

Post-traumatic Stress Disorder (PTSD): The Disorder, Its Diagnosis and Treatment

ABSTRACT: Post-traumatic stress disorder (PTSD) is a common, disabling psychiatric condition affecting those who have experienced highly-threatening traumatic events. Estimates suggest that 8-10% of the U.S. population will develop PTSD at some point in their lives. Ninety percent of the U.S. population is believed to have experienced trauma severe enough to produce PTSD, and, yet, approximately one-quarter of traumatized individuals are believed to suffer from PTSD. The reason some individuals succumb to PTSD and many others do not is the ongoing subject of research.

The signature symptom of PTSD is an uncontrollable re-experiencing of the traumatic event, such as a flashback experience, accompanied by feelings of intense fear, helplessness and horror. Evidence shows that individuals suffering from PTSD experience a wide range of comorbid conditions, which adds to the disabling nature of the disorder and restricts the effectiveness of treatment. The preferred treatment “package” combines cognitive-behavioral psychotherapy, selective serotonin reuptake inhibitor medication and anxiety management training. Evidence indicates that approximately one-third of individuals treated for PTSD continue to show weekly symptoms one year after the traumatic event. Unfortunately, the majority of those suffering from PTSD do not even seek treatment. This is due, in part, to the disorder’s symptomatic “avoidance” of unsettling situations, in part to the unavailability of treatment in many places, and, in part, to stigmas associated with seeking help for dealing with psychiatric disorders, particularly among certain heavily impacted populations, such as combat troops, women who have suffered physical attacks, and poor, low-income males.

Research continues to look at the epidemiology of the disorder, its biology and the relative effectiveness of different treatment types, including variations in psychotherapy, medications and acupuncture. One recent example is the question: Why have U.S. military personnel serving in the current fighting in Iraq shown a higher prevalence of PTSD than the rest of the general population, and even greater PTSD-prevalence than troops fighting in the concurrent conflict in Afghanistan?

KEYWORDS: POSTTRAUMATIC STRESS DISORDER, TRAUMA, COMORBIDITY, PSYCHOTHERAPY, MEDICATION, DSM-IV, DEPRESSION, ALCOHOLISM, SUBSTANCE ABUSE.

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Overview

Post-traumatic stress disorder (PTSD) is a common, debilitating, often chronic psychiatric disorder that can plague individuals who have suffered one or more traumatic experiences. It is known to follow the experience of military combat, violent assaults, rape, terrorist attacks, serious accidents and natural disasters. It is associated in public consciousness with recent events such as the 9/11 attacks, genocide in Darfur, Hurricane Katrina, the shootings at Virginia Tech, the Wars in Iraq and Afghanistan, and the 2005 Asian Tsunami – as well as cases of sexual assault, political torture and child abuse.

While such “traumatic events” are considered “unusual” life experiences, nearly 90% of the population of the United States is believed to have felt the impact of such “traumatic stressors” (Breslau, et al, 1998(1), p.1). Given this high rate of exposure to traumatic events, it is, perhaps, unsurprising that PTSD is common in the population. Among traumatized individuals, 8% of men and 20% of women experience PTSD at some time over the course of their lifetimes, according to an evaluation of data in the 1995 National Comorbidity Study by Khouzam, et al (2005, p. 1). Certain populations have greater incidents of PTSD, such as those in the military, women and individuals who have previously suffered traumatic events (Vasterling & Brewin, 2005, p. 18).

PTSD deeply impairs the functioning of sufferers in most, if not all, areas of their lives – from their psychological functioning and physical health to their occupational functioning, social life and relationships. PTSD also is associated with a high number of

other, related psychiatric disorders that occur in individuals at the same time. The most common of these comorbid disorders are depression and drug and alcohol abuse.

(American Psychiatric Association, 2000, p. 465). With the disorder's near complete impact on functioning, studies have found that individuals with PTSD exhibit "nearly the highest rates of medical visits" and use of other health care services (Deykin, et al, 2001, p. 835). The impact of PTSD reaches beyond the individual and adversely affects family members, colleagues and the community as a whole.

The literature describes three, sometimes bizarre, symptomatic reactions at the core of PTSD: (i) flashbacks, nightmares, and other types of uncontrollable re-experiencing of the traumatic event, (ii) avoiding any reminder of the event which leads to an overall numbing of the individual's reactions to other people and general life situations, and (iii) a persistent state of severe arousal (American Psychiatric Association, 2000, p. 463). The literature summarizes these three categories of symptoms as (i) re-experiencing or reenacting, (ii) avoidance (with a sub category of numbing) and (iii) hyperarousal or hypervigilance.

Generally speaking, the core symptoms of PTSD arise when an individual is overwhelmed by the instinctive physiological changes that occur in response to a life-threatening event. (Levine, 1997, p. 155) The traumatized individual's response becomes stuck on "full throttle." Levine (1997) calls this disordered response to trauma "animal instinct gone awry" (p. 32). Research has found changes in both neuroanatomy and neurochemistry in individuals who develop PTSD (Vasterling & Brewin, 2005, p 7).

The diagnosis of PTSD is often made using traditional unstructured psychological interviews, structured interviews designed to test for PTSD, and general tests of psychological health. While all three provide critical information about an individual's condition, structured interviews are favored by many researchers as providing a more accurate diagnosis of the disorder.

Memory distortion is at the heart of PTSD. Thus, treatment strategies typically involve relieving emotional distress and cognitive disorders associated with PTSD through various types of exposure to traumatic memories. This exposure takes place within the physical and psychological safety of a therapeutic relationship. The favored mode is cognitive-behavioral therapy (CBT). Pharmacological treatments, chiefly selective serotonin reuptake inhibitors (SSRIs), are also commonly used in conjunction with these therapies, as is anxiety management training.

With only 25% of those who experience a traumatic event found to exhibit PTSD symptoms (Green, 1994, p. 343), considerable research has focused on the question: "What factors predict the outbreak of PTSD symptoms?" Furthermore, it is believed that a significant portion of cases of chronic PTSD – which reaches the chronic stage after persisting for more than three months – prove resistant to current treatment strategies. As a result, researchers and clinicians have continued seeking non-traditional treatment methods. Furthermore, only half of those believed to exhibit PTSD symptoms actually seek help from counselors or other mental health practitioners. Thus, another research

focus, of particular interest to the military, has been: “How can we reduce resistance to participation in PTSD diagnosis and treatment programs and increase the number of individuals who participate in them?” The U.S. Army has begun to investigate the efficacy of alternative treatments for the disorder, such as acupuncture, which may be more appealing to those in the military culture (Sinclair-Lian, 2006, p. 45)

PART I – What is Post-Traumatic Stress Disorder?

Introduction – The Vietnam generation says, “Attention must be paid!”

While the name “Post-traumatic stress disorder” (PTSD) is less than 30 years old, reactions to traumatic events have been described in medical and other literature since ancient times. “Shell shock,” which was the term used to describe the disabling response to traumatic events among soldiers during World War I, is probably the best known pre-PTSD name of the disorder. Rather than being treated with psychotherapy in World War I, “shell shock” was often viewed as an instance of extreme cowardice and punished by execution (Joseph, et al, 1997, p. 6).

The term “post-traumatic stress disorder” was first included in the American Psychiatric Association’s (APA) lexicon of psychiatric disorders – the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* – in 1980, based on the observation of traumatized U.S. veterans who had served in the Vietnam War. Prior to DSM-III in 1980, adverse responses to traumatic events were called “transient situational disturbances.” The more extreme and long-lasting cases were believed to result from other disorders (Solomon, 1997, p. 28). At the international level, PTSD first appeared in the 1993 edition of the World Health Organization’s *International statistical classification of diseases and related health problems (ICD-10)* (Joseph, et al, 1997, p. 15).

The APA’s latest *DSM – DSM-IV (2000)* – categorizes PTSD as an anxiety disorder. It is unusual among psychiatric disorders in that its definition includes both (i) a specific kind

of devastating event which an individual experiences, and (ii) the individual's response to that event.

(i) The nature of the traumatic event must involve the threat, if not the actual experience, of physical injury or death (APA, 2000, p. 463).

(ii) PTSD also involves a subjective response to the traumatic event. *DSM-IV* describes the response as "intense fear, helplessness, or horror" (APA, 2000, p. 463). This paper focuses on adult PTSD, though the *DSM-IV* definition says that, in children, the response includes "disorganized and agitated behavior" (APA, 2000, p. 466).

See "Table 1 – Diagnostic Criteria for PTSD (according to *DSM-IV*)" at the end of this paper for (i) a general description of the traumatic events that can lead to PTSD and (ii) a list of the 17 symptoms of the disorder.

What is a "traumatic event?"

Breslau (2002, p. 927) says there is an "essential linking" between PTSD and the experience of a traumatic event.

"Without exposure to trauma," she asks, "what is posttraumatic about the ensuing syndrome of traumatic memories and associated distressing symptoms? Such is clearly not the case with major depression or substance use disorders."

The definition of PTSD in *DSM-IV* says the nature of a traumatic event must involve the threat, if not the actual experience, of physical injury. This definition scheme is more restrictive than the definition in the volume's predecessor, *DSM-III-RT* (1996), in that it

specifically excludes out-of-the-ordinary life events such as divorce, serious illness and significant financial losses which do not involve the threat or experience of physical injury. These non-PTSD events can be as harmful to their victims as PTSD, and they are associated in *DSM-IV* with other types of trauma disorders, chiefly “adjustment disorders” (APA, 2000, p. 470).

The list of PTSD-causing traumatic events (APA, 2000, p. 472) includes:

- A) Natural Disasters
- B) Mass Interpersonal Violence
- C) Large-Scale Transportation Accidents
- D) House or Other Domestic Fires
- E) Motor Vehicle Accidents
- F) Rape and Sexual Assault
- G) Stranger Physical Assault
- H) Partner Battery
- I) Torture
- J) War
- K) Child Abuse
- L) Emergency Worker Exposure to Trauma.

Though these are considered “out-of-the-ordinary” experiences, Creamer, et al, (2001, p. 1237) suggest that as much as 89.6% of the U.S. population has experienced such a traumatic event. Not only are traumatic experiences common, individuals often suffer

from multiple traumatic events in their lifetimes. One study found that 17% of men and 13% of women who had experienced exposure actually had undergone more than three such events (Solomon, 1997, p. 28). Another study found that only 25% of those who experience a traumatic event go on to exhibit PTSD symptoms at some time after the event (Green, 1994, p. 343). Thus, considerable research has focused on the question: “What factors predict the outbreak of PTSD symptoms among individuals who have been traumatized?”

Who Suffers From PTSD?

Anyone who experiences violence or injury to themselves, or anyone who experiences the threat of violence, injury or death to themselves or someone else, can suffer from PTSD. PTSD, as defined in *DSM-IV (2000)*, is believed to exist in approximately 8.6% of the U.S. population (Sadock & Sadock, 2004, p. 397). Vasterling & Brewin (2005, p. 10) reviewed studies of PTSD prevalence in individual communities and report PTSD rates ranging from 1-9.2%. Solomon (1997, p. 28) estimates that 8-10% of the U.S. population will suffer PTSD some time in their lives.

Some types of people are more likely to be hit by a traumatic event, and hence are more likely to suffer from PTSD. “Table 2 – Risk factors for psychological trauma and for PTSD” summarizes risk factors identified by Breslau (19982, p. 18) for both trauma exposure and suffering from PTSD after a traumatic event. Low-income, non-white males are most likely to suffer a traumatic event, but females are more likely to suffer from PTSD in the wake of an event. Indeed, women are approximately twice as likely as

men to succumb to PTSD following a traumatic event (Breslau, 2002, p. 926). A history of neuroticism and major depression are risk factors for both exposure to trauma and succumbing to PTSD (Breslau, 1998(2), p. 18). Furthermore, Breslau (1999, p. 902) found that those with a history of childhood physical abuse are the most likely to suffer PTSD after trauma. Multiple prior traumatic events had a stronger effect on succumbing than a single event and the effect of prior assault persisted over a long period of time with little change. Finally, previous events involving violent assault – single or multiple incidences, in childhood or later in life – were associated with a higher risk of PTSD in adulthood.

Schnurr, et al, (2004, p. 85) found that development of PTSD is related to factors that occur before, during, and after a traumatic event, whereas failure to recover is related primarily to factors that occur during and after the event. Thus, the factors more predictive of recovery include: (i) severity and type of trauma and perceived threat to one's life, (ii) lack of post-event support systems, and (iii) subsequent life stressors. Pre-event factors that “modestly but consistently” predict PTSD development include: (i) history of prior trauma such as childhood abuse, (ii) history of psychiatric disturbance, and (iii) history of family psychiatric disturbances. Hence, treatment has focused on providing post-event support for individuals with PTSD.

Pre-trauma factors. Brewin, et al, (2000) conducted a meta-analysis of 14 separate pre-trauma risk factors for PTSD. The authors found there were three categories of risk factors:

- (i) Factors such as gender, age at trauma and race predicted PTSD for some populations but not others;
- (ii) Factors such as education, previous trauma, and general childhood adversity more consistently predicted PTSD but to varying degrees with different populations and research methods; and
- (iii) Factors such as psychiatric history, reported childhood abuse, and family psychiatric history had “more uniform predictive effects.”

Studies by Breslau, et al (1999, p. 156) of military personnel found that younger age at trauma was a risk factor for PTSD, whereas studies of the general population failed to find great age-dependent trauma effects. In a later study of military PTSD sufferers, Monson, et al, (2004, p. 275) found that “alexithymic externally oriented thinking and negative affectivity” emerged as “the most consistent predictors of PTSD symptoms.” However, depression was the only variable associated with the symptom of emotional numbing.

Concurrent and post-trauma factors. Factors at work during or after the trauma include severity and type of trauma, lack of social support, and additional life stresses. Breslau (1998, p. 12) reports, for instance, that resistance to recovery depends on the type of trauma suffered. She found little or no recovery among 49% of rape victims, 39% of road traffic victims, and 7% of those witnessing someone being killed or seriously injured. In addition, Scott & Stradling (2006, p. 24) assert that the likelihood of recovery decreases when “there is personal intent to harm.”

What are the 17 Symptoms of PTSD?

The critical symptom of PTSD (See “Table 1 – Diagnostic Criteria for PTSD (according to *DSM-IV*)”) is the last: Criterion F, which says that the effects of the disorder must significantly impair the functioning of its victims (APA, 2000, p. 468).

There is also a time requirement involved in making a diagnosis of PTSD. Criterion E of the *DSM-IV* requires that the 17 symptoms of PTSD outlined in Criteria A, B, C and D last for “more than one month” (APA, 2000, p. 468). The following description of the 17 symptoms greatly relies on Scott & Stradling (2006).

Recurrent and intrusive distressing recollections of the event (Criterion B1)

In this symptom, thoughts, images and ideas flash into the individual’s awareness. These thoughts are intrusive – meaning they are autonomous thoughts; uncontrollable by the individual’s own volition. They arrive spontaneously: “not simply the result of the individual reflecting or pondering on a trauma” (p. 9). They recur at least once a month. These “flashbacks” differ from the sense that the traumatic event is “always at the back of my mind,” or “always on the tip of my tongue,” a less-than-diagnostic condition reported by many trauma victims (p. 9). Instead of always being around, the distressing recollections intrude; they interrupt the regular flow of the individual’s awareness, and seem to occur for no apparent reason.

Recurrent and distressing dreams

of the event (Criterion B2)

To qualify as a symptom of PTSD, dreams or nightmares must recur at least monthly. They typically recollect the traumatic event itself or a variation of the event. For instance, a soldier in Iraq who had been in a truck which is blown up by an Improvised Explosive Device (IED) may have recurring sleep-disrupting dreams about being stuck in a truck and desperately feeling he has to escape before it explodes, though this never actually happened to him. This would qualify as a PTSD dream. In comparison, a veteran who experiences a dream of the assault without disrupted sleep would not meet this diagnostic criteria for PTSD.

Acting as if the traumatic event
were recurring (Criterion B3)

This symptom involves more than recalling the event. The individual's awareness moves into a recollection of the traumatic event and departs from his or her actual current surroundings. The individual can completely or partly lose awareness of his or her situation. "Clients often report the symptoms coming over them like a wave or of getting sucked into the original trauma" (p. 10). This altered state of awareness is called dissociation. It can either be triggered by an internal or external event, or it can erupt without being cued. (p. 10)

Intense psychological distress at exposure
to cues of the event (Criterion B4)

Reminders of the traumatic event trigger distress in this symptom. For instance, a child was abused during the Christmas holidays. Each year, the individual experiences great distress as the holidays approach. The distress might also erupt when the individual reads about cases of child abuse in the media. This symptom involves extreme psychological distress, not sadness or apprehension (p. 10).

Physiological reactions on exposure to reminders of the traumatic event (Criterion B5)

These reactions include “sweating, breathing heavily, or heart racing” for “minutes rather than seconds” (p. 10). They occur in reaction to reminders of the traumatic event. For instance, an accident that killed some of the school children on a bus may be the event precipitating extreme agitation, breathlessness, and palpitations and sweating in the bus driver when she drives onto the entrance ramp leading onto the highway on which the accident occurred.

Efforts to avoid thoughts, feelings or conversations associated with the event (Criterion C1)

Avoidance is a key symptom of PTSD. This symptom involves a distinct effort by an individual to avoid intrusive reminders of the traumatic event. Strategies include: changing the subject when talk of the trauma arises, “trying to think about something different, attempting to become engrossed in some activity, or drinking alcohol or using drugs” (p. 11).

Efforts to avoid activities, places or people that arouse recollections of the event (Criterion C2)

Is the individual actively and consciously steering clear of any situations that stir up reminders of the traumatic event? Then, the individual meets this Criterion. Scott & Straddling make the distinction between avoidance strategies that lead to significant impairment in the individual's life versus those that lead to inconvenience. (p. 11). The latter is an example of this symptom. Thus, the victim of a violent assault that occurred while returning from a friend's home may cut off all contact with the friend, even though the friends typically saw each other several times each week before the traumatic event. This behavior would meet the test of Criterion C2. Avoiding the precise scene of the assault while driving to visit the friend, resulting in an inconvenient five minute detour, falls short of meeting Criterion C2.

Inability to recall important aspects of the traumatic event (Criterion C3)

This symptom implies that there is a "significant gap in the person's memory of the trauma" (p. 11). The cause of the gap is neither unconsciousness during the event or neurological amnesia which is traceable to a specific physical cause. An example of this symptom could be an assault victim who has no recollection of the date of the event, and that it occurred on her birthday.

Markedly diminished interest in significant activities (Criterion C4)

This symptom refers to reduced interest or participation in activities that had played a significant role in the individual's life before the traumatic event. The individual suffering from this symptom would evince a marked reduction in the frequency of participation in the activity. Scott & Stradling (2006) point to activities that have some connection with the traumatic event, such as "the victim of a football stadium disaster who no longer attends matches" (p. 11), though the individual is a season ticket holder. *DSM-IV* itself takes a broader view of this symptom. It points to a new, post-traumatic disinterest in pursuing any type of activities, hobbies or pastimes previously pursued on a regular basis by the individual (APA, 2000, p. 468). Scott & Stradling (2006) say "care has to be taken however to ensure that the non-participation in the activity is not simply a question of the person being physically unable to partake in the pastime or having matured past the interest" (p. 11). Thus, the football ticket holder may avoid games because climbing the stairs and walking to his seat causes him severe pain as a result of the injury sustained during the disaster.

*Feelings of detachment or estrangement
from others (Criterion C5)*

The feelings related to this symptom are in marked contrast with how the individual felt before the traumatic event. Feelings can be challenging to identify. Some of the concrete examples of this symptom offered by Scott & Stradling (2006) include "confiding in significantly fewer people," and "not returning phone calls to friends or family," or "wanting them to leave as soon as possible if they visit," and "the making of excuses not to attend social engagements such as weddings or regular meetings" (p. 12).

Restricted range of affect (Criterion C6)

The range of feelings associated with this symptom may be restricted to the individual's own young children. The person may otherwise report experiencing no warm or loving feelings towards others, general numbness, and guilt "that they are unconcerned about the plight of friends or family members and any response is robot-like" (p. 12).

Sense of a foreshortened future (Criterion C6)

The determining characteristic of Criterion C6 is that the individual "sometimes feels that they are going to die by a specific date" (p. 12). This feeling is associated with a belief in a shortened life span and no reason to work towards or even hope for "previous life goals, such as career, marriage and family" (p. 12). This symptom characterizes the hopelessness that is at the heart of PTSD.

Difficulty falling or staying asleep (Criterion D1)

The questions related to this, and all of 17 of the PTSD symptoms, are as follows: Has the instance of sleeplessness occurred at least once in the last month? Did it cause distress during sleepless nights? Did it impair functioning at least during the next day?

Irritability or outbursts of anger (Criterion D2)

Is the individual reacting to common annoyances and hassles with greater expressions of irritability or anger than existed before the traumatic event? Are the outbursts persisting for more than a month and are they impeding the individual's functioning? Such increased expressions of emotion meet the requirements of Criterion D2. Scott & Stradling (2006, p. 12) state that the greater expressions of emotion might include "shouting, breaking or throwing objects or being physically aggressive"; and they say this symptom might exclude raising the voice, taking seconds to calm down and becoming inwardly more irritable.

Difficulty concentrating (Criterion D3)

Is the individual now unable to stick with a task to completion or some state of completion that they had been able to achieve before the trauma? Are they now unable to timely complete a task they had been able to complete before experiencing the trauma? This symptom can apply to tasks at work or leisure activities, such as reading a newspaper, watching a movie, or sculpting a piece of pottery.

Hypervigilance (Criterion D4)

Described by Scott & Stradling (2006) as being "on guard" (p. 13), this symptom often involves a repetitive checking back on something with greater frequency than before the traumatic event.

Exaggerated startle response (Criterion D5)

When someone walks up behind an individual and touches their shoulder, it is normal to be startled. Feeling “jumpy” all the time, as many traumatized individuals report they feel (Scott & Stradling, 2006, p. 13), is not normal. Nor is it normal to respond to a surprising touch on the shoulder by becoming angry or taking several minutes to calm down. These types of reactions – when they persist longer than a month and impair normal functioning – represent the kinds of exaggerated startle responses characterized by Criterion D5.

What course does PTSD follow in an individual?

According to Breslau & Kessler (2001, p. 699):

- (i) PTSD symptoms typically begin immediately after a traumatic event;
- (ii) A portion of individuals diagnosed with PTSD recover within three months of the trauma;
- (iii) Many more – approximately 82% – develop chronic PTSD, which is defined as lasting three months or longer; and
- (iv) Nearly 74% still have symptoms lasting six months or more.

In their review of the National Comorbidity Study, Kessler et al (1995, p. 1052) found that approximately 90% of individuals with PTSD reported that they had symptoms at three months, and more than 70% still had symptoms one year after the traumatic event. Orcutt et al (2004, p. 195) studied Gulf War veterans and found that their PTSD

symptoms followed two distinct growth curves: (i) low levels of PTSD symptoms with little increase over time and (ii) higher levels of initial symptoms with a significant increase over time. Vasterling & Brewin (2005, p. 17) say that the symptoms of long-term sufferers “wax and wane over the lifespan of the individuals.” Solomon (1997, p. 29) reports that more than 33% of individuals with PTSD still experience symptoms several times each week after 10 years.

A review of literature focusing on “delayed-onset PTSD” by Andrews, et al (American Journal of Psychiatry, 2007, p. 1319) found the condition was rare in the absence of any prior symptoms. However, exacerbations of prior symptoms represented 38.2% of military and civilian cases of PTSD; reactivations represented 15.3% of cases.

What does recovery look like? Salo et al (2005, p. 361) report that, over time, trauma survivors who are recovering say they are experiencing positive changes in themselves, their human relationships and spirituality. Survivors who have “secure attachment” with others reported generally more post-traumatic growth, while “insecure-preoccupied attachment” was associated with a high frequency of negative emotions and stunted recovery. This finding may point to the importance of safe therapeutic relationships in the course of PTSD treatment.

Comorbidity – PTSD is associated with clusters of dysfunction that spread like wildfire

Individuals who suffer from PTSD often exhibit a great number of extreme and debilitating symptoms from other disorders. It is as if psychological dysfunction spreads like wildfire throughout the personality of individuals suffering from PTSD.

Comorbidity severely impacts those with PTSD because it adds to the disabling nature of the disorder and restricts the effectiveness of treatment.

Solomon (1997, p. 29) reports that 79-88% of individuals with PTSD have a history of at least one other psychiatric disorder. Indeed, Horowitz (1986, p. 242), the researcher credited with developing the first models of PTSD, says traumatized individuals can undergo enduring personality changes which she likens to “post-traumatic character disorder.”

A meta-study of research by Joseph et al (1997, p. 20) indicates that depression is the major symptom associated with PTSD. These – and other authors – found the following co-morbid disorders occurring in conjunction with PTSD:

- (i) depression (Joseph et al, 1997, p. 20; Breslau, 2002, p. 923),
- (ii) substance abuse and dependence (ranging from alcohol and cigarettes to prescription medication and illegal street drugs) (Joseph et al, 1997, p. 23; Breslau, 2002, p. 923),
- (iii) cognition and memory impairments such as difficulty concentrating and memory disturbances (Joseph et al, 1997, p. 23; Breslau, 2002, p. 923),
- (iv) the development of physical health problems – somatization of the disorder – (ranging from chronic tiredness, headaches, chest pains and gastrointestinal

disorders to cardiovascular disorders, kidney disorders, respiratory diseases, infectious diseases and immune system impairment.) (Joseph et al, 1997, p. 25; Breslau, et al, 1998(1), p. 131), and

- (v) disturbed interpersonal, family and social relationships (such as increased levels of irritability, fighting, withdrawal and marital discord, as well as decreased enjoyment from either shared or solo activities) (Joseph et al, 1997, p. 25; Breslau, 2002, p. 923).

The comorbid effects of depression and PTSD were investigated by Galea, et al, (2002, p. 982) in a study of the effect of the 9/11 World Trade Center attacks on the residents of New York City. The surveys found that 49% of those *with PTSD* had major depression; only 6.5% of those *without PTSD* had depression. The authors say that the non-PTSD measure is close to the expected percentage of depression for the general population, and that the linkage they found between depression and PTSD is extremely significant.

The prevalence of somatization among PTSD sufferers is also vastly greater than the number of physical ailments reported by individuals without PTSD. Solomon (1997, p. 29) reports on one study which found somatization to be 90 times more likely among those *with PTSD* than those *without PTSD*. She says that those *with PTSD* are nearly eight times more likely to have three or more disorders than those *without PTSD*. She also reports on a study of severely victimized women being treated in an HMO. They were found to have “a number of persistent conditions, including chronic pelvic and other

pain, gastrointestinal disorders, headaches, and psychogenic seizures” – that is, seizures that appear to have a psychological rather than a physiological cause.

Despite the great number and severity of such linkages, researchers have found it difficult to establish the reasons for connections between PTSD and other psychological and physical disorders. Nonetheless, the effects of PTSD spread throughout the life of a traumatized individual.

How PTSD affects the brain, the self, and the soul.

The stimulus that produces the fear and freezing response in PTSD is very strong; Scott and Stradling (2006, p. 29) say it is “more extreme than in a phobia.” Thus, a rape, a car crash, or seeing a fellow blown to bits in war are many orders of magnitude greater in effect than the phobia-triggering sight of a spider or the sound of a ticking clock or dripping water. The initial response to the traumatic event is what overwhelms several important systems within the brain of the traumatized individual.

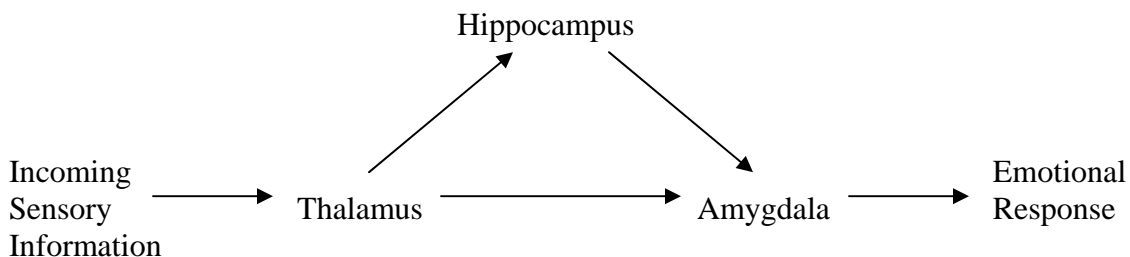
Scott and Stradling (2006, p. 29) describe a model of PTSD in which a traumatic event can elicit extreme reactions in two systems of an individual’s brain, the:

- (i) “alarm” system and
- (ii) “conceptualizing” system designed to make sense of the brain’s alarm response.

The authors identify the three anatomical brain structures (seen in Figure 1. below) that are critical to an individual’s traumatic response – and the relevant functions of the structures – as the:

- (i) **Thalamus** – which takes in sense information, translates it into brain signals, and decides what to do with those signals; sends those signals to, among other locales, both the hippocampus and the amygdala,
- (ii) **Hippocampus** – which orients an individual in time and space; as part of the brain’s memory cortex, stores recent short-term memories before they are sent to long-term memory; sends signals to the amygdala and other structures which explain the context of what is being experienced, and
- (iii) **Amygdala** – which integrates information about outer events and inner states; calibrates emotional responses depending on whether a stimulus is viewed as being potentially good or harmful; typically reacts before an individual is conscious of the stimulus that caused the reaction; and works with the hypothalamus in triggering the fight or flight response.

Figure 1 – Critical Structures of the “Alarm” and “Conceptualizing” Systems



(Source: Scott and Stradling, 2006, p. 29)

One feature of these “alarm” and “conceptualizing” systems is the direct pathway from the thalamus to the amygdala. For the signals emitted by the thalamus, the thalamus-amygdala pathway is a significantly quicker route than the pathway that starts at the thalamus, and then detours to the hippocampus, before reaching the amygdala. Thus, the signals from the hippocampus that might explain the traumatic event for the benefit of the traumatized individual reach the amygdala well after the unmediated (and likely devastating) signals sent directly from the thalamus. The signals from the thalamus hit the amygdala without being put into context by the hippocampus; they are confusing and disturbing. Indeed, when such signals cause PTSD, they are overwhelming. As Scott and Stradling explain (2006, p. 30): “The hippocampus probably plays a pivotal role in telling the story of the trauma.” Interestingly, the hippocampus of individuals with PTSD has been shown to be smaller than those without PTSD (Scott and Stradling, 2006, p. 30). Finally, treatment of PTSD involves bringing to bear the storytelling function of the hippocampus at a time when its signals can cool down activity in the alarm circuitry running from the thalamus to the amygdala. After the trauma stimuli are explained again and again in the supportive environment of treatment, a traumatized individual can “learn that they pose no imminent threat” (Scott and Stradling, 2006, p. 30).

What is the nature of the devastating signals that hit the amygdala after a traumatic event? “It appears that above a certain threshold of severity...the sensory aspects of the trauma appear frozen together so that subsequently if one part of the memory is retrieved the whole experience is reignited” (Scott and Stradling, 2006, p. 30).

Reactivating this unexplained, complex of memories – that is, re-experiencing the sights, sounds, smells and other aspects of the trauma experience – can ignite “a profound fear response” (LeDoux, 1998, p. 1232). This is the source of PTSD’s symptomatic experience of “intense fear, helplessness, or horror.”

For individuals with PTSD, the memory function of the hippocampus may be a source of on-going distress – rather than a force for rationality and understanding – once the traumatic memory-cluster has been burned into the amygdala. A wide range of memories and associations – rather than just a single cue – may “nonconsciously” trigger fear responses associated with the trauma (Scott and Stradling, 2006, p. 32).

The model outlined above explains the mystery of how some individuals with PTSD cannot consciously remember the traumatic event that occurred to them, and how others suffer from PTSD even though they were wholly unconscious during the trauma event. Here is how Scott and Stradling (2006, p. 33) relate their physiological model to several of the 17 core PTSD symptoms – such as avoidance, hypervigilance, difficulty concentrating, restricted range of affect, and feelings of estrangement:

“Avoidance behavior can be seen as an attempt to ensure that memories of the incident are not cued in the first place and more generally that the amygdala’s alarm bells are not tripped. Disordered arousal arises when the output from the amygdala continues to indicate danger resulting in the accompanying physiological tension. Here attentional resources are allocated almost entirely to

being on guard (hypervigilance) leaving little energy over for routine activities and the person experiences impaired concentration and can become distant and cut off from others. As a consequence of this deployment of attentional resources ambiguous information is interpreted in a threatening manner serving to maintain the state of vigilance.”

Because they view so many cues inside and out as threatening, most PTSD sufferers are chronically hyper-aroused and hyper-anxious.

Individuals with PTSD get stuck in distorted thinking patterns. (See Table 3 – Common forms of distorted thinking patterns among traumatized individuals). The condition adversely affects their cognitive operations. Thus, it is unsurprising that the chief form of treatment for PTSD is known as cognitive-behavioral therapy (CBT). CBT is designed to reorder distorted thinking patterns, as well as calm disturbing emotional responses. Scott and Stradling (2006, p. 36) report that the most common distorted thinking patterns experienced by individuals with PTSD are over-generalization and dichotomous thinking

Individuals suffering with chronic PTSD:

“see themselves as ‘stuck’ and as continuing to exist in a time warp as if the trauma had just happened yet they are still in the ‘war zone’: the nightmare may have passed but the terror remains and associated with this is a sense of having been irreparably damaged. The chronic PTSD sufferer’s view of others is that they are not part of the same story, that ‘they’ cannot understand how he or she

feels and are seen as intrusive. Associated with these negative views of self and others are negative beliefs, such as ‘I will never be able to lead a normal life.’”

(Scott and Stradling, 2006, p. 38)

PART II – Intervention, Diagnosis and Treatment

Who seeks treatment?

Avoidance of trauma-related information – and any cue that might trigger a fearful response – is a key symptom of PTSD. Thus, many trauma-survivors actively avoid dealing with service providers who might help them. Perhaps the critical public health question is: “Who DOES NOT seek treatment?”

Avoidance symptoms can be traced to entire populations. Some groups of people -- because of the nature of their group – do not seek help when they are experiencing PTSD symptoms. For instance, a third of the combat veterans exhibiting PTSD symptoms in one study (Elhai, 2003, p. 385) did not seek psychiatric aid. This specific type of avoidance is characterized in the literature as “stigma.” Several studies found that the majority of women who have suffered a sexual assault do not seek treatment or support services, whether from mental health professionals, rape crisis centers, or specific programs set up for sexual assault victims. (Khouzam, et al, 2005, p. 6).

Overcoming the stigma barrier is one of the reasons the U.S. Army has undertaken studies of alternative treatments such as acupuncture for PTSD-affected soldiers. “Acupuncture is viewed as ‘cooler’ than going to a psychiatrist or mental health counselor. Soldiers see themselves as tough guys. It is ‘cooler’ for them to say they go to an acupuncturist and get needles stuck into them than to say they talk to a psychiatrist about their dreams and fears. These soldiers may be more likely to get treated in the first place, and then stick with treatment. That’s the goal” (Interview: Shovlin).

Other groups of people may be more likely to seek help. In one study of the survivors of a mass shooting, 71% of the survivors who exhibited PTSD symptoms, did seek aid from a doctor or counselor (North, Smith, and Spritznagel, 1994, p. 82). Still, 29% of those with PTSD symptoms in the shooting study – a “substantial minority” – did not seek the aid of a doctor or counselor. While all survivors of a traumatic event will not need counseling and support services, Joseph, et al, (1997, p. 111) assert that “it is important that a support team should make an initial proactive contact in which they assess risk factors and potential needs, and refer on to other services for more specialized therapies when appropriate.”

Screening and diagnosis through unstructured interviews and structured instruments

The major challenge of the diagnosis phase is to refrain from triggering PTSD where it does not exist. Thus, questionnaires tend to ask generic questions without suggesting

specific events or showing people specific images. Another challenge is that traumatized clients may be unwilling to answer the full battery of personal questions put forth by mental health professionals. A related challenge may be whether professionals have sufficient time to “capture the full picture” of the trauma and the individual’s responses (Joseph, et al., 1997, p. 118). The goal is to balance non-intrusiveness with sufficient probing.

Screening.

Numerous short, standardized screening instruments have been developed for use with traumatized individuals who clinicians believe may be experiencing trouble (Brewin, et al, 2002, p. 158; Kimerling, et al, 2006, p. 66.). (For two such instruments, see “Table 4 – Breslau’s Short Screen for PTSD” and “Table 5 – Brewin Trauma Screening Questionnaire.”) One of these, The Brewin Trauma Screening Questionnaire, asks 10 questions, all of which point to the potential presence of the re-experiencing and arousal symptoms of PTSD. Brewin’s group found that answering “yes” to six of the 10 items can predict future PTSD and the need for follow up.

Unstructured Interviews.

Assessment typically begins with an open-ended, unstructured interview. During the interview, “the client has the opportunity to tell their tale in an unfettered way with minimal interruption from the counselor” (Scott & Stradling, 2006, p 17)

Because of the high levels of co-morbidity with PTSD, such other disorders should be carefully assessed, because they may be the more critical target of therapy and treatment. Substance abuse and alcoholism are common conditions paired with PTSD. Scott and Stradling (2006) say a client should be abstinent for at least one month before they can focus on PTSD treatment (p. 18).

Researchers have estimated (Briere & Scott, 2006, p. 57) that mental health professionals relying only on unstructured interviews miss up to half of all actual cases of PTSD that are identified using the SCID structured interview tool listed below. Unstructured interviews also fall short in identifying a cluster of comorbid disorders. Briere & Scott report that in one study, fewer than 10% of clients assessed only using unstructured interviews were diagnosed with three or more disorders; more than one-third of the patients evaluated with the structured “SCID” interview tool were diagnosed with three or more disorders. They say the study suggests that diagnoses based on the use of traditional unstructured interviews “tend to stop at the first diagnosis and do not accurately spot co-morbidities.” This is extremely relevant to diagnosing PTSD because the condition is highly susceptible to comorbid disorders.

Structured Interviews.

Using a structured interview in devising a PTSD diagnosis helps to ensure that clinicians cover each of the 17 PTSD symptoms described in *DSM-IV*. It also increases the chances that clinicians ask these questions in a “neutral manner” (Scott & Stradling, 2006, p. 20).

The chief types of structured interviews used in assessing PTSD are (Briere & Scott, 2006, p. 57):

- (i) The Clinician-Administered PTSD Scale (CAPS)
- (ii) The Acute Stress Disorder Interview (ASDI)
- (iii) The Structured Interview of Disorders of Extreme Stress (SIDES)
- (iv) The Structured Clinical Interview for *DSM-IV* Dissociative Disorders-Revised (SCID-D)
- (v) The Brief Interview for Posttraumatic Disorders (BIPD)

The most comprehensive and useful of all the structured interviews used in assessing PTSD is the first one named above: **The Clinician-Administered PTSD Scale (CAPS)**. (Scott & Stradling, 2006, p. 20; Briere & Scott, 2006, p. 57). Developed in 1995, the CAPS is a structured interview asking questions about 30 general items that correspond to the *DSM-IV* criteria for PTSD. “The CAPS can be used to make a current (past month) or lifetime diagnosis of PTSD or to assess symptoms during the past week. In addition to assessing the 17 PTSD symptoms, questions target the impact of symptoms on social and occupational functioning, improvement in symptoms since a previous CAPS administration, overall response validity, overall PTSD severity, and frequency and intensity of five associated symptoms (guilt over acts, survivor guilt, gaps in awareness, depersonalization, and derealization)” (2007, Retrieved July 20, 2007 from the World Wide Web, U.S. Department of Veterans Affairs: National Center for PTSD: Assessments: Clinician-Administered PTSD Scale (CAPS)). Each CAPS test can reference to up to three traumatic events.

According to Briere & Scott (2006, p. 57), CAPS' beneficial features include:

- (i) standard questions for prompting information on all 17 PTSD symptoms (and more),
- (ii) concrete rating scales that are anchored in specific client behaviors, and
- (iii) means of ascertaining the frequency and intensity of symptoms. (Each symptom is rated on a five-point scale and each scale point is explicitly described.)

Scott & Stradling (2006, p. 20) assert that what CAPS gains in comprehensiveness, it lacks in brevity. It often takes more than one hour to administer the test.

Treating a disorder that is “highly resistant to change”

“The trauma structure in individuals with PTSD is unusually stable and broadly generalized...it is easily accessed and highly resistant to change” (Solomon, 1997, p. 32).

As we have seen, the onset of PTSD after a traumatic event is immediate. But how soon should treatment begin? The definition of PTSD in *DSM-IV* states that adverse responses during the first three months after a traumatic event are “acute.” Indeed, *DSM-IV* contains a separate entry for Acute Stress Disorder: its distressing symptoms occur within three months after the trauma occurs (APA, 2000, p 474).

There has been controversy over how to treat people immediately after a traumatic event.

- Should care givers strictly focus on assisting with the practical considerations that may arise – where to live, when to return to work, how to bury the dead, etc?

- Should professionals step in right away and “debrief” individuals as a means of offering short term relief?
- Or should professionals make a benchmark assessment of the state of traumatized individuals, following-up later to see if treatment is needed?

The consensus among researchers has recently congealed around the importance of focusing on practical concerns, and the notion that “less counseling is better” in the short-term, particularly during the first month after a traumatic event. Research supports this approach on several counts (Bryant & Harvey, 2002, p. 886):

- First, different individuals respond very differently in the weeks and months after a traumatic event.
- Second, great levels of distress shortly after trauma are unreliable at predicting the development of PTSD in the long run.
- Third, most of those exposed to extreme stressor events recover within one month.
- And, finally, research indicates that re-exposing traumatized individuals through a “debriefing” protocol may actually trigger the development of PTSD.

Indeed, the U.S. Veterans Affairs Administration’s clinician’s guidelines for dealing with traumatized soldiers returning from Iraq call for PTSD intervention or treatment only beginning one month after the traumatic event (2007, Retrieved July 20, 2007 from the World Wide Web,

http://www.ncptsd.va.gov/ncmain/ncdocs/manuals/iraq_clinician_guide_ch_7.pdf),

though the VA’s response may not be state-of-the-art. Earlier this year, an expert panel

faulted the VA's response to PTSD as lacking a consistent, sufficient standard in terms of assessment and treatment (Schmid, 2007, p. 1).

After an event, individuals typically receive practical and emotional support from social service programs and volunteers, as well as family and friends. They usually receive services such as screening, diagnosis, crisis intervention (at any time after the event), and long-term therapy from mental health professionals (Joseph, et al, 1997, p. 106).

Because of the complexity of PTSD, no single treatment has been found to completely and effectively eliminate its symptoms. Several forms of therapy have proven useful in alleviating these symptoms, yet their long-term effectiveness is still unverified. As McFarlane & Yehuda (2000, p. 940) state: "to date, there appears to be no gold standard treatment program for PTSD, nor has any particular treatment approach received universal acceptance."

Instead, therapists use a combination of treatments for PTSD sufferers. Indeed, Solomon (1997) says that therapists have explored "practically every form of psychotherapy devised" for those with PTSD (p. 30), and many types of psychological medication (p. 36). McFarlane & Yehuda (2000, p. 940) counsel clinicians as follows: Given the emergence of symptoms over time and the fluidity of the chronic symptom patterns of PTSD, it is important to consider using different types of treatment interventions at different stages of the illness." Thus, clinicians tailor treatment to "the severity and type

of presenting PTSD symptoms, to the type of trauma experience, and to the many likely comorbid diagnoses and adjustment problems” (Solomon & Johnson, 2002, p. 947).

What emerges is an “art” that combines elements of a “science.” Robertson, et al, (2004, p. 115) advise clinicians to choreograph the general arc of treatment according to the following sequential outline:

1. Acute intervention in trauma and the early stages of PTSD management
2. Establishing a therapeutic relationship and determining clinical goals
3. Direct intervention at symptomatic level
4. Addressing more complex processes such as disturbed and altered cognitive schemata, impaired distress tolerance, affect dysregulation, and dissociation
5. Dealing with social and interpersonal consequences of PTSD
6. Maintaining the stability and welfare of the therapist.

The primary goal of most PTSD treatment is to relieve its three main symptoms. This involves: (i) overcoming avoidance, (ii) desensitizing memories of the trauma, and (iii) reducing hyper-arousal. Therapists also must deal with the complicated tangle of feelings and comorbid disorders that is present with PTSD.

The most common general treatment strategies include:

- (i) **“cognitive therapies”** designed to develop a realistic assessment of the dangers PTSD sufferers believe threaten them,

- (ii) ***“emotional processing or behavioral therapies”*** designed to eliminate the avoiding of cues that trigger traumatic memories, until those memories lose the power to intrude and disrupt life. Cues that might trigger the toxic mix of PTSD memories and unresolved emotions include external conversations, people, places, and things, plus internal thoughts and feeling states
- (iii) ***safe environments*** in which an individual can re-experience the event, typically in the presence of a therapist, without becoming re-traumatized,
- (iv) ***anxiety management techniques*** to ease resistance at the start of therapy, and help prevent relapse after treatment has begun,
- (v) ***social support and coping skills*** to those whose lives may have been upended, and finally
- (vi) ***medications*** which serve to ease the anxieties and depression that coexist with PTSD, particularly selective serotonin reuptake inhibitors (SSRIs).

The first two types of therapies named above have been combined into the most commonly used form of PTSD therapy: Cognitive-behavioral Therapy (CBT). (See “Table 5 – Outline of a 50-minute CBT therapy session.”)

CBT has an emotional processing component and a cognitive component:

Emotional processing. This aspect of CBT is a way of breaking the connection between traumatic memories and their associated negative emotional responses. Emotional processing involves remembering painful (not overwhelming) events in an environment that provides safety, positive relatedness with a therapist or other supporting person, the opportunity to express emotions, and as little avoidance as the traumatized individual can bear. Each time the memories arise, the traumatized individual has another opportunity to see that the feared expectations do not occur. In time, the fear proves unfounded and is freed from the recollections in the individual's memory. "The realization (experience) that one can be anxious without being annihilated may result in an increased sense of security and, in some cases, better interpersonal functioning" (Briere and Scott, 2006, p. 118).

At the heart of emotional processing is a set of exposure techniques.

- Generally, these exposure techniques involve "the repeated activation, processing, and resolution of distressing but non-overwhelming distress" (Briere and Scott, 2006, p. 106).
- "Such treatment slowly teaches the survivor to become more 'at home' with some level of painful emotional experience and to develop whatever skills are necessary to deescalate moderate levels of emotional arousal" (Briere and Scott, 2006, p. 106).
- "As the client repeatedly experiences titrated (that is, not overwhelming or destabilizing) memories, he or she may slowly develop the ability to self-

soothe, reframe upsetting thoughts, and call upon relational support” (Briere and Scott, 2006, p. 107).

- “However developed, this growing ability to move in and out of strong affective states, in turn, fosters an increased sense of emotional control and reduced fear of negative affect” (Briere and Scott, 2006, p. 107).

Cognitive therapy. Cognitive therapy’s role in CBT involves a reexamination of negative perceptions and beliefs that are tied to and reinforce negative feelings within the traumatized individual. The negative perceptions and beliefs (as well as the negative feelings) were born from the trauma experience. The process of reexamination is guided by the caring presence of a therapist.

This guidance is done “without lecturing, arguing, or labeling such beliefs as ‘wrong.’ Instead, such cognitions should be viewed (and reflected back to the client) as entirely understandable reactions to overwhelming events that involved extreme anxiety and distress, incomplete information, coercion, confusion, and in many cases, the need for survival defenses. Trauma-related cognitions should be treated not as the product of client error or of inherent neurosis, but rather as initial perceptions and assumptions that require updating in the context of safety and support” (Briere and Scott, 2006, p. 114).

“A greater understanding of the past – and insight into the various ways it differs from the present – may reduce the capacity of stimuli in the current environment to trigger posttraumatic responses” (Briere and Scott, 2006, p. 118).

By repeatedly comparing ‘old’ trauma-based versions of reality with newer understandings that arise in the context of a detailed examination of past events, the client can often revise his or her personal history – not in the sense of making things up, but by updating assumptions and beliefs that were made under duress and were never revisited in detail” (Briere and Scott, 2006, p. 113).

“As these negative assumptions are reevaluated, a more affirming and empowering model of self and others frequently takes its place” (Briere and Scott, 2006, p. 109).

Research indicates that clinicians who use these – and other – approaches are bringing relief to traumatized individuals. One meta-analysis of 61 treatment studies (Van Etten & Taylor, 1998, p. 144) evaluated the relative effectiveness of pharmacotherapy (SSRIs) and a host of modalities including eye movement desensitization and reprocessing (EMDR), relaxation training, hypnotherapy, and traditional psychodynamic therapy. Exposure therapy, in the context of CBT, was rated the most efficacious. Further, the effect size for all psychotherapies was 1.17, compared with 0.60 for medication. The authors suggest that an even more important finding was that the mean dropout rate for the medication studies was 32%, versus 14% in the psychotherapy studies. Robertson, et

al, 2004, p. 108, point to another study in which psychotherapies reduced PTSD symptoms of intrusion, avoidance, hyperarousal, anxiety, and depression with effect sizes ranging from 0.2 to 0.49.

Research also indicates that the various PTSD treatments in use also help to reduce the duration of the disorder. Solomom (1997, p. 38) describes a large national study in which those who received professional treatment experienced a shorter average duration of symptoms (three years) than those who did not (five years).

Taylor, et al, (2005, p. 275) suggest that further neuroscience research can aid in devising new treatments – both psychotherapeutic and psychopharmacological. They say the two most promising areas are targeting transmitter systems involved in PTSD and finding ways to either de-condition memories or alter the meanings of traumatic events.

Conclusion

There are hundreds of studies on PTSD. The field has exploded since the disorder first appeared in *DSM-III*. More is known about the source of PTSD, its course and how to treat it than in 1980. This is good news.

So is the fact that treatments serve traumatized individuals – in many cases – if individuals do obtain treatment. Taylor, et al (2005, p. 277) cite a survey of traumatized

individual in which 81% were interested in receiving some form of treatment: 76% were interested in psychotherapy, 62% were interested in receiving medication, and 57% were interested in receiving both. The authors conclude that traumatized individuals are open to receiving the chief available treatment options.

Despite advances in treating the symptoms of PTSD, we, as a society, face greater instances of trauma each year. The current war in Iraq has seen higher rates of mental illness and PTSD than other conflicts (Hoge, et al, 2004, p. 13), in part because the conditions of that war foster the development of PTSD and stand in the way of recovery from the disorder. Extended time in country, lack of control regarding the future, and repeated exposure to traumatic events all make this conflict a breeding ground for PTSD. The VA's difficult processes for returning vets to receive treatment also feed into the traumatized individual's tendency to avoid difficult situations, and keep veterans from needed treatment. The Army has recently begun a service-wide campaign to educate active duty members and their families about the danger signs of PTSD. It is funding research into existing and alternate treatments for the disorder. These are positive moves, but they are only a start. The human toll of the Iraqi war will be with us for a long time,. As a society, we must continue to make advances in understanding PTSD and in making its treatment more accessible to traumatized members of the armed forces.

The wider question remains: can we reduce the incidence of trauma? War, interpersonal violence, accidents on our highways and workplaces – these are the sources of the trauma that can cause PTSD.