Mayes et al., 2017). Although ADHD and DSED can be diagnosed concurrently, care should be taken to assess if the child's disinhibited social behaviors are not better explained by the impulsivity associated with ADHD (Gleason et al., 2011). Additional research is needed to better understand what other diagnoses children with RAD may experience in their lifetime.

**Differential diagnostic issues.** Developmental disorders may co-occur with DSED and can be differentiated by examining how the child interacts with unfamiliar adults. Children with DSED would be overly familiar with others, seek interactions with strangers, and may not hesitate to wander away from caregivers in new places (APA, 2013). ADHD can be

differentiated from DSED if the child also has inattentive, hyperactive, or impulsive symptoms outside of social situations.

**Treatment.** As with RAD, the best treatment for children with DSED appears to be changing their environment so their emotional and social needs can be met. Children removed from the environments in which they experienced neglect have less signs of DSED compared to those who remain (Humphreys et al., 2017; Zeanah et al., 2015). Thus, clients who exhibit symptoms of DSED should be assessed to determine the safety of their current household. Unfortunately, in contrast to RAD, DSED symptoms do not seem to improve as drastically when children are placed in a stable home (Rutter et al., 2009). Despite changing environments, DSED may persist as long as 7 years after adoption (Rutter et al., 2009). While having a safe, caring, and responsive environment appears to improve symptoms, the persistence of DSED after adoption indicates a need for additional services for these children.

Perhaps due to the relative rarity of DSED, there is little research examining the efficacy of specific treatments beyond adoption placements. Children with DSED appear to vary in their degree of attachment to primary caregivers (Zeanah et al., 2016). For children who lack attachments or have insecure attachments, the focus of therapy may be improving the caregiver-child relationship (Shi, 2014; Zeanah et al., 2016). Otherwise, clinicians may focus on treating associated externalizing behaviors to improve the child's ability to function. Zeanah et al. (2016) suggest, based on clinical experience, that interventions may be used to decrease the child's inappropriately familiar behavior with others. For example, reducing contact with non-caregivers following the child's placement in a new home may reduce the child's generalization of familiar behaviors with strangers; however, there is no research testing the efficacy of this suggestion.

### **Adjustment disorder**

**Case presentation.** Ryan is a 20 year old male college student presenting for therapy due to increased anxiety following a break-up with his girlfriend four months ago. Ryan described feeling tense and anxious since the break-up, often worrying about what he is going to do with his life now that he is single. He reported that he had dated his girlfriend for four years and had planned a future with her. Since she unexpectedly broke up with him, Ryan has had trouble making decisions about school and applying to jobs for after graduation. He is currently beginning his final semester of college and is seeking therapy because his anxiety is interfering with his school work and ability to prepare for life after graduation.

**Characteristics and symptoms.** Adjustment disorder involves excessive distress or impairment following at least one specific stressor. Examples of potential stressors include losing a job, attending college, marital difficulties, becoming a parent, or living through a natural disaster. Stressors are nonspecifically defined by the DSM-5 and include both traumatic and non-traumatic events (APA, 2013). To meet criteria for adjustment disorder, individuals must experience either significant impairment or distress that is disproportionate to the severity of the stressor (APA, 2013). These symptoms must occur within three months of when the stressor begins and the symptoms should end six months after the stressor and its effects end. Reactions to the stressor do not represent culturally normative behaviors, such as normal bereavement. Adjustment disorder is not diagnosed if the stress-related disturbance meets criteria for another mental disorder (e.g., major depressive disorder) or if the symptoms of another disorder (e.g., panic disorder) are being worsened by a specific stressor.

**Specifiers.** Adjustment disorder must be diagnosed with one of six specifiers, which describe the type of symptoms experienced. Adjustment disorder may be diagnosed with depressed mood, anxiety, mixed anxiety and depressed mood, disturbance of conduct, mixed

disturbance of emotions and conduct, and unspecified (APA, 2013). The most common subtype diagnosed in clinical settings is mixed anxiety and depressed mood (O'Donnell et al., 2016; Yaseen, 2017).

**Impairment and distress.** Adjustment disorder is associated with general psychological distress, difficulties in relationships, and poor work self-efficacy (Lorenz, Hyland, Perkonig, & Maercker, 2017). Symptoms may compound impairment in school, work, health, and relationships associated with the initial stressor. For example, someone experiencing adjustment symptoms such as depressed mood and anxiety after being fired may have difficulty applying to new jobs and going to interviews. Those with adjustment disorder may also be at increased risk of suicide, particularly for males and older adults (Qin, 2011).

**Changes in the DSM-5.** There are no major changes to the diagnosis of adjustment disorder in the DSM-5 (APA, 2013). Adjustment disorder is now categorized under the Trauma- and Stressor-Related Disorders sections reflecting the conceptualization of the disorder as a specific reaction to a stressful event (Zelviene & Kazlauskas, 2018). Additionally, the disorder is no longer specified as acute or chronic (APA, 2000; APA, 2013).

**Prevalence.** In the general population, the prevalence rate of adjustment disorder appears to be between 0.2% and 2%; however, these rates are based on European samples (Zelviene & Kazlauskas, 2018). In contrast, adjustment disorder is frequently seen in clinical settings and following stressful life events. It is one of the commonly diagnosed disorders worldwide by psychiatrists and is the presenting concern of 5-23% of outpatient clients (Reed, Mendonça Correia, Esparza, Saxena, & Maj, 2011; Yaseen, 2017). Adjustment disorder appears to be experienced at different rates based on the type of stressor. For example, the disorder seems to be present in about 19% of cancer patients, 19% of patients hospitalized for injuries, 5% of pregnant



women, 24% of women after the birth of their first child, and 13% of men following the birth of their first child (Alvarado-Esquivel, Sifuentes-Alvarez, & Salas-Martinez, 2015; Mitchell et al., 2011; O'Donnell et al., 2016; Wynter, Rowe, & Fisher, 2013).

**Course of the disorder.** The onset of adjustment disorder occurs within three months of a specific stressor (APA, 2013). Common stressors include problems related to work, family, romantic relationships, and illness (Anastasia et al., 2016; Yaseen, 2017). Those who develop the disorder appear to rely on maladaptive coping strategies such as disengagement and avoidance (Vallejo-Sánchez & Pérez-García, 2017). Consistent with limited time frame for diagnosing adjustment disorder, two thirds of those with the diagnosis at 3 months do not continue to have symptoms at 12 months (O'Donnell et al., 2016). Some people who initially present with adjustment disorder may meet criteria for an anxiety, mood, or trauma disorder within the year (O'Donnell et al., 2016). While adjustment disorder is transient by definition, it may indicate a generalized difficulty coping with stressors, which increases risk for additional psychological disorders.

**Comorbid disorders.** There is little research studying the comorbidity of adjustment disorder due to the limited time frame for diagnosis. People diagnosed with medical illnesses, particularly illnesses which cause chronic pain or interfere with the ability to function independently, are at risk for developing adjustment disorder (Kirsh, 2010). Adjustment disorder may identify people at risk for developing an anxiety, mood, or trauma disorder at some point in their life (O'Donnell et al., 2016). Adjustment disorder may be diagnosed along with other disorders as long as the symptoms associated with the adjustment disorder are distinct from the comorbid diagnosis.

**Differential diagnostic issues.** Adjustment disorder can be differentiated from normal stress reactions because of the presence of functional impairment or significant distress beyond what would be expected for the individual's situation and culture (Casey, 2009; O'Donnell et al., 2016). For people who present with symptoms related to a traumatic event, it is necessary to differentiate between PTSD, acute stress disorder, and adjustment disorder. In addition to the specific time frames for each disorder, the specific set of symptoms differs across the three disorders. Adjustment disorder may be diagnosed if full symptom criteria are not met for PTSD or acute stress disorder (APA, 2013). Individuals with personality, mood, and anxiety disorders may have difficulty coping with stressful events. In these cases, clinicians should determine if the symptoms represent a pattern that existed prior to when the stressor occurred. If the reaction to the stressor appears to be above and beyond what can be attributed to a comorbid disorder, then an additional diagnosis of adjustment disorder may be appropriate.

**Treatment.** Despite how often adjustment disorder is diagnosed in clinical settings, there is limited research examining effective treatments for the disorder (Skrubis et al., 2016; Zelviene & Kazlauskas, 2018). Typically, adjustment disorder is treated with brief interventions unless the stressors are longstanding or there is another comorbid disorder that may also be treated (Casey, 2009). Problem solving strategies, psychoeducation, and solution focused therapy may be used to remove the stressor or reduce its impact (Casey, 2009). For example, a new parent might benefit from seeking help from family members, accessing available resources, or joining a support group for new parents. Some clients may need practical assistance and could benefit from case management and building their social support network. Treatment may also focus on changing how people respond to stressors. This approach may include increasing flexibility in the use of coping strategies, practicing relaxation techniques, and using cognitive

restructuring to reframe thoughts about the stressor (Casey, 2009; Vallejo-Sánchez & Pérez-García, 2017). Cognitive behavioral, relaxation, mindfulness, and social support enhancing interventions delivered through internet based programs and bibliotherapy show potential for helping some individuals with adjustment disorder (Bachem & Maercker, 2016; Eimontas, Rimsaite, Gegieckaite, Zelviene, & Kazlauskas, 2017).

### **Acute Stress Disorder**

**Case presentation.** Jevaun is a 26 year old male who is seeking therapy after experiencing a serious car accident one week ago. Although Jevaun only had minor physical injuries, another person involved in the accident died at the scene. Jevaun did not know the person who died, but he described nightmares in which he sees the person as they looked after the accident. According to Jevaun, he cannot stop thinking about the accident and he becomes so upset when near fast moving traffic that he avoids going anywhere on a highway. Since the accident, he has had trouble falling asleep, cannot concentrate at work, and jumps whenever there is a loud unexpected noise. Additionally, Jevaun described feeling alone, unhappy, and easily irritable since the accident. He is worried he will not be able to “get back to normal” because he is not able to do the things he normally does, like use highways and be productive at work.

**Characteristics and symptoms.** Acute stress disorder describes symptoms experienced between three days to one month following a traumatic event (APA, 2013). The DSM-5 definition of a traumatic event includes real or threatened death, serious injury, or sexual assault. Natural disasters, war, physical assaults, car accidents, sexual abuse, industrial accidents, and gaining consciousness during surgery all may qualify as a traumatic event. Individuals can be diagnosed with acute stress disorder if they experienced the trauma themselves, they witnessed

the events, or if the trauma was experienced by someone close to them (APA, 2013). It is also possible to meet criteria for acute stress disorder if the individual is intensely exposed to details of a traumatic event (e.g., a police officer who is repeatedly exposure to scenes where a violent death occurred).

Responses to the trauma for those with acute stress disorder differ from person to person. However, to meet criteria for the disorder, an individual must experience at least nine symptoms from any of the following domains: intrusion symptoms, negative mood, dissociative symptoms, avoidance, or heightened arousal (APA, 2013). Intrusion symptoms include repeated distressing memories of the trauma, nightmares, flashbacks, or strong reactions to reminders of the trauma. Individuals may experience dissociative symptoms such as altered perceptions or difficulty recalling significant parts of the trauma. Acute stress disorder is also characterized by avoidance of triggers related to the trauma. Triggers may be internal (e.g., thoughts, memories, or emotions) or external (e.g., places, people, and situations). Additionally, those with acute stress disorder may experience heightened arousal which interferes with sleep, concentration, and mood and can lead to being hypervigilant and easily startled. Collectively, these symptoms lead to significant distress or impairment for up to one month following the trauma.

**Impairment and distress.** Acute stress disorder is associated with social, academic, occupational, and functional impairment. Sleep may be disturbed by nightmares or hyperarousal, leading to disrupted and low quality sleep (Suliman, Troeman, Stein, & Seedat, 2013). Those with acute stress disorder often have difficulty facing things and situations that remind them of the trauma, which may restrict where they go and what they do. Additionally, emotional symptoms such as depressed mood and irritability may interfere with the individual's relationships and general ability to function.

**Changes in the DSM-5.** There are several changes in DSM-5 criteria for acute stress disorder. The new criteria specify if the person experienced the trauma directly, witnessed it, or learned about it happening to an important other (APA, 2013). Experiencing fear, helplessness, or horror in response to the trauma is no longer required (Bryant et al., 2015). Another significant difference is that the DSM-5 does not require individuals to meet a minimum number of symptoms from each symptoms cluster (e.g., at least one re-experiencing symptom; APA, 2000). Instead, a minimum of nine symptoms from any of the symptom clusters must be met in recognition of research showing that those with acute stress disorder may vary in their experiences (Bryant et al., 2015). The final change in the new DSM is that symptoms must be present for at least 3 days rather than 2 days (APA, 2013).

**Prevalence.** The prevalence of acute stress disorder in trauma survivors is reported to vary from 7% to 28% (Bryant, Friedman, Spiegel, Ursano, & Strain, 2011). Differences in the type of trauma experienced may affect the likelihood of developing the disorder. For example, studies have reported different rates of acute stress disorder in those who experienced severe burns (2% to 30%; Giannoni-Pastor et al., 2015), car accidents (13% to 21%; Harvey & Bryant, 1998), rape (37%; Nilsson et al., 2015), and earthquakes (15%; Yuan et al., 2012).

**Course of the disorder.** Not all people who experience a traumatic event will develop acute stress disorder (Bryant et al., 2011). Those at risk for suicide and those with high trait anxiety, a more general and longstanding pattern of anxiety, are more likely to develop the disorder following a trauma (Suliman et al., 2013). Negative beliefs about oneself and the world as well as self-blame following the trauma also predict acute stress disorder (Suliman et al., 2013). Difficulty sleeping, particularly if those difficulties persist, may also predict acute stress disorder and PTSD (Harvey, Jones, & Schmidt, 2003).

There are mixed results surrounding how well acute stress disorder predicts PTSD (Bryant et al., 2015). It appears that some people recover naturally from acute stress disorder while about half go on to develop PTSD (Bryant et al., 2011). Similarly, only about half of those with PTSD have a history of acute stress disorder (Bryant, 2010). The new DSM-5 criteria for acute stress disorder appear to have better predictive ability in identifying those who will develop PTSD as it no longer requires endorsement of dissociative symptoms (Bryant et al., 2015).

**Comorbid disorders.** In a sample of people admitted to the hospital for traumatic injuries, about half of those with acute stress disorder also met criteria for another disorder (Bryant et al., 2015). In this sample, major depressive disorder (18%), generalized anxiety disorder (12%), agoraphobia (12%), and substance use disorders (10%) were the most common comorbidities. However, there is little research examining the relationship between acute stress disorder and other disorders, partially due to the transient nature of acute stress disorder, which can only last until one month after the trauma (Bryant et al., 2011).

**Differential diagnostic issues.** One way acute stress disorder may be differentiated from other disorders is that symptoms are specifically related to a traumatic event and the onset of symptoms occurs shortly after the event. In contrast, adjustment disorder may be diagnosed in those who either have not experienced a traumatic event or who do not meet criteria for acute stress disorder (APA, 2013). Panic attacks may occur with acute stress disorder, and the panic attack specifier may be used in these cases. However, panic disorder only describes those who have experienced unexpected panic attacks which are unrelated to a specific trigger such as a flashback. PTSD cannot be concurrently diagnosed with acute stress disorder for the same traumatic event as acute stress disorder is diagnosed within the first month following the trauma; PTSD can only be diagnosed one month following a trauma. Differentiating acute stress disorder

from a traumatic brain injury (TBI) can be difficult as some symptoms may overlap in these disorders, such as difficulty concentrating, irritability, and loss of memory of the trauma (APA, 2013). Acute stress disorder may be distinguished from a TBI when symptoms specific to acute stress disorder, such as intrusive, dissociative, and avoidance symptoms are present.

**Treatment.** Trauma-focused cognitive behavior therapy (CBT) is recommended as the standard treatment for acute stress disorder by the World Health Organization, which also recommends against treating the disorder with antidepressants or benzodiazepines (Tol, Barbui, & van Ommeren, 2013). CBT may be helpful as individuals with acute stress disorder often overestimate the likelihood that negative events will happen and are hypersensitive to perceived threats in their environment (Bryant, 2017). Early use of CBT or prolonged exposure therapy also appears to decrease the likelihood of later developing PTSD (Bryant, Moulds, Guthrie, & Nixon, 2005; Bryant, Moulds, & Nixon, 2003; Shalev et al., 2012). Importantly, many people naturally recover from traumatic experiences. CBT is shown to be effective with those diagnosed with acute stress disorder, not for non-clinical individuals who experienced a traumatic event. Treatment should also include an assessment of the client's current safety as the trauma may be ongoing.

Critical incident stress debriefing (CISD) is an intervention that has been used immediately following exposure to a traumatic event with the intention of preventing the development of acute stress disorder, PTSD, and/or other distress. CISD and similar single-session debriefing interventions, however, are not recommended due to their potential to cause harm (Rose, Bisson, Wessely, 2003). The majority of outcome studies reported CISD has no effect or negative effects on psychological distress (Rose et al., 2003; Wei, Szumilas, & Kutcher, 2010). In contrast to CBT, CISD is used regardless of whether the individual is diagnosed with

acute stress disorder or experiencing any distress (Wei et al., 2010). CISD is considered a crisis intervention that encourages clients to describe their experiences and reactions related to the event and prepare for symptoms that they may experience in the future (Rose et al., 2003). This attempt at emotionally processing the trauma appears to interfere with the normal recovery process, which is typically characterized by intermittent processing rather than the immediate and complete processing encouraged by CISD (Wei et al., 2010). Despite the urge to implement preventative interventions following wide-scale traumatic events, such as school shootings, terrorist attacks, or natural disasters, it is necessary to consider the potential harm of using treatments that are not evidence-based.

### **Posttraumatic Stress Disorder (PTSD)**

**Characteristics and symptoms.** Posttraumatic Stress Disorder (PTSD) describes four clusters of symptoms that may be experienced after exposure to a traumatic event. As with acute stress disorder, a traumatic event is defined to include sexual violence, serious physical injury, threatened death, and the sudden or violent death of another person (APA, 2013). The traumatic event may be experienced directly or indirectly, such as by witnessing the trauma, discovering the trauma occurred to a loved one, or being exposed to severe details of traumatic events (e.g., search crews looking for human remains following a disaster).

In addition to experiencing a traumatic event, the diagnosis of PTSD includes at least one month of re-experiencing, avoidance, mood/ cognition, and hyperarousal symptoms. At least one form of re-experiencing symptoms must be present, such as repeated intrusive memories of the event, repeated trauma-related nightmares, dissociative reactions such as flashbacks, and intense distress or physiological reactions to reminders of the event (APA, 2013). Flashbacks describe the feeling that the traumatic event is happening again in the present and may affect one's



awareness of the current environment. Avoidance symptoms must be experienced in at least one of two ways. The individual must either try to avoid internal reminders of the trauma (such as memories, thoughts, or emotions) or external reminders of the trauma (such as situations, people, places, or objects). Two or more negative changes in mood or cognitions must occur following the traumatic event. These changes include difficulty remembering significant parts of the trauma, developing negative beliefs (e.g., I am not safe, others are evil), blaming oneself or others for the trauma, disinterest in significant activities, feeling detached from others, persistent negative mood, and difficulty feeling positive emotions (APA, 2013). The fourth symptom cluster requires at least two changes in arousal or reactivity following the traumatic event. Irritability and angry outbursts, reckless behaviors, hypervigilance, being easily startled, difficulty concentrating, and sleep problems are evidence of increased hyperarousal. Symptoms of PTSD are associated with significant distress and/or functional impairment.

The DSM-5 criteria for PTSD are different for children six years old and younger. The primary difference is that only one symptom is required from either the avoidance or negative changes in mood and cognition clusters (APA, 2013). Other changes describe how symptoms may look differently for younger children. Intrusive memories or flashbacks may be evidenced by trauma-related play. Hyperarousal may result in extreme temper tantrums. As young children may not be able to verbally express negative changes in beliefs, these symptoms may be exhibited as social withdrawal and decreased interest in playing. Children typically experience impairment in their social relationships, behavior, and school functioning.

**Specifiers.** PTSD can be specified with dissociative symptoms or with delayed expression (APA, 2013). The dissociative symptoms specifier should be used to describe either persistent depersonalization, where one feels a sense of unreality or detachment from their body,

or derealization, where one feels a sense of unreality of their surroundings. PTSD is specified with delayed expression if six months pass after the traumatic event before full criteria are met.

**Impairment and distress.** Of people who experience a traumatic event, those who develop PTSD tend to have lower quality of life, increased disability, and difficulties in relationships (Greene, Neria, & Gross, 2016; Westphal et al., 2011). Anger and emotional numbing takes its toll on family and spousal relationships, leading to increased isolation (Creech, Zlotnick, Swift, Taft, & Street, 2016; Ray & Vanstone, 2009). Avoidance and re-experiencing symptoms – such as flashbacks – are associated with physical health concerns and missed school days in children (Kassam-Adams, Marsac, & Cirilli, 2010). At work, veterans with PTSD experience trouble with time management, impaired ability to meet interpersonal demands, and lower productivity (Adler et al., 2011). In addition to these concerns, having PTSD can be physically exhausting due to hyperarousal symptoms, difficulty sleeping, and always looking out for threats (Resick, Monson, & Rizvi, 2008).

**Changes in the DSM-5.** A number of changes occurred in the DSM-5 criteria for PTSD (APA, 2013). Traumatic events are defined more specifically, and the criterion that one must have a specific emotional reaction to the trauma is no longer required. The three symptom clusters defined in the DSM-IV were changed to four, as the numbing symptoms were recategorized to include both cognitive and mood symptoms. Additionally, hyperarousal symptoms were broadened to include aggressive behaviors such as angry outbursts and reckless behaviors. The separate criteria for children younger than six years old were added to the DSM-5 to be more developmentally appropriate.

**Prevalence.** Although up to 90% of Americans have experienced at least one traumatic event, the rates of PTSD are much lower (Kilpatrick et al., 2013). The lifetime prevalence of

PTSD in the general population is approximately 8% to 9%, with 5% of people meeting criteria for the disorder each year (Kessler et al., 1995; Kessler et al., 2005; Kilpatrick et al., 2013). Information on PTSD in primary care is varied, as one review reported that the prevalence ranged from 2% to 39% (Greene, Neria, & Gross, 2016). Changes in the DSM-5 criteria for PTSD do not appear to have substantially changed the number of people who meet for the disorder (Kilpatrick et al., 2013).

Certain groups in the United States are at greater risk of experiencing a traumatic event and developing PTSD. Military members and veterans are particularly at risk, with almost one in ten Vietnam veterans continuing to have PTSD over a decade after the war ended (Kilpatrick, 2007). Experiencing a disaster event, such as the Buffalo Creek Dam collapse or wildfires, is associated with PTSD rates ranging from 27% to 44% (Keane & Barlow, 2004). Women may be more likely to develop PTSD, although the research is mixed (Greene et al., 2016; Kilpatrick et al., 2013).

**Course of the disorder.** PTSD is more likely to develop in individuals who have experienced multiple traumatic events, although many people do not develop PTSD despite their history of trauma (Kilpatrick et al., 2013). Experiencing interpersonal violence, sexual assault, and military combat were most predictive of developing PTSD compared to other types of traumatic events like witnessing an accidental death (Green et al., 2016; Kessler et al., 1995; Kilpatrick et al., 2013). The age of onset of PTSD appears evenly distributed across the lifespan, with slightly higher rates of the disorder in 30 to 59 year olds (Kessler et al., 2005). Approximately half of those with PTSD first developed acute stress disorder, and most people experience symptoms within three months of the traumatic event (APA, 2013; Bryant, 2010).

There are multiple factors associated with developing PTSD. Risk for PTSD appears moderately heritable based on twin studies that controlled for environmental influence (Sheerin, Lind, Bountress, Nugent, & Amstadter, 2017). Additionally, trauma exposure appears to influence the expression of genes, including those related to the HPA-axis, which controls the stress response and regulates multiple body functions (Sheerin et al., 2017). Cognitively, attentional bias towards reminders of the traumatic event appears to predict intrusive symptoms, consistent with the hypervigilance often experienced by those with PTSD (Schäfer, Zvielli, Höfler, Wittchen, & Bernstein, 2018). In addition to the risk posed by genetic and cognitive factors, early environment also plays a role in the etiology of PTSD. Not only does incidence of PTSD increase with multiple traumas, a history of childhood abuse and neglect is particularly predictive of developing PTSD later in life (Keane & Barlow, 2004).

**Comorbid disorders.** PTSD has a complex relationship with comorbid disorders (Galatzer-Levy, Nickerson, Litz, & Marmar, 2013). For example, certain disorders such as substance use or conduct disorder may increase one's likelihood of experiencing a traumatic event and developing PTSD (Keane & Barlow, 2004). Similarly, PTSD and comorbid disorders may increase risk for substance use, homelessness, and risky behaviors that may subsequently increase risk for experiencing additional traumas. Comorbidity rates for PTSD and substance use range from 22% to 52% (Green et al., 2016; Kessler et al., 1995). Alcohol misuse, specifically, is associated with increased PTSD symptom severity, particularly in veterans (Walton et al., 2018). PTSD is highly comorbid with major depressive disorder, with co-occurrence rates as high as 23% to 71% (Angelakis & Nixon, 2015; Green et al., 2016). Those with comorbid depression may be less responsive to treatment and experience more chronic symptoms than those without (Angelakis & Nixon, 2015). Physical disease and chronic pain problems are common in those

with PTSD and in some cases appear to be related to somatization (Green et al., 2016).

Additionally, anxiety disorders may co-occur with PTSD. Specific phobias and social anxiety disorder are comorbid with PTSD in approximately 30% of individuals (Kessler et al., 1995).

Overall, those with PTSD experience a comorbid disorder in 62% to 92% of cases (Green et al., 2016; Kessler et al., 1995).

**Differential diagnostic issues.** Mathematically, the potential combinations of symptoms result in 636,120 unique possible presentations of PTSD, which can make differential diagnosis difficult (Galatzer-Levy & Bryant, 2013). PTSD can be distinguished from the other trauma and stress-related disorders based on the timeframe, type of event, and symptoms (APA, 2013). Acute stress disorder would be appropriately diagnosed within one month of the traumatic event, while PTSD requires at least one month of symptoms to be diagnosed. In contrast to PTSD, adjustment disorder can be diagnosed in response to any type of stress – not just traumatic events. Adjustment disorder would be a more appropriate diagnosis when an individual experiences distress and impairment following a traumatic event, but does not meet criteria for PTSD.

It is also possible for the onset of another psychological disorder, such as panic disorder or major depressive disorder, to occur following a traumatic event. In these situations, it is necessary to determine if the symptoms are better explained by PTSD, the other disorder, or if both are being experienced comorbidly. Major depressive disorder shares symptoms with PTSD, including depressed mood, negative beliefs, sleep problems, and difficulty concentrating (Angelakis & Nixon, 2015). However, major depressive disorder is not associated with the re-experiencing symptoms and avoidance characteristic of PTSD. Similarly, anxiety disorders, obsessive compulsive disorder, and PTSD may share avoidance and intrusive symptoms;

however, with PTSD, these symptoms are specifically associated with the traumatic event. PTSD may be diagnosed with a panic attack specifier if the individual experiences panic attacks related to their PTSD symptoms. For example, someone may have panic attacks when they experience intrusive memories of the traumatic event.

### **Treatment for Post-traumatic Stress Disorder**

#### **Cognitive Processing Therapy**

Cognitive Processing Therapy (CPT), designed specifically for the treatment of PTSD, integrates cognitive interventions with exposures in the form of a trauma account, which is a written narrative of the trauma memory (Resick, Nishith, Weaver, Astin, & Feuer, 2002). Clients engage in interventions initially with the therapist and gradually learn to manage their symptoms independently through regular homework. CPT is based on the assumptions of social cognitive theory, emphasizing the role of client's interpretations of and reactions to the traumatic event, as well as the emotional processing theory of PTSD (Resick, Monson, & Chard, 2014).

Emotional processing theory explains escape and avoidance behaviors as resulting from a mental fear network in which the person associates aspects of the trauma memory with the trauma itself (Foa & Kozak, 1986). Thus, situations, smells, people, and things that remind the client of their traumatic experience may activate this mental fear network, leading to fear, intrusive symptoms, and avoidance. The trauma account in CPT is used as a form of exposure, allowing the client to habituate to the traumatic memory and alter the fear network associated with PTSD symptoms (Resick et al., 2014).

Social cognitive theory complements emotional processing theory within CPT by informing cognitive interventions and targeting other trauma-related symptoms, such as anger, guilt, and sadness (Resick et al., 2014). Cognitive interventions seek to identify how the client's

cognitions changed due to the trauma and how those changes influence emotional and behavioral responses. Ultimately, clients work towards integrating their traumatic experiences with their pre-existing beliefs about themselves, others, and the world in a balanced way through a process called *accommodation* (e.g., “Not everyone can be trusted, but most people can be;” Resick & Schnicke, 1992). In contrast to accommodation, clients may *assimilate* information about the trauma without altering their pre-existing beliefs (e.g., “I must have done something wrong to deserve this abuse”) or *over-accommodate* information about the trauma by extremely altering their pre-existing beliefs (e.g., “Everyone is out to hurt me”). Integrating information about the trauma through accommodation allows clients to challenge distorted thoughts following the trauma, decreasing emotions such as guilt, anger, and sadness (Resick et al., 2014).

CPT appears to be effective in treating PTSD symptoms, with the majority of the research focusing on PTSD symptoms following sexual assault, childhood sexual abuse, and military combat trauma (Chard, 2005; Monson, et al., 2006; Resick et al., 2002). Specifically, a review of ten randomized controlled trials and six observational studies concluded that CPT is effective at improving quality of life and reducing PTSD symptoms, depression, and anxiety (Tran et al., 2016). Although a great deal of CPT research has occurred within the Veterans Affairs system, CPT has been successfully implemented in other settings such as at mental health clinics and at university counseling centers with novice therapists (Chard, 2005; Wilkinson, von Linden, Wacha-Montes, & Bryan, 2017). Therapists may use CPT with clients individually or in a group format, with some evidence indicating that clients improve more in individual therapy (Lamp, Avallone, Maieritsch, Buchholz, & Rauch, 2018; Resick & Schnicke, 1992). Based on this support, CPT is a recommended treatment for PTSD and seems similarly effective to other evidence based treatments such as prolonged exposure therapy (APA, 2017; Beck & Sloan,

2012; Cook & Stirman, 2015; Jeffreys et al., 2013; Rutt, Oehlert, Krieshok, & Lichtenberg, 2018).

The CPT manual may be purchased commercially (e.g., Amazon), and the military version of the therapist and client CPT manuals can be found for free online. A description of this treatment program follows.

**Psychoeducation.** Psychoeducation explaining the development of PTSD symptoms can help normalize clients' experiences and provide a rationale for treatment. Within CPT, psychoeducation includes describing: symptoms as natural responses to traumatic events, the relationship between trauma and cognitions, the difference between natural emotions and manufactured feelings, and PTSD as the disruption of natural recovery (Resick et al., 2014). PTSD symptoms are related to an adaptive response to dangerous situations – we have an automatic fight-flight-freeze response that helps us respond to danger, and we avoid things that remind us of the trauma because those things might be dangerous (Resick et al., 2008). The trauma influences beliefs about oneself, others, and the world as clients attempt to integrate the trauma into their existing worldviews. In response to distorted beliefs, clients experience emotions like anger, guilt, and shame (Resick & Schnicke, 1992). These manufactured feelings, resulting from interpretations of the trauma, differ from natural feelings like fear that are an automatic response to trauma (Resick et al., 2014). With PTSD, these trauma-related cognitions and avoidance behaviors become generalized and interrupt natural recovery (Resick et al., 2014).

**Cognitive interventions.** Cognitive interventions are integrated throughout CPT and specific techniques include the Impact Statement, identifying how beliefs relate to events and emotions, and Socratic questioning. The Impact Statement is written early in therapy and describes the impact of the trauma on clients' beliefs about themselves, others, and the world



(Resick et al., 2014). Collaboratively, the therapist and client use the Impact Statement to identify the meaning of the trauma for the client, how beliefs were influenced by the trauma (through accommodation, over-accommodation, or assimilation), and how stuck points may have interfered with assimilation. *Stuck points* are conflicts between pre-existing beliefs and information from the traumatic experience (Resick & Schnicke, 1992). Awareness exercises and worksheets are used to as a first step to cognitive restructuring by helping clients understand the relationship between events, thoughts, and emotions (Resick et al., 2014). Cognitive restructuring seeks to alter thoughts or interpretations about events to be more realistic and change the client's emotional and behavioral responses. Therapists use Socratic questioning to challenge problematic thoughts and help clients reframe thoughts to be more realistic. Socratic questioning involves asking targeted questions to clarify beliefs, assumptions, and evidence related to distorted thoughts and then reframe those thoughts by exploring alternative perspectives and examining potential outcomes of assumptions (Resick et al., 2014). CPT focuses on cognitive distortions related to safety, trust, power, self-esteem, and intimacy (Keane & Barlow, 2004). Additionally, consistent with general cognitive behavior therapy (Beck, 2011), clients learn to independently use cognitive restructuring skills in different situations to manage their symptoms and work towards accommodation of the trauma with their beliefs.

**Trauma account.** Consistent with CPT's integration of emotional processing theory with social cognitive theory, clients engage in exposures by writing, reading, and re-writing a detailed account of the trauma – called a trauma account. Successful exposures involve confronting the feared memory without avoidance (Keane & Barlow, 2004). In order to fully engage clients in the memory of the trauma, trauma accounts should be handwritten and contain as much detail as possible, including thoughts, feelings, sights, sounds, and physical sensations (Resick et al.,

2014). Writing a trauma account can be very difficult, as clients may fear the memory or their emotions related to the memory. Subsequently, the urge to avoid by skipping aspects of the trauma, distracting oneself, or not doing the exposure at all should be addressed at the beginning when therapists initially discuss the trauma account. Clients read the trauma account in session and daily as part of homework. Over the course of therapy, writing and reading the trauma account allows clients to express avoided natural emotions related to the trauma, habituate, identify stuck points, and integrate reframed thoughts about the trauma into the trauma memory.

### **Prolonged Exposure Therapy**

Prolonged exposure therapy is rooted in learning theory and emotional processing theory (Rothbaum, Foa, & Hembree, 2007). Prolonged exposure therapy usually consists of 8-15 weekly or twice-weekly sessions that last between 60-90 minutes (Foa, 2011; Rothbaum et al., 2007). The components of prolonged exposure therapy are repeated prolonged imaginal exposures to the trauma memories, repeated in vivo exposures to avoided situations, psychoeducation, and breathing retraining. Exposures are the primary intervention to decrease PTSD symptoms and create change through the mechanisms proposed by behavioral principles and emotional processing theory.

Exposures – purposefully confronting feared memories, situations, and objects – decrease fear and avoidance behaviors through the behavioral principles of classical and operant conditioning (Foa, 2011). Fear develops through classical conditioning, in which the person learned to association something (e.g., cars) with the traumatic experience (e.g., fear during a car accident). Avoidance behaviors (e.g., refusing to drive a car again) prevent extinction, or re-learning that cars are not usually dangerous. Avoidance behaviors are also maintained through operant conditioning, in that clients feels relief when they successfully avoid something

frightening. Exposures encourage clients to confront their fears and learn that the thing they fear can be safe.

Emotional processing theory of PTSD posits that exposures create change by allowing clients to emotionally process their trauma (Foa, 2011). This process is the altering of a mental fear structure, which is a type of memory that associates a stimulus with the fear response and specific meanings, like that the stimulus is dangerous (Foa & Kozak, 1986). When the fear structure is activated by the stimulus, we automatically interpret the meaning of the stimulus as dangerous and thus attempt to avoid it to protect ourselves. The fear structure is adaptive and helpful when the structure accurately represents the world – it is useful to interpret a roaring bear as dangerous and automatically seek to avoid it (Rothbaum et al., 2007). The fear structure is maladaptive and can result in PTSD symptoms when the structure does not accurately represent the world, leads to avoidance behaviors activated by harmless situations, is interfering with the ability to function, and leads to harmless situations being interpreted as dangerous. The only way to change the fear structure is by first activating it and then replacing inaccurate information (cars are dangerous) with new information (cars are usually safe; Foa & Kozak, 1986). From Foa and Kozak's (1986) perspective, extinction learning is viewed as a true change in the association between what is feared (the conditioned stimulus such as riding in a car) and the fear response.

Recent animal and human conditioning studies support a different conceptualization of what happens during exposure therapy (see Hermans, Craske, Mineka, & Lovibond, 2006, for a review). The inhibitory learning model proposes that exposure does not eliminate the association between what is feared (e.g., riding in a car) and the fear response (Vervliet, Craske, & Hermans, 2013). Fears are not “unlearned.” Instead, extinction learning results in a newly formed inhibitory association that competes with the original excitatory association (Bouton, 2000). Said

differently, through exposure, a new association is learned (e.g., riding in a car is now associated with safety) but the old association remains (e.g., riding in a care is associated with danger).

With exposure therapy, this new association (e.g., riding in a car is associated with safety) becomes stronger than the old association (e.g., riding in a car is associated with danger).

The inhibitory learning model has led to a variety of recommendations regarding how to maximize the effectiveness of exposure therapy (see Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014). One recommendation is to set up exposures as experiments, with the intention of violating patients' expectations (e.g., they will experience intolerable fear, they will be harmed). Another recommendation is to conduct exposures under a variety of contexts to maximize inhibitory learning (e.g., driving different types of cars, driving at different times of day, driving on different types of roads).

Prolonged exposure therapy appears to be an effective treatment for PTSD. Meta-analyses indicate that prolonged exposure therapy performs as well as or slightly better than other common treatments of PTSD and there is a large effect size in the efficacy of prolonged exposure therapy compared to control treatments in randomized controlled trials (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010; Tran & Gregor, 2016). On average, clients engaging in prolonged exposure experience decreased PTSD symptoms and increased quality of life (Powers et al., 2010). Contrary to common concerns about exposures, a review of 25 studies evidences no difference in client dropout rates between exposure therapy and other treatments for PTSD (Hembree et al., 2003; Ruzek et al., 2016). Due to the empirical support for prolonged exposure, it is recommended as a treatment of choice by the American Psychological Association and the Veterans Affairs system along with cognitive processing therapy (APA, 2017; Cook & Stirman, 2015). Prolonged exposure therapy also appears adaptable to different settings, with

different traumatic events, and when administered in 60 minute or 90 minute sessions (Asukai, Saito, Tsuruta, Kishimoto, & Nishikawa, 2010; Foa et al., 2005; Foa et al., 2018; Nacasch et al., 2015). Foa's therapist and client manuals for PTSD are available commercially (e.g., Amazon).

**Psychoeducation and common reactions to trauma.** Consistent with CBT principles, prolonged exposure therapy includes educating clients about their symptoms and the rationale for treatment (Beck, 2011). PTSD symptoms are framed as a common reaction to traumatic events, with some people recovering naturally and others needing help to process their experiences (Rothbaum et al., 2007). Psychoeducation includes an explanation of the four symptom clusters of PTSD (re-experiencing, avoidance, changes in mood/cognitions, and hyperarousal) as well as other common areas of concern for clients with PTSD (e.g., depression, self-image, substance use, sexual relationships).

**Breathing retraining.** Breathing retraining is taught during the first session in order to provide clients with an immediate tool to manage their anxiety (Rothbaum et al., 2007). Clients learn to engage in slow, controlled breathing, which is practiced outside of session three times every day. Clients should not use breathing exercises as a form of avoidance during exposures because both emotional processing theory and behavioral principles assert that activating the client's fear and anxiety – not avoiding it – is necessary for new learning to occur (Craske & Barlow, 2008; Foa, 2011; Foa & Kozak, 1986).

**In vivo exposures.** Exposures that involve entering situations that are typically avoided due to fear and anxiety are called *in vivo* exposures (Foa, 2011). First, the client and therapist collaboratively develop a hierarchy of specific things, situations, people, and places that the client avoids or feels anxious in, ranking these situations in terms of how distressing they are to the client (Rothbaum et al., 2007). Exposures should be safe situations that the client typically

avoids due to unrealistic beliefs about the safety of the situation or their ability to tolerate it (Foa, 2011). Exposures should also be situations that the client can realistically engage in regularly between sessions. Trauma-related *in vivo* exposures may include being alone in different situations, physical or sexual contact, listening to loud noises, or talking with someone about the trauma (Rothbaum et al., 2007). Over the course of treatment, clients repeatedly engage in exposures, beginning with situations associated with mild-moderate distress and then gradually completing more difficult exposures on their hierarchy. Clients rate their distress using Subjective Units of Distress (SUDS) in order to build their hierarchy and assess progress over the course of treatment.

**Prolonged imaginal exposures.** Imaginal exposures involve remembering the traumatic event by repeatedly describing it out loud in session. To increase engagement in the trauma memory, therapists encourage clients to describe the event from beginning to end in detail, with eyes closed, using the present tense (Rothbaum et al., 2007). Therapists may occasionally interrupt clients to keep them engaged with the memory, direct them towards aspects of the memory they may be avoiding, and ask their 0 – 100 Subjective Units of Distress (SUDS) ratings; however, these interruptions should be minimal. The standard 40 minute imaginal exposure can be adapted to 20-30 minutes to fit in a typical hour long session (Nacash et al., 2015). After the imaginal exposure, therapists aid clients in processing their emotions, thoughts, and other reactions (Rothbaum et al., 2007). As clients begin to habituate to their trauma memories, therapists help them target hot spots – the most difficult parts of the memory – by repeatedly describing this part of the traumatic event as if it was happening in slow motion. Clients should not take breaks during exposures, as this would reinforce avoidance, and should listen to the most recent recording of the in-session imaginal exposure daily as homework.

Clients with multiple traumas may initially focus exposures on the most distressing memory until progress is made before moving on to other memories (Rothbaum et al., 2007).

### **Case Example of Prolonged Exposure Therapy**

**Background.** Sarah was a 24-year-old full-time graduate student working on her master's degree in nursing. She worked part-time at a nursing home. She was living with her boyfriend, whom she had been dating for a year and a half. She described her family of origin as close and supportive.

Three years earlier, Sarah was in a long-term relationship with another man named Zac. They were in a serious car accident. Zac was the driver, and Sarah was the passenger. Zac was killed instantly (although Sarah initially thought that he was only unconscious), and Sarah was seriously injured. She sustained internal injuries, a concussion, and back injuries. At the time of intake, she reported intermittent problems with headaches and back pain, which she attributed to lingering effects from the accident.

Sarah met criteria for PTSD related to the accident. Sarah frequently experienced nightmares about the accident. She avoided being a passenger in a car and experienced intense fear and hypervigilance when she could not avoid being a passenger. She was somewhat comfortable driving, but feared and avoided driving on country roads, because the accident occurred when Zac was hit by another vehicle when attempting to cross a highway from a country road. She experienced intrusive recurrent recollections of the accident and avoided external reminders such as looking at pictures or videos of her and Zac because doing so caused her significant distress. She reported an inability to recall some aspects of the accident and decreased interest in and motivation for school and work since the traumatic event. Since the accident, she experienced difficulty falling asleep as well as restless and unsatisfying sleep.

At intake, Sarah was taking Zoloft, which was prescribed to her soon after the accident. She was taking no other daily medications. She used over-the-counter medications for her occasional headaches and flare ups of back pain.

Sarah's presenting complaint was her symptoms of PTSD. In addition to her primary diagnosis of PTSD, Sarah met criteria for diagnoses of generalized anxiety disorder, major depressive disorder, and social anxiety disorder on the basis of a semi-structured clinical interview.

**Treatment.** Therapy sessions were conducted weekly. The same therapist who conducted the intake (over the course of two sessions) served as the treatment therapist. Consequently, a good therapeutic alliance had been established by the time of the active phase of treatment. The therapist followed the treatment program outlined in *Reclaiming Your Life From a Traumatic Experience* by Rothbaum et al. (2007). Sarah completed weekly questionnaires assessing PTSD and depressive symptoms to objectively track changes over time.

In the first session after assessment was completed, the therapist shared the rationale for prolonged exposure. Sarah was somewhat apprehensive about exposure therapy but also recognized that she was likely to remain "stuck" with her current symptoms if she continued her primary coping strategy of avoidance. In this session, Sarah was also taught diaphragmatic breathing as a way to decrease her physiological arousal.

During the second session, Sarah and her therapist practiced diaphragmatic breathing again and created an *in vivo* exposure hierarchy. Sarah had practiced diaphragmatic breathing twice on three days since the last session. She experienced her first panic attack in a year in between sessions and asked the therapist whether she should start anxiety medication; she had tried anxiety medication in the past with modest benefit and discontinued it due to the side



effects. Her therapist discussed with Sarah how it was not unusual for anxiety to increase at the beginning of CBT because therapy focused her attention on the trauma, which she had previously been working very hard to avoid. Sarah was told that the choice was hers with regard to what to do with the medication but that she would likely experience a reduction in anxiety over the next several weeks without medication if she stuck with and fully engaged in therapy. Additionally, any medications taken on an as needed basis for anxiety could not be taken prior to exposure work because doing so would interfere with the effectiveness of exposure.

Sarah's *in vivo* hierarchy included things that Sarah had been avoiding since the car accident due to distress: watching her and Zac's favorite movie, listening to their favorite song, seeing bloody noses (Zac had a bloody nose in the accident), riding as a passenger in a car without having her cell phone in her hand (she had been unable to reach her cell phone in her purse to call for help due to the damage to the car), riding as a passenger in an older model vehicle (Zac's car had been an older model vehicle), driving on country roads (as driver or passenger), and driving without her St. Christopher medal (Sarah was agnostic but kept the medal in her car since the accident because a Catholic friend gave it to her as a gift and told her that it would keep her from having another accident). Sarah and her therapist discussed that, while avoiding the things on her *in vivo* hierarchy made her feel less anxious in the short term, over the long term, this avoidance restricted her life and interfered with her ability to learn that these things, which she viewed as safe prior to the accident, were typically not dangerous.

The rationale for imaginal exposure, which would begin next session, was also reviewed again in the second session. As with the things that she avoided in her life, avoidance of memories of the trauma prevented her from learning that, while understandably very upsetting, the memories are not dangerous in the way that being in a serious car accident is dangerous.

Confronting these memories would result in a decrease in anxiety in response to them across exposure sessions and would allow her to file these memories away with her other memories. She would gain a sense that she was in control of the memories rather than being controlled by them.

For the third session, during the homework review, Sarah reported that she practice diaphragmatic breathing twice during the week and succeeded in watching her and Zac's favorite movie as an *in vivo* exposure. She said that she felt less anxious than she had expected watching the movie and was surprised that she mostly felt sadness and grief. Sarah had not had another panic attack and had decided not to pursue anxiety medication. Sarah completed her first imaginal exposure during the session, which was recorded on her phone. She gave a first-person present-tense account of the accident, which included details and sensory experiences (e.g., "My head is pounding and hurts. I touch my forehead, and it feels warm and wet. I look at my hand and it is red with blood."). She was asked to keep her eyes closed or gaze at a spot on the floor so that she could stay focused on the memory and generate vivid imagery. She was encouraged to comment on what she was thinking and feeling periodically at different points in the story (e.g., Therapist: "What are you feeling now?" Sarah: "I am so afraid because I smell gas and think that the car might catch on fire while we are still in it."). Statements about feelings or thoughts during the trauma narrative were only allowed for a sentence or two, because discussing them at greater length can disrupt the narrative and emotional processing of the trauma (e.g., after Sarah shares a feeling, Therapist: "What is happening now?" Sarah: "I am starting to crawl over Zac's body to get out of the car."). When she reached the end of the story, the therapist asked her to immediately tell it again, from the beginning and with even more details. This procedure was repeated until Sarah had 40 minutes worth of imaginal exposure recorded on her

phone. Sarah's therapist asked for SUDS ratings (0 = no anxiety; 100 = maximum anxiety) every five minutes during the exposure to monitor her distress. Sarah's lowest SUDS rating was 83 and her highest SUDS rating was 98. Sarah's voice quavered, and she was choked up several times during the exposure. At these times, the therapist encouraged continued engagement in the task in a warm, supportive manner (e.g., "It is hard but you are doing exactly what you need to do – keep going;" "This is what emotional processing is – you are doing a great job – what is happening now?"). Sarah did a good job of persisting with the task despite the strong emotion it created. After the exposure, Sarah's therapist asked what the experience was like for her and whether Sarah had any new thoughts about the accident after having gone through the event in great detail. Sarah reported feeling tired and having a headache after the exposure, but she also reported that, as difficult as it was, she learned that she can handle thinking about the accident. After discussing what the experience of the imaginal exposure had been like for Sarah, the therapist and Sarah practiced diaphragmatic breathing for five minutes to help her to further relax. Sarah was assigned homework of listening to the recording daily until the next session. She was also asked to do another *in vivo* exposure.

At the fourth session, Sarah reported that she went home to rest after the last session and felt better after a few hours. For her *in vivo* exposure, she had listened to her and Zac's favorite song several times on three different days. Sarah listened to the recording of the imaginal exposure daily in between sessions and stated that listening to it got easier each day. Sarah also stated that this was the first week that she had not experienced a nightmare since the accident. During session, Sarah again engaged in imaginal exposure, repeatedly retelling the story of the accident and adding more details. The imaginal exposure was recorded, and diaphragmatic breathing was practiced after the exposure. Sarah was instructed to listen to the new recording of

the imaginal exposure daily until the next session. She was also asked to engage in another *in vivo* exposure.

At the fifth session, Sarah reported that listening to the story of the accident was getting easier, even as she was remembering more details. For her *in vivo* exposure, she had looked at pictures of bloody noses on the internet daily so that the pictures now elicited a SUDS rating of only 15. During the imaginal exposure this session, her peak SUDS rating was 93 and her lowest SUDS rating was 85. Sarah was instructed to listen to the imaginal exposure from this most recent session daily and to do another *in vivo* exposure for homework.

At the sixth session, Sarah reported riding with her boyfriend multiple times without holding her cell phone in her hand or having it within reach. She was also compliant with listening to the tape of her imaginal exposure daily. During this session's imaginal exposure, her peak SUDS were 90 and her lowest SUDS were 40. Imaginal and *in vivo* exposures were assigned as homework.

At the seventh session, Sarah reported being stressed about finals and because Zac's birthday was this week. Sarah had looked at old pictures and videos of Zac for *in vivo* homework and reported feeling sadness and grief rather than anxiety. She also continued to leave her cell phone in her purse on the floor of the car rather than hold it in her hand while she was a passenger. She also challenged herself by asking her boyfriend to drive her on country roads. She listened to her imaginal exposure tape for half of the days since her last session. By this point in therapy, Sarah's assessments revealed that she had made substantial progress on her PTSD. Additionally, after finals, Sarah was returning to her home town, which was two hours away. Consequently, the decision was made to terminate therapy at the next session. Another

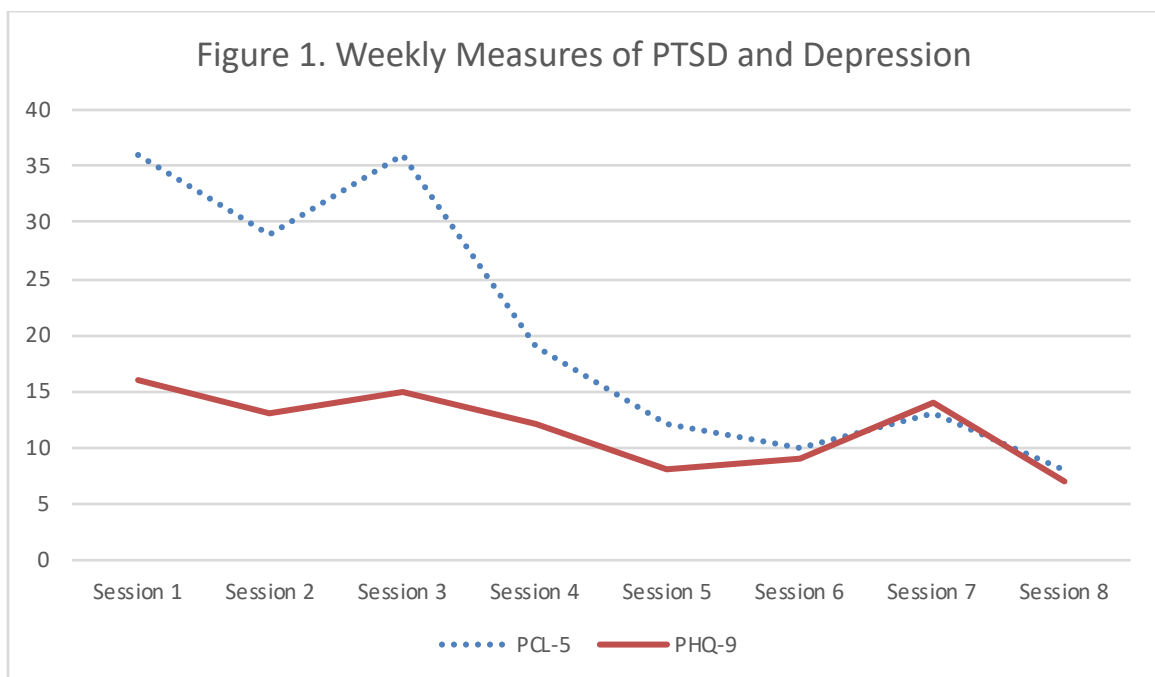
imaginal exposure was conducted in session, which produced a peak SUDS rating of 92 and a lowest SUDS rating of 5.

At the eighth session, Sarah reported that she had practiced riding as a passenger in an older model vehicle and that she had driven all week without the St. Christopher medal in her car. She had also driven herself on a country road. She had listened to the newest version of her imaginal exposure tape four times since the last session. No imaginal exposure was conducted. Instead, treatment progress was reviewed, and relapse prevention was discussed. In particular, the importance of avoiding avoidance was discussed as critical in maintaining gains. Sarah expressed satisfaction and pride in her treatment progress. Sarah agreed to return to the clinic in the fall when she returned to campus in order to work on remaining issues with social anxiety and generalized anxiety.

**Objective Treatment Outcome Measures.** Sarah completed the Patient Health Questionnaire – 9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001) weekly. The PHQ-9 is a nine item measure of depression. Items (e.g., “feeling down, depressed, or hopeless”) are rated on a 0 (not at all) to 3 (nearly every day) scale. Scores range from 0 – 27, with higher scores indicative of more severe depression. Scores are interpreted as follows: 1-4 minimal depression, 5-9 mild depression, 10-14 moderate depression, 15-19 moderately severe depression, 20-27 severe depression. As can be seen in Figure 1, Sarah’s depression was in the moderate range until session five. After three weeks of *in vivo* exposure and two weeks of imaginal exposure, her depression fell into in the mild range, where it remained until the end of treatment, with the exception of session 7, which was finals week and the anniversary of Zac’s death.

Sarah also completed the weekly version of the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013) at each treatment session. The PCL- 5 assesses the 20 DSM-5 symptoms

of PTSD. Items (e.g., “In the past week, how much were you bothered by repeated, disturbing, and unwanted memories of the stressful experience?”) are rated on a 0 (not at all) to 4 (extremely) scale. Scores range from 0 – 80, with higher scores indicative of more PTSD symptomology. A score of 33 or higher is interpreted as the client being likely to benefit from PTSD treatment, although a more lenient cut-off is recommended when trying to maximize identification of cases in need of treatment. As can be seen in Figure 1, Sarah’s PTSD scores were significantly elevated until session 4. After two weeks of *in vivo* exposure and one week of imaginal exposure, her PCL-5 scores fell significantly. A dramatic drop in symptoms after initiation of imaginal exposures is not uncommon with treatment-compliant clients like Sarah. Her scores continued to fall until the last session, ending with only mild symptoms persisting.



*Note.* PCL-5 = PTSD Checklist for DSM-5. PHQ-9 = Patient Health Questionnaire-9.

Vertical axis represents questionnaire score.

**Three Month Follow-up.** When Sarah returned to the clinic in the fall, she was re-assessed with a semi-structured clinical interview. Sarah continued to not meet criteria for PTSD

or major depressive disorder. She continued to meet criteria for social anxiety disorder and generalized anxiety disorder, and these issues were the focus of treatment for the next nine months until termination.

### **Other Treatments**

**Multi-phasic treatment.** Phase based treatment for PTSD uses interventions to build emotional, social, and cognitive resources in addition to decreasing PTSD symptoms (Cloitre et al., 2012). Treatments typically involve 2-3 phases, with initial phases focused on building social and emotion-regulation skills in order to prepare clients for later phases focused on processing traumatic memories and consolidating treatment gains. Multi-phasic treatment is recommended by 84% of PTSD experts sampled for the treatment of complex PTSD; that is, PTSD associated with broad self-regulation difficulties typically following repeated, prolonged, or multiple experiences of trauma (Cloitre et al., 2011).

One protocol for a two phase treatment of PTSD related to childhood abuse focuses on building affective and interpersonal regulation skills in the first phase and uses a modified prolonged exposure intervention in the second phase, called narrative story telling (Cloitre, Cohen, & Koenen, 2006). The first phase of treatment consists of about eight weekly sessions, with interventions including psychoeducation, emotional awareness exercises, practicing effective coping skills, role playing, and assertiveness training. The second phase of treatment is built on the assumptions of prolonged exposure therapy, with the clients engaging in narrative story telling by describing the trauma memory repeatedly for 10-20 minutes. At the end of the narrative storytelling, therapists aid clients with encouragements, grounding techniques, and cognitive restructuring of distorted beliefs related to the trauma. Beliefs related to fear, shame, and loss are emphasized. This two phase treatment was effective for women with PTSD

following childhood abuse, with greater improvement in PTSD symptoms, emotion regulation, and interpersonal skills compared to those treated with only exposures or affective/interpersonal interventions and those on waitlists (Cloitre, Koenen, Cohen, & Han, 2002; Cloitre et al., 2010). The *Treating Survivors of Childhood Abuse* (Cloitre et al., 2006) manual may be purchased commercially (e.g., Amazon).

**Dialectical behavior therapy for PTSD (DBT-PTSD).** There is growing evidence for the efficacy of DBT supplemented with exposures for the treatment of PTSD with and without borderline personality disorder (Bohus et al., 2013; Harned, Korslund, & Linehan, 2014; Steil, Dyer, Priebe, Kleindienst, & Bohus, 2011). DBT is an offshoot of cognitive behavior therapy focused on affect regulation and interpersonal skills that was first developed to treat clients with borderline personality disorder (Linehan, 1993). Treatment in DBT typically includes weekly individual therapy, group skills training, phone consultation, and therapist consultation team meetings (Lineham, 1993). Consistent with DBT's use of hierarchy of treatment targets, DBT-PTSD does not engage clients in imaginal or in vivo exposures until they have consistently evidenced ability to maintain safety (e.g., not at risk of suicide or self-injury) and participate in therapy (Harned et al., 2014; Steil et al., 2018). DBT-PTSD aims to reduce fear of trauma-related emotions, challenge secondary emotions like guilt, and radically accept that the trauma occurred (Steil et al., 2011). A strength of DBT-PTSD is the inclusion of theory and interventions focused on managing self-injury and suicidal ideation (Bohus et al., 2013; Harned, 2014)

DBT-PTSD is evidenced to be effective for women with PTSD related to childhood sexual abuse with and without comorbid borderline personality disorder (Bohus et al., 2013; Harned et al., 2014; Steil et al., 2011; Steil et al., 2018). In these studies, clients treated with DBT-PTSD were less likely to attempt suicide and self-injure in addition to reporting decreased



PTSD symptoms, borderline personality symptoms, anxiety, depression, and dissociation.

Compared to DBT alone, DBT-PTSD with prolonged exposures was associated with greater and more stable PTSD symptom reductions and remission rates, less suicide attempts, and improved functioning (Harned et al., 2014). Additional research is needed comparing the efficacy of DBT-PTSD in randomized controlled trials, with diverse trauma histories, and with broader samples.

**Eye movement desensitization and reprocessing (EMDR).** There is mixed support for the use of EMDR in the treatment of PTSD. APA (2017) guidelines for PTSD treatment recommend CPT and prolonged exposure therapy more strongly than EMDR, which is only conditionally recommended. In contrast, EMDR is considered an evidence-based therapy for PTSD by the Veterans Affairs system along with CPT and prolonged exposure therapy (Veterans Health Administration, 2015). Meta-analyses of outcome studies suggest EMDR may be effective in decreasing PTSD symptoms, although there was significant heterogeneity in the effect sizes reported by EMDR studies (APA, 2017; Powers et al., 2010; Tran & Gregor, 2016). In EMDR, clients are asked to focus on trauma-related images and memories, the negative thoughts associated with these memories, and their physical sensations while tracking the clinician's finger, which moves back and forth in front of the clients' faces (Spates, Koch, Cusack, Pagoto, & Waller, 2009). This process continues repeatedly for 20 second intervals until the client reports minimal distress when recalling the memory, at which point the process is repeated with the client focusing on positive thoughts (Spates et al., 2009). Although the lateral eye movement is considered a primary component of EMDR, it is unclear whether it is an active mechanism of change in the therapy (Keane & Barlow, 2004). A review of dismantling studies concluded that EMDR is equally effective regardless of whether the eye movements are used, suggesting that the eye movements are not necessary for treatment (Davidson & Parker, 2001).

EMDR may instead foster change through similar mechanisms as CPT and exposures due to the elicitation of trauma-related memories, thoughts, and images as well as the focus on identifying alternative positive thoughts (Resick et al., 2008).

### **Treatment Considerations for Working with Trauma Survivors**

**Assessing and maintaining safety.** Safety is a primary concern regardless of the client's diagnosis. If clients are at risk of hurting themselves or others, it is important to fully assess this risk and prioritize safety as the goal of treatment (Resick et al., 2014). Similarly, it is important to assess the client's safety if there is a possibility that their abuse or experience of trauma is ongoing when they seek treatment. In these situations, the priority is to increase the client's safety (Resick et al., 2014). Exposures should also be safe and not involve more risks than those common to daily life (Rothbaum et al., 2007). For example, an exposure would not include staying or interacting with an abusive partner. An important aspect of exposures and therapy in general is that the client is doing difficult things in a safe environment (Resick et al., 2014). Thus, therapists should do what they can to assess and maintain clients' safety throughout this process.

**Common barriers in treatment.** Assessing progress over the course of therapy allows therapists to adapt treatment in response to barriers such as low motivation, avoidance/underengagement, overengagement, and dissociative symptoms (Rothbaum et al., 2007). PTSD treatment can be difficult and scary for clients, leading them to avoid seeking therapy, dropping out prematurely, and failing to complete homework. Thus, directly addressing motivation and other barriers to treatment may improve compliance and outcomes (Rothbaum et al., 2007). Reviewing the risks and benefits of treatment, exploring how PTSD has prevented clients from living the life they want, engaging in exposures gradually, and providing rationale for each step

of treatment may improve motivation (Rothbaum et al., 2007). Underengagement, where clients engage in exposures but do not experience significant distress, is evidence of avoidance (e.g., distraction during exposures or stopping themselves from feeling/expressing emotions). Once identified, aspects of the exposure which clients avoid can be purposefully integrated into the exposures. Overengagement during exposures (e.g., experiencing flashbacks or dissociating) can prevent clients from learning that the exposure is safe and may be addressed by allowing clients to keep their eyes open, use past tense, or writing the memory rather than describing it out loud.

**Comorbidities.** The treatments for PTSD reviewed here appear generally effective in decreasing trauma-related symptoms for clients with multiple diagnoses and can even improve some comorbid symptoms such as depression and anxiety (Chard, 2005; Rutt et al., 2018; Tran & Gregor, 2016). Additionally, although prolonged exposure therapy and CPT specifically treat PTSD, one study found that the majority of clients with comorbid major depressive disorder no longer meet criteria after treatment for their PTSD (Resick et al., 2002). Rothbaum and colleagues (2007) argue that difficulties with anger, substance use, and depression are often related to – or exacerbated by – PTSD symptoms and may indirectly improve from PTSD treatment (as in the case of Sarah, presented above). While standard PTSD treatment may benefit clients with comorbid disorders, therapists are recommended to also explore resources that adapt treatment to specific populations (e.g., for comorbid substance use disorders, see McCauley, Killeen, Gros, Brady, & Back, 2012). Additional research is needed to explore how to best serve clients with multiple comorbidities, particularly those with psychotic symptoms, suicidality, and environmental stressors such as homelessness, who are not well represented in research (Tran & Gregor, 2016).

### **Conclusion**

PTSD and other trauma and stressor related disorders are associated with significant distress, interfering with clients' ability to recover and live the life they want to lead. New research and changes in the DSM-5 influence the way these disorders are conceptualized and defined. Despite the shared history of experiencing a stressful or traumatic event, clients with these disorders can present with a diverse range of symptoms and impairment. Although treatments for PTSD are well researched, limited evidence exists to guide clinicians serving clients diagnosed with RAD and DSED (Shi, 2014; Tran & Gregor, 2016; Zeanah et al., 2016). Factors such as environmental, developmental, and sociocultural context should also be considered when conceptualizing clients. In this article, we sought to provide a guide for understanding the current research and concepts in the diagnosis and treatment of trauma and stressor related disorders. We hope clinicians are able to benefit from the information provided and feel more competent in their ability to serve clients with these disorders.

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