

Most people print off a copy of the post test and circle the answers as they read through the materials. Then, you can log in, go to "My Account" and under "Courses I Need to Take" click on the blue "Enter Answers" button.

After completing the post test, you can print your certificate.

---

## CHAPTER 6

### IMPACT OF CRIME ON VICTIMS

Eidell Wasserman and Carroll Ann Ellis<sup>1</sup>

*The trauma of victimization can have a profound and devastating impact on crime victims and their loved ones. It can alter the victim's view of the world as a just place and leave victims with new and difficult feelings and reactions that they may not understand. It is important for victim assistance professionals to understand the different ways that crime can affect victims—psychologically, financially, physically and spiritually. Any discussion of the impact of crime on victims is necessarily general in scope. The following information is offered to help victim assistance professionals to be aware of the common types of reactions that victims experience, and should be used as general guidelines to provide direction and references for additional resources.*

#### NVAA Module 6 Learning Objectives

- Identify primary and secondary victims of crime.
- Recognize factors that influence a victim's ability to cope.
- Identify symptoms of trauma that victims may have in the immediate, short-term, and long-term periods following victimization.
- Discuss possible physical, psychological/emotional, financial, and spiritual effects of crime on victims.

Crime has significant, yet varying consequences, on individual crime victims, their families and friends, and communities. The impact of crime on victims results in emotional and psychological, physical, financial, social and spiritual consequences. While there are no consistent findings about victims' challenges in coping with the aftermath of criminal victimization with respect to demographic characteristics, a victim's ability to cope with the impact of crime depends on a variety of factors (National Institute of Mental Health, 2006):

- A history of victimization increases trauma following a new crime.

---

<sup>1</sup> Authors of this chapter are Eidell Wasserman, Ph.D., Sebastopol, CA; and Carroll Ann Ellis, J.D., Fairfax County Police Department, Fairfax, VA

- A history of mental health problems increases trauma following a new crime, particularly a history of post-traumatic stress disorder or major depression.
- A higher degree of threat to life and physical injury increases the risk of difficulty in coping.
- Generally, violent crime victims have a more difficult time coping than property crime victims.
- Research also indicates two key post-victimization factors that can increase the likelihood of victims to develop mental health problems:
  - ♦ A lack of or poor social support systems.
  - ♦ The degree of exposure to the justice system.

The incidence of violent crime in the United States decreased from 1994 to 2004 (U.S. Department of Justice, 2006); however, according to the FBI Uniform Crime Reports (2006), violent crime increased in 2005. Rape was the only violent crime that showed a decrease. Americans are still concerned about becoming crime victims. Americans' fear of becoming a victim of a crime affects more people than crime itself (Warr, 2000).

According to the Bureau of Justice Statistics, in 2004:

- About 14 percent of households in the United States (16 million households) experienced one or more property crimes or had a member age 12 or older who experienced one or more violent crimes.
- About one in 250 households included a member victimized by an intimate partner, such as a spouse, ex-spouse, boyfriend, or girlfriend.
- About 5 percent of households had at least one incident of vandalism. Over 5.6 million households were vandalized during this period (Klaus, 2006).

Recent research has shown that Native Americans and Alaska Natives are victims of violent crime more often than members of any other group. American Indians experienced a per capita rate of violence twice that of the U.S. resident population. On average, American Indians experienced an estimated one violent crime for every 10 residents age 12 or older (Perry, 2004).

As the field of victim services has evolved, so has understanding of the multidimensional impact of crime on victims, their families, and their communities. Victims of either violent or nonviolent crimes can face a multitude of challenges as the result of their victimization. Crime affects victims and their families on a variety of levels: physical, physiological, behavioral, emotional, cognitive, financial, social, and spiritual. Victim assistance programs may offer resources to deal with many or all of these issues.

Victim service providers need to:

- Understand the dynamics of trauma and the vital role victim service providers have in trauma response and victims' rights advocacy.
- Remember that every victim is unique.
- Never make assumptions concerning how a victim will react.
- Recognize that a person's reaction to victimization will be influenced by a variety of factors.
- Try to identify the specific needs of individual victims and develop a plan to meet them.
- Know and use the wide range of community, cultural, and justice system resources to meet the myriad needs of victims.
- Become familiar with the culture and traditions of the populations being served.

The impact of crime is frequently described through the results of research studies. Participants in these studies often are people who have sought services from agencies (for example, victim assistance agencies, social services, and hospitals) or who are involved in the criminal justice system. Research allows us to present information in easily understood numerical terms. The impact of crime is not easily understood or quantifiable, however. Many cultures and groups have a more experiential approach to human events and do not find empirical approaches helpful. This chapter focuses on the more mainstream empirically based approach. Students are encouraged to think beyond the numbers and research results and develop an awareness of the multilayered impact of crime, as well as the individual, highly personal meaning that victims, their families, and their communities attach to crime victimization.

## **Who is Affected by Crime?**

Everyone is affected by crime, either as a direct victim or a friend or family member of a victim. Even individuals who are not direct victims of crime can be negatively affected in a variety of ways, such as developing an increased fear of crime or experiencing the financial impact of crime (e.g., higher insurance rates, lost work days). While primary victims of crime might be identified easily, secondary victims such as family and clan members may not be so readily identifiable and may not receive needed services. Identifying services offered for neighborhoods and communities can be even more difficult.

Another group affected by crime is first responders—the people who typically are first on the scene or first to respond to crime, including police officers, firefighters, and

emergency medical technicians. A vivid example of the impact of crime on first responders involves those who responded to the September 11, 2001, terrorist attacks. Descriptions of stepping through or on body parts while trying to find survivors illustrate the experiences that can cause long-term trauma to first responders. However, crimes need not have devastating, large-scale impact to affect those who respond. An officer interviewing a child sexual abuse victim may be reminded of her or his own child of the same gender and age.

The term “trauma” often is used to describe the experience of crime victims. Trauma refers to both a medical and a psychiatric condition. “Medically, ‘trauma’ refers to a serious or critical bodily injury, wound, or shock. Psychiatrically, ‘trauma’ has assumed a different meaning and refers to an experience that is emotionally painful, distressful, or shocking, which often results in lasting mental and physical effects” (National Institute of Mental Health, 2006, p. 2).

## **Potential Victim Reactions in the Aftermath of Crime**

### **Immediate and Short-term Trauma Reactions**

Short-term trauma occurs during or immediately after the crime and lasts for about 3 months (Kilpatrick, 2000). This time frame for short-term versus long-term trauma is based on several studies showing that most crime victims achieve considerable recovery sometime between 1 and 3 months after the crime. Some common responses to trauma include the following:

- Few crime victims are anticipating a violent assault as the crime occurs, so most are shocked, surprised, and terrified when it happens.
- Crime victims often have feelings of unreality when an assault occurs and think, “This can’t be happening to me.”
- People who have been victimized in the past are at greater risk of developing emotional problems than newly victimized individuals. Victims do not “get used to it.”
- Many victims of violent crime describe experiencing extremely high levels of physiological anxiety, including rapid heart rate, hyperventilation, and stomach distress.
- Crime victims often experience cognitive symptoms of anxiety, including feeling terrified, helpless, guilty, or out of control.

Such physiological and emotional reactions are normal “flight or fight” responses that occur in dangerous situations. In the days, weeks, and first 2 or 3 months after the crime, most victims of violent crime continue to have high levels of fear, anxiety, and generalized distress. The following are examples of distress that may disrupt crime victims’ ability to perform simple mental activities requiring concentration:

- They are preoccupied with the crime; they think about it a great deal, talk about it, or have flashbacks and bad dreams about it.
- They are often concerned about their safety from attack and about the safety of their family members.
- They are concerned that other people will not believe them or will think that they were to blame for what happened.
- Many victims also experience negative changes in their belief systems and no longer think that the world is a safe place where they can trust other people.
- For victims of some crimes, such as child abuse or domestic violence, the trauma occurs many times over a period of weeks, months, or even years. Victims in such cases often experience the compounded traumatic effects of having to always worry about when the next attack will occur.

### **Long-term Trauma Reactions**

Most victims of crime are able to cope with the trauma of victimization. This is especially true of those who receive counseling, other supportive services, and/or information about justice processes and their relevant rights. However, if victim trauma is neither identified nor addressed with mental health assistance, the initial and short-term trauma reactions can exacerbate and turn into long-term trauma reactions, including:

- Major depression.
- Thoughts of suicide and suicide attempts.
- Use and abuse of alcohol and other drugs.
- Ongoing problems with relationships.
- Anxiety disorders.
- A changing view of the world as a safe place.
- Increased risk of further victimization.

## Posttraumatic Stress Disorder (PTSD)

The American Psychiatric Association (2000) describes a characteristic set of symptoms that develop after exposure to an extreme stressor. Types of stressors that are capable of producing PTSD include sexual assault, physical attack, robbery, mugging, kidnapping, or child sexual assault, as well as observing the serious injury or death of another person due to violent assault and learning about the violent personal assault or death of a family member or close friend. People who respond to these stressors with intense fear, helplessness, or horror, and whose symptoms persist over a specified length of time and influence their functioning in major areas of life, may be experiencing symptoms of PTSD. In such cases, appropriate medical attention is required. However, PTSD is a psychiatric illness that can only be diagnosed by a trained professional. The following are characteristic symptoms after a traumatic event:

- Persistent reexperiencing of the event (i.e., distressing dreams, distressing recollections, flashbacks, or emotional or physiological reactions when exposed to something that resembles the traumatic event).
- Persistent avoidance of things associated with the traumatic event or reduced ability to be close to other people and experience or sustain loving feelings.
- Persistent symptoms of increased arousal (i.e., sleep difficulties, outbursts of anger, difficulty concentrating, constantly being on guard, extreme startle response).

Research studies with adults (Resnick, 1993) indicate that PTSD is a frequent reaction to violent crime:

- Rates of PTSD are much higher among those who have been victims of violent crime than those who have been victims of other types of traumatic events. For example, one study found that the lifetime prevalence of PTSD was 25.8 percent among crime victims compared to 9.4 percent among victims of other traumatic events.
- Victims of crimes that resulted in physical injuries, and who believed they might have been killed or seriously injured during the crime, were much more likely to suffer from PTSD than victims whose crimes did not involve life threat or physical injury (45.2 percent compared to 19 percent).
- Rates of PTSD appear to be higher among victims who report crimes to the justice system than among non-reporting victims, probably because these crimes are more serious or more likely to result in injury.

Evidence shows that many crime victims with PTSD do *not* spontaneously recover without treatment, and some crime victims experience PTSD years after they were victimized.

## Physical, Spiritual, Emotional, and Financial Impact of Crime

Victims may face a wide range of immediate, short-term, and long-term reactions in the aftermath of crime. Every crime victim is unique. Individual trauma is affected by previctimization and postvictimization factors related to individual experiences, degree of personal and social support, resiliency, and exposure to supportive services.

Brief summaries of the physical, spiritual, emotional/psychological, and financial impacts of crime are shown in Exhibits 6-1 and 6-2, which provide an overview of *the range of possible reactions* that victims *may* experience.

### EXHIBIT 6-1

#### PHYSICAL AND SPIRITUAL IMPACT OF CRIME ON VICTIMS

Physical Impact	Spiritual Impact
<ul style="list-style-type: none"> <li>■ Physiological anxiety (including rapid heart rate, hyperventilation, and stomach distress)</li> <li>■ Physical injuries (such as gunshot wounds, lacerations, broken bones, sprains, and burns)</li> <li>■ Physical injuries that lead to other health conditions (such as heart attack, stroke, fractures from falling, and loss of dexterity)</li> <li>■ Increased risk of cardiac distress, irritable bowel syndrome, and chronic pain</li> <li>■ Permanent disability</li> <li>■ Disfigurement</li> <li>■ Immune disorders that increase the potential for infectious diseases</li> <li>■ Substantial lifestyle changes, including restriction of activities once enjoyed</li> <li>■ Lethargy and body fatigue</li> <li>■ Sleep disorders</li> <li>■ Loss of appetite, excessive appetite, or eating disorders</li> <li>■ Decreased libido and sexual dysfunction</li> <li>■ Inability to work</li> <li>■ Increased risk of future victimization</li> <li>■ For sexual assault victims: possible exposure to sexually transmitted diseases, exposure to HIV, and unwanted pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>■ In an attempt to understand events that make no sense, people who do and do not engage in religious practice often turn to the spiritual beliefs with which they were raised. These spiritual insights are sometimes helpful; more often than not, however, victims express disappointment in the reactions of their faith communities.</li> <li>■ All religions accept suffering as a component of the human experience but understand its role differently. Hindus and Buddhists understand the role of karma in tragic events and seek to accept what has happened rather than seek justice. Jews believe that God expects human beings to act in kindness to one another; when they do not, justice is sought and forgiveness must be earned. The wide gamut of Christianity practiced in the United States includes all perspectives, from acceptance of suffering as “God’s will” and forgiveness of offenders to strong drives for justice in the secular arena. Muslims believe they have a special mission from God/Allah to create a just society. They typically condemn violence and willingly participate in the justice system.</li> </ul>

**EXHIBIT 6-2**

**EMOTIONAL/PSYCHOLOGICAL AND FINANCIAL IMPACT OF CRIME ON VICTIMS**

<b>Emotional/Psychological Impact</b>	<b>Financial Impact</b>
<ul style="list-style-type: none"> <li>▪ Shock</li> <li>▪ Terror</li> <li>▪ Feelings of unreality</li> <li>▪ Feelings of numbness</li> <li>▪ Confusion</li> <li>▪ Helplessness</li> <li>▪ Fear</li> <li>▪ Anger or rage</li> <li>▪ Grief or intense sorrow</li> <li>▪ Enhancement of particular senses (e.g., hearing, smell, sight)</li> <li>▪ Anxiety (including terror, helplessness, and feeling out of control)</li> <li>▪ Difficulty trusting self or others</li> <li>▪ Depression</li> <li>▪ Panic symptoms</li> <li>▪ Anxiety disorders (e.g., panic disorder, agoraphobia, obsessive-compulsive disorder)</li> <li>▪ Inability to concentrate</li> <li>▪ Guilt and self-blame</li> <li>▪ Shame</li> <li>▪ Preoccupation with the crime</li> <li>▪ Concerns about personal safety</li> <li>▪ Problems with important relationships</li> <li>▪ Social withdrawal</li> <li>▪ Concerns about being believed</li> <li>▪ Concerns about being blamed</li> <li>▪ Negative changes in belief system</li> <li>▪ Increased feelings of vulnerability</li> <li>▪ Increased risk of alcohol or other drug abuse</li> <li>▪ Isolation</li> <li>▪ Persistent avoidance of things associated with the traumatic event</li> <li>▪ Suicide ideation</li> <li>▪ PTSD</li> </ul>	<ul style="list-style-type: none"> <li>▪ Medical bills (e.g., emergency transportation, hospital stays, inpatient and outpatient physical care, medical supplies)</li> <li>▪ Medication and prescription drugs</li> <li>▪ Replacement of eyeglasses, hearing aids, or other sensory aid items damaged, destroyed, or stolen</li> <li>▪ Rental and related costs for physical mobility restoration equipment (e.g., wheelchairs, ramps, crutches)</li> <li>▪ Physical therapy</li> <li>▪ Occupational therapy</li> <li>▪ Job retraining</li> <li>▪ Mental health counseling and therapy</li> <li>▪ Loss of wages due to incapacitation, rehabilitation, or taking time off from work to repair damage from property crimes, participate in criminal or juvenile justice proceedings, or seek medical or mental health treatment</li> <li>▪ Crime scene cleanup</li> <li>▪ Loss of or damage to personal property</li> <li>▪ Costs of replacing locks and changing security devices</li> <li>▪ Child and elder care</li> <li>▪ Fees incurred in changing banking or credit card accounts</li> <li>▪ Higher insurance premiums</li> <li>▪ Relocation expenses</li> <li>▪ For families of homicide victims, funeral and burial expenses and loss of income</li> </ul>

## The Financial Costs of Crime

Some of the financial costs of crime—such as property damage, replacement of stolen or damaged items, medical bills, lost days at work, and therapy expenses—are easy to identify. However, emotional pain and suffering, fear, damage to interpersonal relationships, community-wide fear and loss, and other intangible costs can be difficult to measure. In 1996, the U.S. Department of Justice published a study of the costs and consequences of crime victimization that attempted to quantify both the monetary costs of crime victimization as well as the psychological/emotional costs (Miller, Cohen, and Wiersema, 1996). Among the findings were:

- Personal crime is estimated to cost **\$105 billion** annually in medical costs, lost earnings, and public program costs related to victim assistance.
- Including pain, suffering, and the reduced quality of life increases the cost of crime to victims to an estimated **\$450 billion** annually.
- Violent crime (including drunk driving and arson) accounts for **\$426 billion** of this total, with property crime at **\$24 billion**.

One method for assigning value to fear, pain, suffering, reduced quality of life, and other intangible costs is to use the amount of money given in jury awards for these losses. This method is imperfect, however, as it does not take into account the impact on a person's extended family or clan nor the impact on the wider community. Some crimes, such as hate crimes, may negatively affect every member of a particular group in a city or state or even the entire country. In fact, one of the purposes of a hate crime is to affect all members of the targeted group (Craig, 2002).

### Who Pays for Crime?

Victims and their families pay the actual financial costs for some crimes, while insurance companies, government, taxpayers, and employers also pay. Insurers pay \$45 billion annually due to crime, or \$265 per American adult (Miller, Cohen, and Wiersema, 1996).

### Community Impact

Crime has an impact not only on primary and secondary victims but also on the entire community. High-profile major crimes, such as school shootings or multiple-victim molestations, understandably will have an impact on all community members. Other crimes, such as kidnappings, sexual assaults, or drunk driving crashes, can also have a wide effect. Some communities have begun to use community victim impact statements to assess the effect of crime. Similar to individual victim impact statements, these statements can be introduced after conviction to assist the judge in sentencing. The use of such statements, even on a limited basis, shows that the court system is beginning to acknowledge the wider impact of crime beyond the primary victim and family members.

## **The Impact of Trauma on Brain Development**

A variety of research studies have examined the impact of trauma on brain development (DeBellis, 1999; Perry, 1997; van der Kolk, 1994). The research strongly suggests that physiological changes take place in a child's developing brain due to the experience of trauma. Changes in the developing brain can even take place in utero, based on the mother's experience of trauma or stress (Dowling, Martz, Leonard, and Zoeller, 2000). A child's brain continues to develop after birth, weighing 75 percent of its adult weight by age 2 and being almost completely developed by age 5 (Wasserman, 2004).

Traumatic experiences before age 5 may alter the development of neural pathways, sensitizing pathways that are related to fear and arousal. This sensitization predisposes the child to react to external stimuli in a certain way. A child who has been exposed to traumatic events may be predisposed to react to all situations as potentially dangerous. Physiological changes, such as the release of stress hormones, can cause the child to become hypervigilant, fearful, and anxious.

Successful emotional and social development are dependent on successful brain development. As the child grows and the brain matures, the brain is dependent upon external stimuli for normal growth. There appear to be critical time periods for the development of certain skills. A child who does not learn verbal language skills by a certain age may never be able to develop these skills. The parts of our brains that control higher order functions such as social skills, emotional control, and logical thinking are among the last areas to develop. If a child experiences trauma in the early years, normal brain development may be affected, making it more difficult to develop these higher order skills.

The brain develops, in part, in response to the infant's experiences. If the relationship with the primary caregiver is neglectful or abusive, this will have a negative impact on the child's development of appropriate coping skills. Trauma in early life can lead to problems in maintaining interpersonal relationships, coping with stressful situations, and controlling emotion (Wasserman, 2004, p.14).

## **The Impact of Trauma on the Developed (Adult) Brain**

Response to trauma leading to psychological and physiological disorders should be viewed as a spectrum of conditions rather than a single disorder. On one end is acute stress reaction that resolves on its own without treatment. "Complex" posttraumatic stress disorder (PTSD) is at the other end of the spectrum, and "classic" or "simple" PTSD lies somewhere in between (Herman, 1997). While there is also a spectrum of adaptation to traumatic events, the various conditions have some basic features in common. One of these features is the effect of trauma on the adult brain.

Trauma's effect on the brain has become of increasing interest to researchers, clinicians, victims, and victim advocates. With advancements over the last decade in the field of neuroimaging, scientists are better able to document and understand the structural, biochemical, and functional condition of individuals who have experienced trauma that results in posttraumatic stress disorder. The causal relationship between trauma and brain adaptation, however, is not without controversy. Some scientists question whether a preexisting brain anomaly might serve as a risk factor for development of PTSD following a person's exposure to trauma (Stein, Hanna, Koverola, Torchia, and McClarty, 1997). Others suggest that brain abnormality occurs only in persons with chronic or complicated PTSD (Bonne, Brandes, Bilboa, et al., 2001). While study findings to date are tentative, scientists do know that certain areas of the brain are consistently implicated in PTSD.

These regions of the brain play an important role in learning and memory (hippocampus), emotional regulation (medial prefrontal cortex), and encoding of emotional memories, sensitization, and fear conditioning (amygdala). They are all part of what is called the limbic system of the brain. Emotion and memory are very closely related. In ordinary circumstances, we tend to remember things that carry some emotional content. For example, we are more apt to recall someone we just met if that person made us laugh or feel embarrassed. Exposure to severe stress affects the memory and emotional regulation portions of the brain. The medial prefrontal cortex is then less able to inhibit the amygdala, thereby further intensifying and increasing occurrences of traumatic memories. This confluence of brain deficits creates one of the hallmark symptoms of PTSD: exaggerated emotional reaction coinciding with difficulty recalling the emotional event (Elzinga and Bremner, 2001). Other symptoms include emotional numbing, avoidance, and reexperiencing the trauma.

Neuroimaging studies, which reveal changes in the brain's structure and function in persons with PTSD, underscore deficits found in hippocampal function using neuropsychological measures. Magnetic resonance imaging (MRI) has shown reduction in the volume of the hippocampus in individuals exposed to trauma. Positron emission tomography (PET) studies have shown dysfunction in the prefrontal cortex in individuals responding to stimuli associated with their PTSD (Bremner, 1999). In addition, it is reported that chronic hyperarousal symptoms (mediated by the amygdala) contribute to atrophy of the hippocampal region of the brain (Villarreal and King, 2001).

Being able to measure—to document—changes in the brain carries enormous implications for individuals with PTSD. For example, a diagnosis of PTSD may have bearing on an individual's job security and workplace accommodation (based on regulations set forth by the Americans With Disabilities Act). The Social Security Administration's disability claim evaluation process does not focus on specific diagnoses, but on functional limitations imposed by an illness or impairment. But if and when impairment is documented through assessment, it can be a determining factor in obtaining eligibility for Social Security Disability

Insurance (SSDI) or Supplemental Security Income (SSI). In most states, eligibility for these programs also confers eligibility for Medicaid. Medicaid benefits enable recipients to obtain better access to health care and enable providers to obtain compensation for these health services. Less defined, but equally critical, is the impact a diagnosis of PTSD may have on personal relationships. Family members, friends, coworkers, as well as the patients themselves, are more likely to accept emotional abnormalities when they are viewed and understood as a medical issue, not simply a “mood problem.”

Examining the physiological impact of trauma on the brain through neuroimaging has another benefit. There is recent evidence that damage to the limbic brain regions can be reversed. The effects of trauma can be countered in a number of ways. Both cognitive processing therapy (CPT) and prolonged exposure therapy have been found to mediate negative outcomes of trauma (Resick, Nishith, Weaver, Astin, and Feurer, 2002). Also, studies using serotonin reuptake inhibitors (SSRIs), a class of antidepressants, and phenytoin, a medication commonly used for epilepsy, reported that these treatments increased the volume of the hippocampus (by 5 percent and 6 percent, respectively) in patients with PTSD. At the same time, the SSRI increased memory function by 35 percent (Bremner, 2006).

Posttraumatic stress disorder is a highly disabling condition associated with an extremely high rate of medical and mental health service use. It is diagnosed in combat veterans, victims of child abuse, and mothers of chronically ill children. It occurs in victims of crime as well as witnesses to crime, victims of physical abuse and victims of emotional abuse, persons who receive a threat as well as persons who only perceive a threat. As the vulnerable hippocampus and other portions of the limbic system are exposed to trauma, the brain is altered. Some people are more vulnerable to trauma than others. Coping mechanisms, age, social supports, and drug use are all mitigating factors. Anyone can get PTSD. It is a “normal response to an abnormal occurrence.”

Scientists know that other regions of the human body are also affected by trauma. People with PTSD tend to have abnormal levels of key hormones involved in response to stress. Cortisol levels are lower than normal and epinephrine and norepinephrine are higher than normal. Also, when people are in danger, they produce high levels of natural opiates, which can temporarily mask pain. People with PTSD tend to produce higher levels of these opiates after the danger has passed, which can lead to blunted emotions (National Institute of Mental Health, 2002).

Additional studies to examine how the brain functions will help researchers better understand the physiological impact of trauma on brain development and brain damage. This area of research may help service providers understand the long-term impact of trauma and the importance of prevention.

## References

- American Psychiatric Association. 2000. *Diagnostic and Statistical Manual IV-TR*. Washington, DC: Author.
- Bonne, O., D. Brandes, A. Gilboa, et al. 2001. "Longitudinal MRI Study of Hippocampal Volume in Trauma Survivors with PTSD." *The American Journal of Psychiatry*. 158: 1248–1251.
- Bremmer, J.D. 2006. "The Relationship Between Cognitive and Brain Changes in Posttraumatic Stress Disorder." *Annals of the New York Academy of Sciences* 1071: 80–86.
- Bremmer, J.D. 1999. "Alterations in Brain Structure and Function Associated with Post-Traumatic Stress Disorder." *Seminars in Clinical Neuropsychiatry* 4(4): 249–55.
- Craig, K.M. 2002. "Examining Hate-motivated Aggression: A Review of the Social Psychological Literature on Hate Crimes as a Distinct Form of Aggression." *Aggression and Violent Behavior* 7: 85–101.
- DeBellis, M.D. 1999. "Developmental Traumatology: Neurobiological Development in Maltreated Children with PTSD." Retrieved January 9, 2004, from [www.psychiatrictimes.com/p990968.html](http://www.psychiatrictimes.com/p990968.html).
- Dowling, A.L.S., G. U. Martz, J. L. Leonard, and R. T. Zoeller. 2000. "Acute Changes in Maternal Thyroid Hormone Induce Rapid and Transient Changes in Gene Expression in Fetal Rat Brain." *Journal of Neuroscience* 20: 2255-2265.
- Elzinga, B.M., and J.D. Bremmer. 2001. "Are the Neural Substrates of Memory the Final Common Pathway in Posttraumatic Stress Disorder (PTSD)?" *Journal of Affective Disorders* 70: 1–17.
- Federal Bureau of Investigation. 2006a. "Preliminary Annual Uniform Crime Report, 2005." Retrieved June 14, 2006, from [www.fbi.gov/ucr/2005preliminary/index.htm](http://www.fbi.gov/ucr/2005preliminary/index.htm).
- Herman, J. 1997. *Trauma and Recovery: The Aftermath of Violence from Domestic Abuse to Political Terror*. New York: Basic Books.
- Kilpatrick, D.G. 2000. "The Mental Health Impact of Rape." Retrieved May 26, 2006, from [www.musc.edu/vawprevention/research/mentalimpact.shtml](http://www.musc.edu/vawprevention/research/mentalimpact.shtml).
- Kilpatrick, D. G., C. N. Edmunds, and A. K. Seymour. 1992. *Rape in America: A Report to the Nation*. Arlington, VA: National Center for Victims of Crime; Charleston, SC: Medical University of South Carolina.
- Kilpatrick, D.G., C. L. Best, B. E. Saunders, and L. J. Veronen. 1988. "Rape in Marriage and in Dating Relationships: How Bad Is It for Mental Health?" In *Human Sexual*

*Aggression: Current Perspectives*, eds. R.A. Prentky and V.L. Quinsey. New York: New York Academy of Sciences, 335–344.

Kilpatrick, D.G., B. E. Saunders, and D. W. Smith. 2003. *Youth Victimization Prevalence and Implications*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Klaus, P. 2006. *Crime and the Nation's Households*. 2004. Washington, D.C: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Miller, T.R., M. A. Cohen, and B. Wiersema, 1996, *Victim Costs and Consequences: A New Look*, Washington, DC: U.S. Department of Justice.

The National Center on Elder Abuse in Collaboration with Westat, Inc.1998. *The National Elder Abuse Incidence Report*. Washington, DC: Administration for Children and Families and the Administration on Aging.

National Institute of Mental Health, National Institutes of Health. 2002. *Facts About Posttraumatic Stress Disorder*. Retrieved December 21, 2006, from [www.nimh.nih.gov/publicat/ptsdfacts.cfm](http://www.nimh.nih.gov/publicat/ptsdfacts.cfm).

National Institute of Mental Health. 2001. *Helping Children and Adolescents Cope With Violence and Disaster*. Retrieved June 10, 2006, from [www.nimh.nih.gov/publicat/violenceresfact.cfm](http://www.nimh.nih.gov/publicat/violenceresfact.cfm).

Perry, B.D. 1997. "Incubated in Terror: Neurodevelopmental Factors in the 'Cycle of Violence.'" In *Children, Youth and Violence the Search for Solutions*, ed. J. Osofsky. New York: Guilford Press.

Perry, S. 2004. *American Indians and Crime*. Washington, DC: U.S. Department of Justice.

Resnick, P.A., P. Nishith, T.L. Weaver, M.C. Astin, and C.A. Feurer. 2002. "A Comparison of Cognitive-Processing Therapy with Prolonged Exposure and a Waiting Condition for the Treatment of Chronic Posttraumatic Stress Disorder in Female Rape Victims." *Journal of Consulting and Clinical Psychology* 70(4): 867–79.

Resnick, H.S., D.G. Kilpatrick, B.S. Dansky, B.E. Saunders, and C.L. Best. 1993. "Prevalence of Civilian Trauma and PTSD in a Representative National Sample of Women." *Journal of Clinical and Consulting Psychology* 61(6).

Stein, M.B., D. Hanna, C. Koverola, M. Torchia, and B. McClarty. 1997. "Structural Brain Changes in PTSD: Does Trauma Alter Neuroanatomy?" *Annals of the New York Academy of Sciences* 1(1): 76–82.

.

Van der Kolk, B.A. 1994. "The Body Keeps the Score: Memory and the Evolving Psychobiology of Posttraumatic Stress." *Harvard Review of Psychiatry* 1: 253–265.

Villareal, G., and C.Y. King. 2001. "Brain Imaging in Posttraumatic Stress Disorder." *Seminars in Clinical Neuropsychiatry* 6(2): 131–45.

Warr, M. 2000. "Fear of Crime in the United States: Avenues for Research and Policy." Retrieved May 27, 2006, from [www.ncjrs.gov/criminal\\_justice2000/vol\\_4/04i.pdf](http://www.ncjrs.gov/criminal_justice2000/vol_4/04i.pdf).

Wasserman, E. 2004. *Understanding the Effects of Childhood Trauma on Brain Development of Native Children*. West Hollywood, CA: Tribal Law and Policy Institute.