

## **The Health Effects of Childhood Abuse: Four Pathways by which Abuse Can Influence Health**

**Kathleen Kendall-Tackett, Ph.D.**

Family Research Laboratory, University of New Hampshire

**Objectives:** *This paper describes four possible pathways by which childhood abuse relates to health problems in adults.*

**Method:** *Literature on the long-term effects of childhood abuse is organized in a health psychology framework describing behavioral, social, cognitive and emotional pathways. Key studies from the health psychology and behavioral medicine literature are included to demonstrate how these pathways relate to health.*

**Results:** *Childhood abuse puts people at risk of depression and PTSD, participating in harmful activities, having difficulties in relationships, and having negative beliefs and attitudes towards others. Each of these increases the likelihood of health problems, and they are highly related to each other.*

**Conclusions:** *Childhood abuse is related to health via a complex matrix of behavioral, emotional, social and cognitive factors. Health outcomes for adult survivors are unlikely to improve until each of these factors is addressed.*

### **Key words: child abuse, chronic illness, depression, substance abuse, social support**

Survivors of childhood abuse often suffer from health problems long after the abuse has ended. Abuse survivors are sick more often and go to the doctor more (Felitti, 1991). They report more symptoms and are less likely to describe their health as good. They have surgery more often—in one study, almost twice as much (Kendall-Tackett, Marshall, & Ness, 2000). Adult survivors are at increased risk of having one or more chronic pain syndromes (Drossman et al., 1990; Kendall-Tackett, 2000; Schofferman, Anderson, Hinds, Smith, & White, 1992). And in the Adverse Childhood Experiences (ACE) study, Felitti and colleagues (Felitti et al., 2001) found that subjects who experienced four or more types of adverse childhood events were at increased risk of a wide range of conditions including ischemic heart disease, cancer, stroke, chronic bronchitis, emphysema, diabetes, skeletal fractures, and hepatitis. The childhood events that they studied included psychological abuse, physical abuse, contact sexual abuse, exposure to substance abuse, parental mental illness, exposure to violent treatment of the mother or stepmother, and exposure to criminal behavior.

Over the past decade, researchers have documented the higher frequency of these health problems among adult survivors. The next step for researchers is to understand why this happens. In this paper, a model with four possible pathways by which victimization might influence health is described. By looking at the long-term effects of childhood abuse in a new way, clinicians and researchers can begin to understand the mechanisms by which health problems occur. The four types of pathways described are behavioral, social, cognitive and emotional. Adult survivors can be influenced by any or

all of these and the four types influence each other. Indeed, they form a complex matrix of interrelationships, all of which influence health.

### **Behavioral Pathways**

The behavioral pathways are perhaps the best known of the four pathways described. Anyone familiar with the child maltreatment literature will not be surprised to learn that adult survivors of child maltreatment are more likely to engage in harmful activities. Below is a summary of these findings. Each of these behaviors is obviously harmful to health.

#### **Substance Abuse**

Not surprisingly, adult survivors are at increased risk of abusing alcohol and drugs. In the ACE study (Felitti et al., 2001), subjects who had experienced four or more adverse childhood events were more likely to consider themselves as alcoholics, have used illegal drugs, and have injected drugs. In another primary-care sample, those with a history of victimization were more likely to use recreational and intravenous drugs (Kendall-Tackett et al., 2000). Similarly, in a study of gay and bisexual men, sexual abuse survivors were more likely to use psychoactive drugs (Bartholow et al., 1994). Similarly, in a study of female survivors of sexual abuse, these women were 10 times more likely to have a history of drug addiction and two times more likely to have been alcoholics than members of the control group (Briere & Runtz, 1987).

#### **Obesity & Eating Disorders**

Obesity is also more common among adult survivors of childhood abuse. In a study of 131 HMO patients with a history of incest, 60% of these patients were more than 50 lbs overweight, compared with 28% of the control group. Twenty-five percent were more than 100 pounds overweight compared with 6% of the control group (Felitti, 1991). Felitti had a similar finding in the much-larger ACE study, with the odd ratio of severe obesity equal to 1.6 (Felitti et al., 2001).

Study findings are mixed with regard to sexual abuse and eating disorders, but some researchers have found a relationship. For example, Miller, McClusky-Fawcett, and Irving (1993) found that significantly more young women diagnosed with bulimia reported sexual abuse after age 12 with an adult relative than did a group of matched controls (15% vs. 1%). However, the relationship between sexual abuse prior to age 12 was nonsignificant. The authors conservatively suggest that sexual abuse may be related to the onset of bulimia *for some women*. Others, however, have not found a relationship between bulimia and past abuse (Kinzl, Traweger, Guenther, & Biebl, 1994; Rorty, Yager, & Rossotto, 1994).

#### **Suicide**

Suicide attempts and ideation are also common among adult survivors. The percentages are particularly striking in clinical populations, but the rates are high in community samples as well. In a community sample from Europe, 43% of CSA

survivors had suicidal ideation and 14% had made suicide attempts (Teegan, 1999). Similarly, patients in the ACE study (Felitti et al., 2001) who had experienced four or more types of family dysfunction were at dramatically increased risk of attempted suicide.

A study of gay and bisexual men in treatment for STDs also demonstrated that those with a history of child sexual abuse were significantly more likely to have suicidal thoughts or actions (Bartholow et al., 1994). Finally, in two studies with samples from psychiatric emergency rooms, patients who had a history of either child sexual or physical abuse were significantly more likely to have thought about or attempted suicide (Briere, Woo, McRae, Foltz, & Sitzman, 1997; Briere & Zaidi, 1989).

### **High-risk Sexual Behavior**

Risky sexual behavior is the most highly documented form of harmful behavior in abuse survivors. This finding holds true for males and females, and is consistent across the range of sexual orientations.

Sexual abuse was related to high-risk sexual activities in four different community samples from Australia (Ferguson, Horwood, & Lynskey, 1997), New Zealand (Fleming, Mullen, Sibthorpe, & Bammer, 1999), Norway (Grimstad & Schei, 1999), and the United States (Felitti et al., 2001). Young women with a sexual abuse history had earlier onset of consensual sexual activity, and higher rates of teen pregnancy, multiple sexual partners, unprotected intercourse, and sexually transmitted disease. The findings were particularly pronounced for women whose abuse experience included intercourse (Ferguson et al., 1997). Women with a sexual abuse history reported earlier age at menarche and at first sexual activity (Grimstad & Schei, 1999), and were more likely to have had an abortion (Fleming et al., 1999). Finally, men and women who had experienced four or more types of family dysfunction were more likely to have had 50 or more sexual partners, and to have had a sexually transmitted disease (Felitti et al., 2001).

The findings are similar in specialized populations. In a study of incarcerated youth, girls with a history of sexual abuse reported an earlier mean age of first intercourse and were less likely to use contraception compared with their nonabused counterparts (Mason, Zimmerman, & Evans, 1998). In a study of women treated for sexually transmitted diseases (STDs), researchers found that sexual abuse survivors were more likely to have had two or more sexual partners in the past 90 days (57% vs. 30%; Thompson, Potter, Sanderson, & Maibach, 1997).

Gay and bisexual men with a history of child sexual abuse were more likely to have unprotected anal intercourse, and had a two-fold increase in the prevalence of HIV infection compared with gay and bisexual men who had not been sexually abused (Bartholow et al., 1994; Zierler, Feingold, Laufer, Velentgas, Krantowitz-Gordon, & Mayer, 1991). Carballo-Dieguez and Dolezal (1995) reported similar findings in their study of Puerto Rican men who had sex with other men. Those who had been sexually abused before age 13 were more likely to participate in anal intercourse without

protection compared with men in their sample who had not been sexually abused before age 13.

### **Smoking**

Smoking is also more likely among those with a history of childhood abuse (DeWit, MacDonald, & Offord, 1999; Kendall-Tackett et al., 2000). In the ACE study (Felitti et al., 2001), subjects who had experienced four or more types of family dysfunction were more likely to be current smokers (OR=2.2). Norwegian women with a history of sexual abuse were more likely to smoke during pregnancy (Grimstad & Schei, 1999).

### **Sleep Difficulties**

Adequate sleep is essential for good health. While not strictly a “behavior,” it has a strong behavioral component, and is therefore included here. Adult survivors of childhood abuse often have trouble sleeping. In a study of German-speaking sexual abuse survivors, 68% indicated that they had sleep difficulties, with 45% reporting repetitive nightmares (Teegan, 1999). The author did not report the rate of sleep problems for the healthy controls, but did indicate surprise that the group of abuse survivors was so symptomatic even after participating in therapy. Briere and Runtz (1987) also noted that insomnia was common in their study of sexual abuse survivors who presented at the psychiatric emergency room.

Lack of sufficient sleep affects health in a number of ways. Indeed, the National Sleep Foundation warns that modern sleep problems are “taking a catastrophic toll on our bodies and minds” (National Sleep Foundation, 2000). People who are chronically short on sleep are more prone to infections and illnesses, and are more likely to have accidents (National Sleep Foundation, 2000). Trouble sleeping can also predict a more severe and chronic course of depression (Moos & Cronkite, 1999).

The behavioral pathways have the most obvious impact on health, but the problem does not stop there. The next three pathways described are more subtle, but all still have a substantial negative impact on health.

### **Social Pathways**

The ability to form social relationships and get along with others is essential to the wellbeing of humans. Maintaining positive, reciprocal social connections involves reading social cues, speaking up for oneself, and finding people who will not exploit and abuse others. Unfortunately, the ability to create and maintain relationships is also affected by past abuse. Adult survivors are often in relationships that are exploitive or victimizing (Fleming et al., 1999). The divorce rate is higher (Felitti, 1991; Fleming et al., 1999), as is the general dissatisfaction with their present relationships (Fleming et al., 1999). Adult survivors also may choose to cut themselves off from others, having very few relationships. Indeed, approximately half the women in a community sample of

child sexual abuse survivors described themselves as socially isolated (Teegan, 1999). These relationship difficulties could be related to interpersonal style.

### **Childhood Abuse & Interpersonal Style**

Becker-Lausen & Mallon-Kraft (1997) describe how relationship dysfunction is the “pandemic” outcome of childhood sexual abuse, but may also occur in survivors of other forms of child maltreatment. Adult survivors may adopt one of two interpersonal styles: avoidant or intrusive. The avoidant style is characterized by low interdependency, low self-disclosure and low warmth. People with the avoidant style have few interpersonal ties and few friends. They are less likely to be involved in relationships with others and less likely to be married. The intrusive style is at the opposite end of the spectrum. People with the intrusive style have extreme needs for closeness. There is excessive self-disclosure, and relationships are smotheringly warm. The intrusive style is overly demanding and controlling. Both the avoidant and intrusive styles are dysfunctional and are likely to result in loneliness.

Interestingly, the two patterns that Becker-Lausen and Mallon-Kraft describe as common among adult survivors have also been described in regard to health behavior, independent of abuse experiences. Hegelson and Fritz (1999) describe two interpersonal styles related to poor health. Unmitigated agency is the focus on self to the exclusion of others. At the other end, unmitigated communion is a focus on others to the exclusion of self. In a study of cardiac patients (Hegelson & Fritz, 1999), unmitigated agency and unmitigated communion were both predictive of poor health behaviors and health outcomes. Both styles were related to hostility, and unmitigated communion was related to depression. Hegelson and Fritz speculated that there are different pathways by which these behaviors lead to poor health. People whose primary style is unmitigated agency may have problems because they are too arrogant and hostile to follow a doctor’s orders or advice from loved ones. Those with unmitigated communion may have health problems because they are so involved with others that they fail to take care of themselves.

The importance of social connections and good interpersonal relationships has also been demonstrated in other studies. For example, people without good social support were less likely to participate in health-promoting activities. College students with low social support were less likely to exercise and wear a seat belt, and were more likely to sleep irregular hours (Allgower, Wardle, & Steptoe, 2001). In a 10-year longitudinal study of depression, subjects who did not socialize with friends, and coped with stressors by avoiding others, had the highest occurrence of chronic depression (Moos & Cronkite, 1999).

Social support appears to be especially important for people with lower incomes. Low-income individuals with social support have better cardiovascular health (as measured by high-density lipoproteins and mean arterial pressure) and natural killer cell activity than low-income people without support. These findings did not occur for subjects with higher incomes (Vitaliano et al., 2001).

The above discussion focused on social connections in general. Below is a discussion of two types of failed social connections that are more likely among adult survivors of childhood abuse. Each of these can also have a deleterious effect on health.

## **Revictimization**

Revictimization reflects a failure of social connections, and is relatively common among adult survivors of childhood abuse, even in community samples. For example, women with a history child sexual abuse were more likely to have been raped or domestically abused as adults in one sample (Fergusson et al., 1997), and Teegan (1999) found that 41% of sexual abuse survivors had experienced sexual violence as adults one or more times in relationships, at work, or in therapy. Teegan did not provide the percentage of women in the control group who had experienced sexual violence.

Revictimization is even more common in clinical samples. In a study of 93 adult women presenting at a psychiatric emergency department, Briere and colleagues found that childhood sexual and physical abuse were common (53% and 42% respectively). The authors assumed that women presenting at a psychiatric emergency department would have high rates of child and adult victimization. For women who reported a history of child abuse, they compared rates of adult revictimization. Specifically, they were attempting to determine whether women who had been sexually abused as children were at higher risk of revictimization as adults than women who had been physically abused. They found that sexual abuse was related to higher risk of attempted or completed rape and physical assault outside a sexual relationship, but not battering within a sexual relationship. In contrast, childhood physical abuse was not related to any form of adult victimization (Briere et al., 1997).

In a study of 290 patients diagnosed with borderline personality disorder, almost half had been victimized as adults. Specifically, 33% had an abusive partner, 31% had been raped, 21% had been raped by a known perpetrator, 11% had been raped multiple times, and 19% had been both beaten and raped. In examining the link between abuse as adults and abuse as children, the authors noted that 86% of borderline patients who had been assaulted or raped as adults also reported a history of childhood physical or sexual abuse. In contrast, only 50% who reported a history of childhood abuse also reported that they had been assaulted or raped as adults. Five types of experiences during childhood appeared to predict later victimization: physical neglect by a caretaker, emotional withdrawal by a caretaker, a caretaker's failure to provide needed protection, sexual abuse by a noncaretaker, and any type of sexual abuse (Zanarini et al., 1999).

Revictimization affects health through injury and potential death from each victimizing encounter. Revictimization also increases the risk of contracting any number of sexually transmitted diseases, including HIV. In addition to frank injury, revictimization can lead to a state of chronic stress, where partners never know when violence might erupt. This type of chronic stress can lead survivors to self-medicate by participating in harmful activities such as substance abuse, eating disorders and smoking.

Chronic stress also can lead to an elevation in blood levels of triglycerides, free fatty acids, cholesterol, glucose, and insulin, all of which are related to cardiovascular disease and diabetes (Lovallo, 1997; Kendall-Tackett & Marshall, 1999).

## **Homelessness**

Homelessness is another example of failed social networks, and this too appears to be related to past abuse. Milburn and D'Ercole (1991) note that homeless women were more likely to have experienced trauma and abuse either as adults or as children than were domiciled women of similar SES. Physical and sexual abuse are potent predictors of whether women, in particular, will be homeless or domiciled. For example, in a study of 20 homeless women, 33% had been battered, 50% had been physically abused as children, and 33% had been sexually abused (Redmond & Brackmann, 1990). Another study conducted in a New York City shelter found that 63% of homeless women had been battered, 58% had been raped, 51% had been attacked with a weapon, and 31% had been molested (D'Ercole & Struening, 1990). There were no comparison groups in these two studies, but even so, the numbers are striking.

To describe a partial mechanism, Bassuk and Rosenberg (1988) note that family violence creates social isolation that may make women vulnerable to homelessness. Fragmentation of social networks and disruptions in familial supports were more common for women than for men (Milburn & D'Ercole, 1991). For example, foster care and other forms of separation from families were more common among homeless than domiciled women. And for both women and men, high rates of childhood separation and lifetime physical or sexual assault were common. In a large sample of respondents in emergency shelters, researchers found twice as many had a history of sexual abuse, and almost twice as many had a history of physical abuse among the homeless than among a comparison group of housed respondents on public assistance (Shinn, Knickman, & Weitzman, 1991).

Being homeless has a detrimental effect on health in a number of ways including hunger and malnutrition, exposure to inclement weather, lack of medical care, lack of routine hygiene and increased risk of physical injury. Homeless persons are also at an increased risk of substance abuse. McCarty and colleagues (McCarty, Argeriou, Huebner, & Lubran, 1991) note that substance abuse and homelessness have a bidirectional relationship: substance abuse led to homelessness and homelessness led to substance abuse. Overall, they found that 30% to 40% of homeless people abuse alcohol and 10% to 15% of homeless people abuse drugs. The rates of alcohol abuse were higher among older men and American Indian men. Homeless alcoholics were twice as likely to suffer liver disease, seizure disorders, injuries, traumas, and nutritional deficiencies. They also had higher rates of drug abuse, mental illness, hypertension, pulmonary disease and arterial disease.

## **Cognitive Pathways**

The next pathways described are the cognitive pathways. These include the beliefs and attitudes that shape a person's day-to-day existence; these attitudes and beliefs can have a substantial impact on health.

### **Internal Working Model**

An internal working model is one of the most oft-studied constructs with regard to cognitive pathways. It refers to the internal mental framework by which a person interprets stressful life events, and the motives and actions of others. The internal working model also ties into people's beliefs about how much power they have in situations and how much they can do to help themselves. It is related to depression, health perception, and self-efficacy.

Briere and Elliot (1994) note that when children are abused, they develop an internal working model where they see the world as a dangerous place. Because they have been powerless in the past, they may overestimate danger and adversity in their current environment. This may cause adult survivors to underestimate their own sense of self-efficacy and self-worth in dealing with both real and perceived danger. They may also have chronic perceptions of helplessness, powerlessness, and danger. These distortions can contribute to emotional distress and increase the risk of depression.

These observations have been confirmed in empirical studies. In a community sample of female sexual abuse survivors, Teegen (1999) found that 93% were fearful, especially when confronted with stimuli that reminded them of their abuse experiences. Approximately half of the women described themselves as "mistrusting," and described their current views toward life, themselves and others as "very negative." Similarly, women in a study of sexual abuse survivors believed that others would use them and could not be trusted (Silk, Lee, Hill, & Lohr, 1995). Adult survivors of child neglect also reported high levels of anxiety, paranoia and hostility (Gauthier, Stollak, Messe, & Aronoff, 1996).

Unfortunately, these chronically negative, fearful or mistrusting thoughts can also influence health. Lovallo (1997) notes that when people view an event or circumstance negatively, their bodies release the stress hormone cortisol. Constantly elevated cortisol levels can suppress the immune system, slow wound healing, damage the brain, and increase the likelihood of disease.

Interpersonal trust can even influence how long a person lives. In a 14-year followup of 100 men and women, ages 55-80, Barefoot and colleagues (Barefoot et al., 1998) found that subjects who had higher levels of interpersonal trust at baseline were healthier and lived longer than those with low levels of trust. Higher levels of trust were associated with better self-rated health and life satisfaction. The authors defined "trust" as the belief that subjects could rely upon the sincerity, good-will, or truthfulness of others.

Finally, a recent 60-year longitudinal study of nuns has also demonstrated that optimism, reflected in positive emotion words, is related to longevity. Researchers found that nuns who used more positive emotion words in their handwritten, one-page autobiographies written at age 22 (a requirement for entry into the convent) had a 2.5-fold decrease in mortality 60 years later. Indeed, there was a 6.9-year difference in mortality between the highest and lowest quartiles of positive emotion sentences (Danner, Snowdon, & Friesen, 2001).

## **Health Perception**

The above discussion focuses on negative beliefs in general. A subtype of belief—health perception—is also related to health. Health perception refers to whether people consider themselves to be healthy. This has also been shown to be affected by victimization experiences.

Sexual abuse survivors, in one study, expressed less overall satisfaction with their health than did their non-abused counterparts (Moeller, Bachman, & Moeller, 1993). In a study of primary-care patients, only 80% of patients who had been abused described themselves as healthy compared with 97% of the non-abused control group who were matched for age and sex (Kendall-Tackett et al., 2000). Finally, a recent meta-analysis of seven studies found that women who had been sexually victimized, either as adults or children, were more likely to consider their health to be poor (Golding, Cooper, & George, 1997).

Health perception is a potent predictor of both illness and mortality. In a study of 3,500 Canadian senior citizens, those who rated their health as “poor” were almost three times more likely to die during the 7-year study as those who rated their health as “excellent.” This proved to be a *more* accurate predictor of mortality than the objective rating of physicians (Moosey & Shapiro, 1982). Another study of 7,000 adults in California found similar results even after controlling for health behavior, psychological state (including depression), and social ties (Kaplan & Comacho, 1983).

## **Emotional Pathways**

Emotional pathways are the final category described. A large literature has developed over the past 20 years demonstrating the potentially life-threatening significance of negative emotions. Two conditions described have been documented as common symptoms of past abuse---depression and PTSD. Both of these conditions can also have a significant impact on health.

## **Depression**

Depression is one of the most commonly occurring sequelae of past abuse. According to Briere and Elliot (1994), adult survivors of child sexual abuse have a four times greater lifetime risk of developing major depression compared with people who do not have an abuse history. Felitti (1991) found that 83% of his patients with a sexual

abuse history were depressed compared with 32% of the comparison group. Their symptoms included sleep disturbances, chronic fatigue, despondency and frequent crying spells. Most had never been treated. In another study, patients who had been sexually abused in childhood reported the highest levels of depression, even when compared with other depressed patients (Gladstone, Parker, Wilhelm, & Mitchell, 1999).

Some have wondered whether it is child abuse per se that causes mental health problems, or if depression is caused by a general level of family dysfunction that allowed the abuse to occur. To test this hypothesis, Zuravin and Fontanella (1999) examined data from 513 low-income women (105 had experienced child sexual abuse). They had measures of depression and 11 other markers of family dysfunction including four other types of maltreatment (verbal abuse, emotional neglect, physical abuse and physical neglect). Their results indicated that women who had experienced child sexual abuse were three times more likely to be depressed as the non-abused women in their sample. They also discovered that child sexual abuse made an independent contribution to the variance in depression that was over and above other adverse events in childhood.

Depression has a severe and dramatic influence on health, and its effects are myriad. Depression is a well-established immunosuppressor (Weisse, 1992), and has been shown to affect the immune system even on the level of the white blood cells (Avissar, Nechamkin, Roitman, & Schreiber, 1997). This is particularly true in those with major depressive disorder (MDD), who tend to have abnormally high cortisol levels (Kendall-Tackett, 2000).

Depression can influence whether people participate in health-promoting behaviors. In a study of over 5,000 male and female college students, depression was associated with lack of physical activity, not eating breakfast, irregular sleep hours, and not using a seat belt. These findings were for both men and women. Additionally, depression was associated with smoking, not eating fruit, and not using sunscreen among women (Allgower et al., 2001).

Depression can also have a negative impact on sleep. One recent study examined the strength of the relationship between EEG sleep measures and symptoms of depression (Perlis et al., 1997). Using canonical correlation, the authors identified that sleep and depression were essentially and intimately related. Severe depression drastically reduces the amount of time spent in Stage 4 (delta) sleep. Further, depressed patients have more REM sleep, and REM sleep occurs earlier in the night (reduced REM latency), indicating increased arousal (Perlis et al., 1997).

Women who suffer from major depression are at an increased risk of coronary heart disease (Schwartzman & Glaus, 2000). In a recent review of the literature, depression following a myocardial infarction (MI) increased cardiac mortality three to four fold for both men and women (Lesperance & Frasure-Smith, 2000). The risk was not only for those suffering from major depression, but for milder forms as well. Similarly, depressed patients hospitalized for unstable angina were also at increased risk of cardiac events, including heart attacks and stroke, in the year following their

admission. Depressed people are as likely to have another heart attack as those with ventricular dysfunction or severe coronary atherosclerosis (Lesperance & Frasure-Smith, 2000). Another recent study found that depression did not predict mortality in patients who had had an MI, but was significantly related to post-MI quality of life (Lane, Carroll, Ring, Beevers, & Lip, 2000).

Finally, a prior incident of major depression significantly predicted who would develop peritraumatic dissociative symptoms (a precursor of PTSD) following a car accident (Fullerton et al., 2000). The authors speculate that because major depression is often comorbid with PTSD, peritraumatic dissociation may be part of the neurobiological link between PTSD and depression, which brings us to the next emotional pathway-- PTSD.

### **Post-Traumatic Stress Disorder (PTSD)**

PTSD is another common symptom of past abuse, and it too has a severe impact on health. Briere and Elliot (1994) note: “although most child sexual abuse victims do not meet full diagnostic criteria for PTSD, more than 80% are reported to have some “post-traumatic” symptoms” (p. 56). These symptoms include hypervigilance, intrusive thoughts, and sudden intrusive flashbacks of the abuse experience.

Lindberg and Distad (1985) examined the relationship between PTSD and symptoms that led victims to seek treatment. They found that a significant number of victims in their sample manifested symptoms of PTSD, including flashbacks and intrusive memories. Approximately one third experienced dissociative reactions. In another study, 51% of 105 female psychiatric in-patients had a history of sexual abuse. Among the survivors, 66% met the diagnostic criteria for PTSD (Craine, Henson, Colliver, & MacLean, 1988).

Childhood abuse appears to make people more vulnerable to developing PTSD when exposed to a current life stressor. Bremner and colleagues (Bremner, Southwick, Johnson, Yehuda, & Charney, 1993) compared rates of childhood abuse in Vietnam veterans with and without combat-related PTSD. They did indeed find higher rates of childhood physical abuse among veterans with PTSD compared with those without PTSD (26% vs. 7%). This association held even after controlling for level of combat exposure. The authors note, however, that childhood abuse does not account for all PTSD among veterans. Seventy-four percent of those with PTSD did not report a history of abuse.

Not surprisingly, PTSD also has a negative impact on health. It has been described as a highly co-morbid disorder, and is likely to co-occur with depression and anxiety disorders, alcohol abuse, smoking, and drug abuse (Perkonigg & Wittchen, 1999). PTSD can also influence social ties, and those suffering from PTSD are more likely to be divorced and have other family problems, are less likely to have completed their educations, and are more likely to have contemplated or attempted suicide (Maercker, 1999).

PTSD can also lead to sleep problems, especially problems with insomnia and chronic nightmares (Krakow, Tandberg, Sandoval, Cutchen, & Schrader, 1998). Lack of sleep can also cause considerable health problems as well as increasing the risk of injury or death due to accidents at home, at work or in a car.

### **Clinical Implications**

As can be seen, “health” depends on a complex web of behaviors, thoughts, emotions and social connections. All of these not only influence each other, but ultimately influence health as well. Abuse can influence health at any, or all, of these junctures, and these pathways will vary for each individual patient.

To improve health outcomes for adult survivors, clinicians must consider and address each of the ways by which victimization can influence health. For example, admonitions to abstain from smoking or substance abuse are likely to be unsuccessful until the traumatic past events that are driving these harmful activities are addressed and resolved. Admonitions to exercise will not be helpful if the patient believes that nothing she does makes any difference. Telling a patient to “lose weight” is likely to fail if he has no ability to make and keep friends, and eats when he is lonely or stressed.

Recognizing the complexity of the forces that lead to health, clinicians and researchers must strive for an approach that addresses all these pathways. Health outcomes are unlikely to improve if professionals in the child maltreatment field continue in the current mindset of treating mental health and physical health sequelae separately. Only by recognizing, and addressing, all of these underlying factors can we hope to improve the health of adult survivors of childhood abuse.

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