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# 6

## THE LINK BETWEEN CHILD SEXUAL ABUSE AND RISKY SEXUAL BEHAVIOR: THE ROLE OF DISSOCIATIVE TENDENCIES, INFORMATION-PROCESSING EFFECTS, AND CONSENSUAL SEX DECISION MECHANISMS

EILEEN L. ZURBRIGGEN AND JENNIFER J. FREYD

Previous research has demonstrated a connection between child sexual abuse (CSA) victimization and engaging in high-risk sexual behaviors as an adult (Allers, Benjack, White, & Rousey, 1993; Browne & Finkelhor, 1986; Fergusson, Horwood, & Lynskey, 1997; Knutson, 1995; Thompson, Potter, Sanderson, & Maibach, 1997; Urquiza & Capra, 1990). These behaviors include sexual compulsivity, indiscriminate or impulsive sex, a high number of sexual partners, substance abuse, prostitution, and a low incidence of condom use. Although some researchers have investigated possible psychological mediator variables such as condom use self-efficacy (Thompson et al., 1997), sex guilt (Walser & Kern, 1996), self-esteem (Low, Jones, MacLeod, Power, & Duggan, 2000), sexual assertiveness (Morokoff et al., 1997), and

gender rigidity (Lisak, Hopper, & Song, 1996), much work remains to be done. In this chapter, we describe a set of cognitive mechanisms that may be important mediators of the relationship between abuse experiences and sexually risky behavior.

We come to this research from slightly different directions, but we share a belief in the importance of studying and understanding the cognitive processes that result from and underlie sexual abuse and aggression. Freyd has spent the last 10 years theorizing about and investigating the relationship between traumatic experience, especially CSA, and unawareness of that experience. The goal of this program of research has been to understand the reasons and mechanisms whereby people who are abused may remain unaware of that abuse or may not be able to recall the abuse for long periods of time. Freyd has approached the question of unawareness of abuse from a cognitive science perspective, and much of her empirical work in this area has involved laboratory investigations of cognitive mechanisms involved in dissociation. In the process of these years of theorizing and researching the relationship between dissociation and trauma, she has also considered particular consequences to sexual awareness and decision making, many of which may be relevant to the observed link between CSA and sexually risky behavior.

Zurbriggen has a long-standing interest in the relationship between cognition and personality and in the ways in which cognitive mechanisms might underlie or relate to individual differences in motivation, attitudes, and beliefs. In particular, she has studied unconscious psychological links between the concepts of *power* and *sex*, and shown that people with strong power-sex links are more likely to report acting in a sexually aggressive manner in dating relationships (Zurbriggen, 2000). She also has academic training and industry experience as a computer scientist and has helped develop computational models that accurately predict speeded performance for complex cognitive tasks (Glass et al., 2000; Meyer et al., 1995; Schumacher et al., 1999). These computational models were constructed using a production rule architecture—a set of “If-Then” rules that are hypothesized to describe and explain behavior. This sort of computational modeling may also prove useful in understanding the link between CSA and adult sexual behavior.

Our shared focus, then, is on cognitive science approaches to understanding the psychology of sexual abuse and aggression. Our theorizing takes an information-processing perspective and is concerned with cognitive structures, processes, and mechanisms. In this chapter, we first describe some of our ongoing work investigating cognitive mechanisms in the area of trauma, dissociation, and memory, and we then speculate about the implication for sexually risky behavior. Note that there are many theoretically plausible links between CSA and sexually risky behavior, ranging from third-variable explanations to a variety of mediating factors between the experience of abuse and subsequent behavior (some cognitive, others noncognitive). We believe that there are multiple explanations for this relationship; however, in this

chapter, we consider just one set of plausible links, those based on information-processing theory. Although these links are unlikely to explain the entire observed relationship between CSA and sexually risky behavior, we believe that they are important links, and ones that have been understudied to date.

## DISSOCIATION AND BETRAYAL TRAUMA THEORY

### Dissociation

Individuals differ in the extent to which they report experiences of dissociation. Although most adults report only mild dissociative experiences, such as briefly losing awareness while reading or driving, some adults report more extreme dissociative experiences, such as finding items that they must have purchased but with no memory or awareness of having actually done so. Dissociative experiences such as temporarily losing track of one's identity, location, or place in time are marked by a lack of integration of consciousness, attention, and memory. It is therefore likely that basic cognitive mechanisms of memory and attention are implicated in the phenomenon of dissociation.

The word *dissociation* is often used in connection with diagnosable disorders of thinking or behavior. For example, Bernstein and Putnam (1986) defined dissociation as “a lack of normal integration of thoughts, feelings, and experiences into the stream of consciousness and memory” (p. 727). The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., *DSM-IV*; American Psychiatric Association, 1994) recognizes five distinct dissociative disorders. Common to all five is “the disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment.” (American Psychiatric Association, 1994, p. 477). In addition, dissociation is now recognized by the *DSM-IV* as contributing to posttraumatic stress disorder (PTSD).

Dissociation has consistently been linked to a history of traumatic victimization. Janet (1889) was one of the early theorists and researchers to observe this relationship and develop an account for the connection. This observed relationship between dissociative disorders and trauma has now been documented in a large number of empirical studies, using a variety of measurement instruments (e.g., Chu & Dill, 1990; DiTomasso & Routh, 1993; Miller, McCluskey-Fawcett, & Irving, 1993; Sanders & Giolas, 1991; van der Kolk, Perry, & Herman, 1991). Importantly, this trauma-dissociation relationship has been found in studies with corroborated trauma samples, such as Putnam and Trickett's (1997) study of sexually abused girls.

### Betrayal Trauma Theory

Many have suggested that dissociation is a defense against the psychological and emotional pain that results from traumatic experiences (e.g., Freud,

1913; Goleman, 1985; Green, 1992; Greenson, 1967). In contrast, Freyd (1994, 1996, 2002) has proposed that dissociation and related memory failures result from some kinds of traumatic experiences, not for the purpose of avoiding pain, but to allow the trauma victim to maintain a necessary system of attachment.

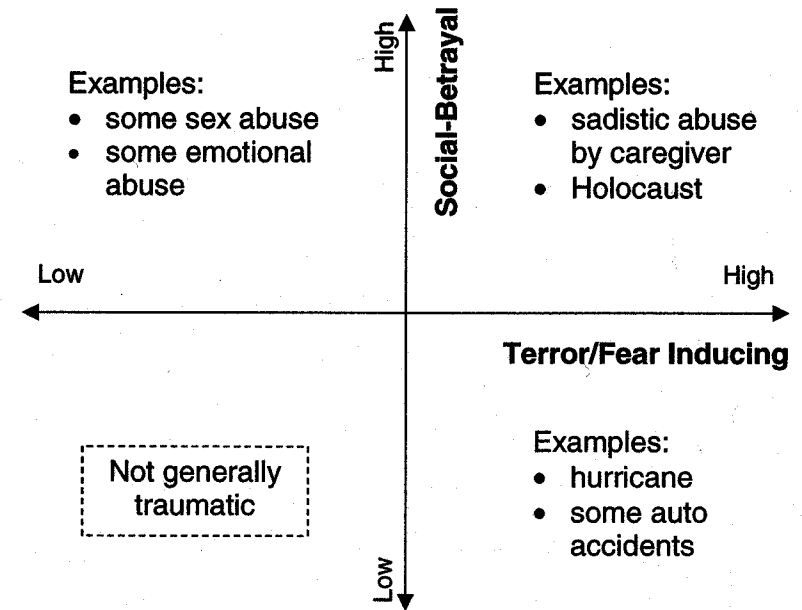
More specifically, consider what happens when a child, charged by life with the duty to become attached to (and elicit attachment from) his or her caregiver, is betrayed by that very person. We are frequently sensitive to cheating and betrayal when we know we have the choice to avoid the cheater or betrayer (Cosmides & Tooby, 1992). This exquisite sensitivity to betrayal usually motivates us to withdraw from the person who betrayed us. However, when the betrayer is someone we depend on for physical and emotional survival, the very mechanisms that are normally protective become, themselves, a problem. An infant or a child who responds to cheating in the "normal" way would pull back from that relationship, become less lovable, and become less likely to inspire the nurturing he or she requires for survival. Child abuse by a caregiver or trusted authority is especially likely to produce a social conflict for the victim. If a child processes the betrayal in the normal way, he or she will be motivated to stop interacting with the betrayer. To preserve the attachment, then, the child needs to *not* know about the abuse.

Betrayal trauma theory (Freyd, 1994, 1996) predicts varying frequencies of amnesia for different sorts of traumatic events depending on the presence or absence of factors related to social betrayal, as well as depending on the presence or absence of factors related to the cognitive feasibility of amnesia. More specifically, betrayal trauma theory posits that traumatic events can be broadly distinguished into two separate dimensions, one being the terror- or fear-inducing aspects of a situation and the other being social betrayal (see Figure 6.1). Symptoms of traumatic response are theorized to depend on the extent to which these dimensions are present in the traumatic episode. Immediately life-threatening events that produce great biological fear are hypothesized to lead to hyperarousal and anxiety, whereas events that include social betrayal are hypothesized to lead to numbing, amnesia, and dissociation. Because many traumatic events are highly loaded on both dimensions, many people will display both kinds of symptoms. In addition, though, we argue that those individuals who have experienced high degrees of social betrayal traumas may tend to create a particular *cognitive environment* that is marked by high levels of divided attention (as in multitasking) as opposed to selective or focused attention.

#### BETRAYAL TRAUMA THEORY, COGNITIVE MECHANISMS, AND DISSOCIATIVE TENDENCIES: LABORATORY STUDIES

To test the predictions of betrayal trauma theory, Freyd and her colleagues at the University of Oregon have been conducting a number of re-

Figure 6.1. A two-dimensional model of trauma. Copyright © 1996 by Jennifer J. Freyd. Reprinted with permission.



search projects investigating aspects of trauma, information processing, and betrayal trauma theory. One research direction evaluates predictions regarding the frequency of amnesia as a function of different features of trauma. Another research direction involves assessing the association of trauma, dissociative experiences, and performance on standard cognitive tasks. Results from both of these lines of research are summarized below.

#### Betrayal and Memory Impairment: Betrayal Trauma Inventory Studies

One of the key insights of betrayal trauma theory (Freyd, 1994, 1996) is that victims of abuse may remain unaware of the abuse, not to reduce suffering, but rather to maintain an attachment with a figure vital to survival, development, and thriving. The nature of the relationship between the victim and perpetrator (e.g., whether or not the perpetrator is a caregiver, that is, someone who provides food, clothing, shelter, and other resources necessary for survival) is therefore hypothesized to be highly relevant to whether memory for a traumatic incident is impaired and forgetting occurs. Ideally, this hypothesis would be tested by gathering detailed information about the victim-perpetrator relationship and the degree of dependency. To date, how-

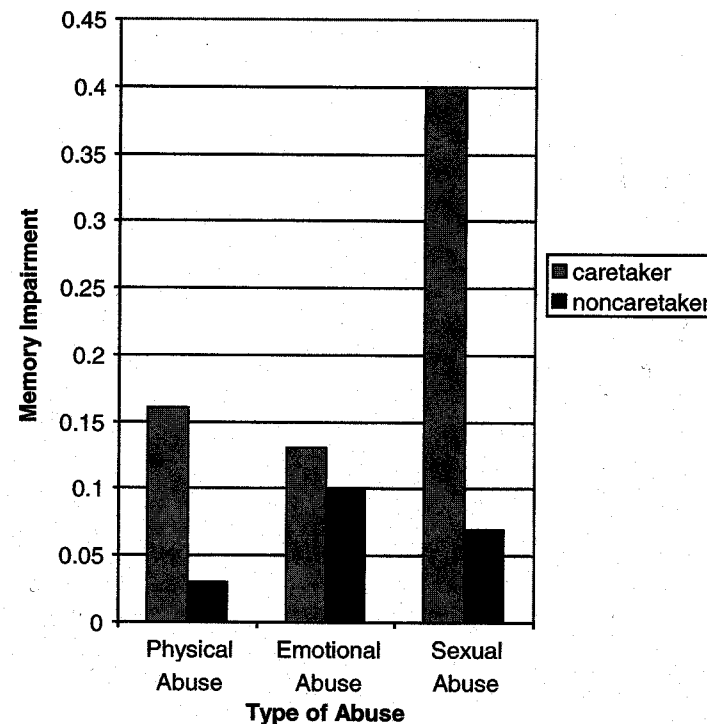
ever, few data sets have included this information. The closest proxy to high dependence in the relationship in most published studies appears to be whether the abuse was perpetrated by a relative. Freyd (1996) reanalyzed a number of data sets, including Feldman-Summers and Pope (1994), Williams (1994, 1995), and Cameron (1993), focusing on the relationship between amnesia and whether the abuse was incestuous. In most cases this analysis indicated that memories for incest are more likely to be lost and recovered than are memories for other forms of abuse.

To more precisely test the specific hypotheses of betrayal trauma theory, we have been collecting new data that assess the victim-caregiver relationship in a much more detailed way. These studies use the Betrayal Trauma Inventory (BTI), a measure that is currently under development in the Freyd laboratory. The BTI assesses physical, emotional, and sexual abuse in childhood and some adulthood traumas. It consists of many behaviorally defined events (e.g., "Before you were the age of 16, did someone hold your head under water or try to drown you?"). If a participant indicates that this event happened, he or she is asked to answer follow-up questions. There are many factors probed in the follow-up questions, including age of the victim, relationship between victim and perpetrator, severity of injuries, and the victim's memory for the event. One follow-up question assessed caretaker status of the perpetrator: "Was the person responsible for caring for you (for example, providing you with food or shelter)?"

In a recent study using the BTI (Freyd, DePrince, & Zurbriggen, 2001), we administered this questionnaire to 202 men and women enrolled in an introductory psychology course. Within the three types of abuse (sexual, physical, and emotional), averages were computed across items (i.e., across the specific behaviors such as holding under water or hitting with a belt) for the age at which the abuse began, the duration of the abuse, and the amount of memory impairment. Duration scores and memory impairment scores were calculated on the basis of responses to follow-up questions. For duration, participants were asked to indicate "Over how long a period did it happen?" for any event endorsed. To determine memory impairment, we asked participants about their "knowledge of the event." Participants received a 1 for each abuse item in which they indicated any memory impairment (i.e., they endorsed "I now remember basically what happened, but I didn't always" or "I now remember the details of what happened, but I didn't always") and a 0 for all other abuse items. Average memory impairment scores thus ranged from zero to one. Note that this method of assessing memory impairment is conservative in that it does not identify people with (current) complete memory impairment, that is, those victims who currently have no memories (either general or detailed) of being abused.

Within sexual and physical abuse, caretaker status of the perpetrator was significantly related to average memory impairment in the predicted direction, with higher levels of memory impairment associated with caretaker

Figure 6.2. Average memory impairment for caretaker and noncaretaker sexual, physical, and emotional abuse. From "Self-Reported Memory for Abuse Depends Upon Victim-Perpetrator Relationship," by J. J. Freyd, A. P. DePrince, and E. L. Zurbriggen, 2001, *Journal of Trauma and Dissociation*, 2, p. 12. Copyright © 2001 by the International Society for the Study of Dissociation. Reprinted with permission.



abuse (see Figure 6.2). To control for the possible effects of age at first abuse and duration of abuse on memory impairment, we conducted additional regression analyses. Even when the possible effects of age and duration of abuse were statistically controlled, however, the relationships between caretaker status and sexual and physical abuse were still significant. In other words, physical and sexual abuse perpetrated by caretakers was associated with greater memory impairment than physical and sexual abuse perpetrated by noncaretakers. This difference in memory impairment could not be accounted for by the fact that victimization by caretakers occurred at an earlier age and for a longer duration.

These results are consistent with the predictions made by betrayal trauma theory, which states that *knowledge isolation* (of which impaired memory is

one example) is more likely to result from traumas that have a social betrayal component. Another type of knowledge isolation is the dissociation and withdrawal dimension of PTSD. In a recently completed study using a community sample of 75 individuals who self-reported one or more traumatic events, DePrince (2001) found that self-reported betrayal (associated with the trauma) predicted multiple measures of dissociation and PTSD withdrawal, but self-reported fear did not. We plan to conduct further studies concerning betrayal, fear, and knowledge isolation related to experiences of trauma.

### Dissociation and Selective Attention: Stroop Studies

Another research direction involves the assessment of basic cognitive mechanisms related to attention for people with varying exposure to childhood trauma and with varying levels of dissociative tendencies. This basic research seeks to understand the repercussions of a dissociative style on specific cognitive tasks. We began by focusing on the basic function of selective attention: the ability to willfully select certain information while inhibiting the selection of other information simultaneously available. Human participants are generally impressive at selective attention, but it is not an all-or-none ability. Even though certain information is selected for focused processing, additional information may nonetheless intrude. We hypothesized that dissociative tendencies would be systematically related to selective attentional mechanisms.

The Stroop paradigm (Stroop, 1935), one of most widely used methodologies for studying selective attention, seemed to us a good starting place for exploring our hypothesis that participants varying in dissociative tendencies would show a difference in basic attentional processing. In the classic Stroop demonstration participants are asked to name the ink color of a list of words or strings of letters printed in different colors. In its simplest form in the experimental condition, the words are color names (e.g., *red* or *green*), and those words are incongruent with the ink colors (thus the word *red* is printed in green ink, and the word *green* is printed in blue ink). In a control condition the words are neutral terms (e.g., *table* or *tree*) or nonword stimuli such as strings of identical letters (e.g., *xxxx*), and the ink colors are randomly assigned to the different words or strings of letters. Participants attempting to name the ink color take longer when the ink colors are paired with incongruent color words than when the ink colors are paired with neutral words, strings of letters, or congruent color terms. The fact that participants can name the ink colors and inhibit naming the words illustrates the power of selective attention. However, the fact that the meaning of the color words apparently interferes with ink-naming demonstrates the inability to completely exclude information that is not chosen for selection.

Note that our focus here is on the standard, rather than the emotional, Stroop task. The emotional Stroop task, in which participants view words

that are emotionally charged for their particular fears (along with control words and control participants), has been widely used to study information processing in a variety of mental disorders. A number of studies with individuals who meet criteria for PTSD have shown biases toward threatening information in the emotional Stroop task (e.g., Foa, Feske, Murdock, Kozak, & McCarthy, 1991; McKenna & Sharma, 1995; McNally, Kaspi, Riemann, & Zeitlin, 1990). Although this literature increases understanding of biases in various forms of psychopathology, these studies do not examine the basic (non-emotional) Stroop effect that is well established in the cognitive literature (MacLeod, 1991). We used the standard Stroop task to better understand differences in basic attentional mechanisms (not dependent on emotional content) that might be important to dissociation and response to trauma.

In our first study on this topic (Freyd, Martorello, Alvarado, Hayes, & Christman, 1998), we found that women and men reporting high levels of dissociative experiences (as measured by the Dissociative Experiences Scale [DES]; Bernstein & Putnam, 1986) displayed a greater level of interference on the basic Stroop color-naming task. High-DES participants took longer to name the ink colors when the lists were conflicting color terms (e.g., naming the color *yellow* when the word *red* was printed in the ink color yellow) than did the low-DES participants. For all other categories but the conflicting color terms, reaction times for high dissociators were equivalent to or slightly faster than the reaction times of the low dissociators, indicating that the increased interference effect was not due to generalized slowing among the high-DES participants.

Although the first study showed a disadvantage for high dissociators in a particular task, we suspected that high dissociators must sometimes have an advantage. We considered under what conditions that might be and hypothesized that conditions of divided attention might advantage high dissociators just as low dissociators are apparently advantaged in a selective attention task. So we designed an experiment in which we looked for an interaction between performance in different attentional contexts as a function of dissociative tendencies.

In this second study (DePrince & Freyd, 1999), we sought to build on previous results (Freyd et al., 1998) by examining whether the relationship between dissociation and performance on the Stroop task would be different in a single-task (selective attention) as opposed to a multitask (divided attention) environment. In the divided attention condition, participants were asked to name the ink colors (as in the standard Stroop task) but at the same time were asked to memorize the words. We predicted an interaction between attentional context and DES score. For the selective attention condition, we expected to replicate the results of Freyd et al. (1998), with high dissociators showing impaired performance on the Stroop task. In contrast, we expected that low dissociators would show impaired performance in the divided attention condition.

We also wanted to investigate the relationship between dissociative tendencies and the emotional valence or "charge" of the words. Because we hypothesized that the function of dissociation is to keep emotionally threatening information from conscious awareness, we wanted to test whether high dissociators had particular difficulties recalling emotionally charged words. Because most people who are high dissociators have a history of traumatic experiences (see Freyd, 1996), the charged words that we used were ones associated with trauma (e.g., *assault, rape*).

In a replication of the results from Freyd et al. (1998), men and women reporting high levels of dissociative experiences (as measured by the DES) showed a greater level of interference on the basic (selective attention) Stroop color-naming task. However, high dissociators showed less interference when they were asked to divide their attention and accomplish two tasks at once. High dissociators also remembered fewer charged words than did low dissociators, a finding suggestive of the adaptive value of dissociation. Furthermore, we found (in line with other studies) that high dissociators reported significantly more trauma in their history.

### Cognitive Environments

These results can best be understood by conceptualizing dissociation as a particular type of *cognitive environment*. This term is based in part on an analogy to modern computer software environments. These environments allow users to decide whether they want to have many "windows" and applications open to simultaneously handle a number of ongoing programs and tasks, or whether they prefer to have only a few windows and applications open, thus focusing fairly exclusively on a single task. A similar choice is available more generally as we work, play, and interact with others—we can choose to do many things at once or to focus more specifically on one person or task.

Because dissociation involves a lack of integration of thoughts, experiences, and emotions, it necessarily creates a cognitive environment in which many distinct windows are open at the same time, thus leading to a near-constant state of divided attention. People who habitually dissociate may therefore be most comfortable in environments that favor multitasking and divided control structures. Those who tend not to dissociate may be most comfortable in a more focused single-task environment. From this cognitive-environments perspective, high dissociators may find the selective attention task more challenging than the divided attention task. Thus high dissociators show greater Stroop interference than the low dissociators in the selective attention task as evidence of the difficulty. However, high dissociators may show less Stroop interference in the divided attention task because they are adept at engaging in dual tasks compared with low dissociators.

Much research remains to be completed before we can make statements about the causal link between attention and dissociation. At least one possibility that is consistent with the research to date is that in coping with trauma, individuals learn to multitask as a way of managing and controlling the flow of information. In particular, a cognitive environment based on dissociation and multitasking serves as a means of keeping threatening information (especially knowledge of social betrayal) out of conscious awareness. Such a cognitive environment can have both adaptive and maladaptive consequences, depending on the context and situation.

### Clinical Implications

The therapeutic treatment goals and methods that are most appropriate for survivors of childhood abuse have much in common with the treatment goals and methods appropriate for trauma survivors more generally. Indeed, many of the therapeutic goals (e.g., the development of a healthy therapist-client relationship) are fundamental to the therapy process and are thus appropriate for all clients. However, betrayal trauma theory suggests that there are also specific concerns and goals that are either unique to or especially important for clients who were victimized by a caretaker (or whose traumatic victimization was in some other way an instance of a social betrayal).

According to betrayal trauma theory, survivors of childhood abuse by a caretaker have learned to cope with social conflicts they cannot escape by being disconnected internally. While abuse is ongoing, this mental disconnection (and the concomitant memory impairment) may be adaptive. However, disconnection and memory impairment regarding nonabusive relationships are likely to be problematic, as is a more general style of mental disconnection or dissociation. Because these problematic symptoms arose in the context of a close relationship, their treatment will require a focus on social relationships and the cognitive mechanisms that support such relationships.

One of the main treatment goals will therefore be the promotion of internal integration of disjointed and fragmentary sensory memories, as well as a deeper (and more veridical) connection to the external ("objective") world. This is an important goal for abuse victims more generally. However, it is especially important for victims whose abuse comprised a social betrayal, because they are more likely to suffer from disjointed and impaired memory. Note that this treatment goal need not be at odds with the treatment goals and methods for addressing other common symptoms of trauma (e.g., high levels of anxiety, fear, and hyperarousal). It can best be met, for example, within the context of a healthy therapist-client relationship, a relationship that is important for other treatment goals as well.

Another important goal for a therapist working with victims of caretaker childhood abuse is to provide support and assistance as the client works

to develop close relationships with important others (e.g., friends, romantic partners, or family members). Again, this goal is not unique to victims of caretaker childhood trauma; close interpersonal relationships are important to everyone. However, victims of caretaker childhood abuse may be especially impaired in the development of such relationships because of the violent breach of trust that they experienced as a child. The development of healthy social relationships will of necessity entail the development of the client's active and appropriate use of trust and reality assessment mechanisms—exactly the mechanisms that are most likely to be damaged or underdeveloped. The clinician should therefore be prepared to encourage and assist the client, as well as to provide “reality checks” as needed and appropriate.

For clients who are survivors of caretaker childhood abuse, even more so than with other types of clients, the potential to heal internal disconnection is almost surely going to be most fully realized in the context of what was so broken in the first place: intimate and trusting relationships. It is thus absolutely crucial that the client be able to trust the therapist and that this trust not be betrayed. Betrayal trauma theory suggests that even small betrayals of trust (e.g., lying about the reason for canceling an appointment) could have large consequences for people whose internal and external disconnection were the direct result of childhood social betrayals.

While disconnection and dissociation can be truly problematic, high dissociators may have certain cognitive “deficits” and “strengths” depending on the task context. Clinicians might help high dissociators find appropriate contexts for their particular skills. When high dissociators make chaos in their lives, clinicians may be more helpful if they understand the cognitive and adaptive forces behind this chaos. Clinicians should remain alert to the possibility that, for some clients, certain dissociative responses may continue to have current adaptive value. They may also want to talk to their dissociative clients about the benefits and costs of dissociation (e.g., not being present during sex may help with anxiety but may be costly in terms of control over HIV risk).

Our results also suggest that the assessment of trauma history may be highly relevant to the diagnosis and treatment of other disorders. In particular, because we have shown that basic processes of attention are affected by dissociative tendencies, we recommend that clinicians who are working with clients with any kind of attention-based disorder (e.g., ADHD) always explore their clients' trauma history. The possible links between trauma and attention-based disorders like ADHD are speculative at this point, but we suspect that both of the following are likely to be true. First, it is possible that a substantial number of children diagnosed or medicated for purported ADHD have been misdiagnosed and are in fact showing dissociative and other post-traumatic reactions to childhood abuse or other traumatic experiences. Because of the misdiagnosis, these children are likely to be poorly understood by teachers and physicians. Second, children with underlying ADHD may

have their symptoms significantly complicated by posttraumatic reactions, and the role that trauma plays in exacerbating or affecting the ADHD symptoms may be poorly understood by teachers and physicians.

If trauma is playing a role in children diagnosed with ADHD, it will be important to recognize and respond to the trauma, yet past research on ADHD in children has almost never included even an assessment of trauma history. In fact, in some cases (as with the National Institutes of Health Multimodal Treatment study for ADHD; Hinshaw et al., 1997), the recruitment procedures specifically excluded children who were experiencing abuse or neglect. As a result of this lack of research on ADHD in abused children, the authors of the recently published American Academy of Pediatrics Guidelines for diagnosing and treating ADHD (American Academy of Pediatrics, 2000) specifically state that the guidelines are not applicable to abused and neglected children.

Recent work in the Freyd laboratory was designed in part to fill this gap in the ADHD literature. Becker (2002) examined the relationship between trauma and abuse history, PTSD, and ADHD in community samples of preschool- and school-age (ages 8–11) children. She found reliable correlations between ADHD and PTSD symptoms for both groups of children. In addition, for the school-age children, boys and girls with a history of abuse had higher ADHD scores. These results underscore the need to screen all children suspected of an attention-based disorder for trauma and trauma symptoms.

#### DAMAGED COGNITIVE MECHANISMS: POSSIBLE MEDIATORS BETWEEN ABUSE EXPERIENCES AND SEXUALLY RISKY BEHAVIOR

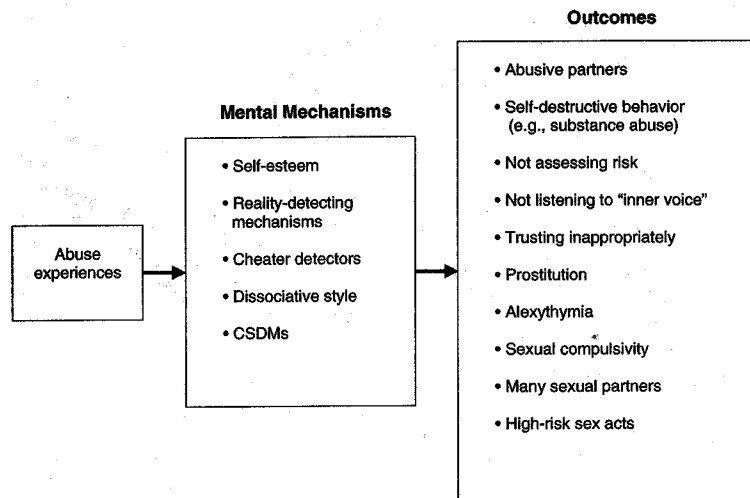
In Figure 6.3 we present a partial list of cognitive mechanisms that may lead to specific HIV-relevant outcomes (including specific high-risk sexual behaviors). Because so little research on cognitive mediators has been conducted, many of the links in this figure are only speculative at this point. However, all of the hypothesized links are theoretically and conceptually plausible. We briefly discuss three hypothesized cognitive mechanisms and then focus in greater detail on the remaining two: a general dissociative style and consensual sex decision mechanisms (CSDMs)

##### Self-Esteem

One set of paths that already enjoys a fair amount of empirical support is the set of paths from abuse to lowered self-esteem and from self-esteem to behavioral outcomes. CSA is correlated with lowered self-esteem as an adult (Banyard, 1999; Romans, Martin, & Mullen, 1996). Higher levels of self-



Figure 6.3. Cognitive mechanisms that might mediate the path between childhood abuse experiences and risky sexual behavior. CSDMs = consensual sex decision mechanisms.



esteem are associated with less risky behavior under some circumstances, for example, between female sex workers and their clients (Fritz, 1998), among college students engaging in relatively unconventional sexual behavior (Hollar & Snizek, 1996), and among young women in casual sexual relationships (Seal, Minichiello, & Omodei, 1997). On the other hand, higher levels of self-esteem can also be associated with more risky behavior, for example, between female sex workers and their romantic partners (Fritz, 1998), among college students engaging in more conventional sexual behaviors (Hollar & Snizek, 1996), and among young women in more committed sexual relationships (Seal et al., 1997).

#### Reality-Detecting Mechanisms

Other paths have not been tested but make conceptual sense. For example, cognitive mechanisms that aid in the general assessment of reality are likely to be damaged by any long-term experience of CSA. This is because it is commonplace for perpetrators to lie and distort reality. While the child is being abused and is frightened and in pain, he or she is told "You like this." Afterward, the message may be "I did that because I love you" or "All daddies do that with their daughters." If the child tries to disclose the abuse, the response might be "You're lying" or "You must have imagined that" or "He would never do that; he loves you." The normal processes whereby a child

learns to distinguish reality from fantasy are in danger of being sidetracked by these inaccurate (yet authoritatively delivered) statements. The end result may be an adult whose ability to assess reality is hampered. Valid intuitions may be brushed aside. For example, the fear that a potential sexual partner might be abusive is ignored. Risk may be assessed improperly (e.g., the high probability that an injecting partner is HIV-positive is not considered).

#### Cheater Detectors

Another set of cognitive mechanisms that is likely to be damaged (or not fully developed) in sexual abuse survivors is the set of particular cognitive mechanisms that are used to assess the trustworthiness of other people. Cosmides and Tooby (1992) discussed these *cheater detector* mechanisms and argued for the evolutionary adaptiveness of being able to recognize when other people are trying to take advantage of us. As described in the previous section, Freyd (1996) has argued that these mechanisms are exactly the mechanisms that need to be suppressed when a child is being abused by his or her caretaker. The automatic response to being cheated is either anger and confrontational behavior or to "leave the field" and avoid further contact with the cheater. Neither of these options is open to the dependent child, though, because of the need to maintain an attachment with the caregiver. One solution to the dilemma is to turn off the cheater-detector mechanisms. Should these mechanisms remain in a nonfunctioning state in adulthood, however, a host of negative outcomes are likely to ensue. These include remaining with an abusive partner, being unable to avoid exploitation (e.g., as a prostitute), and being at higher risk for date rape and sexual assault (because of the difficulty of accurately perceiving that someone is untrustworthy).

#### Dissociation, Divided Attention, and Sex

Victimization can lead to dissociation (DiTomasso & Routh, 1993; Putnam & Trickett, 1997; Sanders & Giolas, 1991). Like most behaviors, sexual behaviors can be performed in a highly dissociated state. In other words, someone can engage in sexual activity without attending to her or his own feelings of fear, pleasure, or safety. In addition to this inability to attend to aspects of one's own mental and emotional state, people with dissociative tendencies may also be unaware of external features of the event; for example, whether a condom is being used or even (in extreme cases) who they are with. Such dissociation would make it difficult for someone to make any decisions about sex, let alone good ones, because they are not mentally present.

Dissociation may also appear (although probably to a lesser degree) even when simply thinking or talking about sex, and even with a neutral third party. Thus, when safer sex practices or facts about sexually transmitted diseases (STDs) or AIDS are taught or even just discussed (e.g., in health classes,



clinic settings, community agencies, or intervention programs), people who have been sexually victimized may have difficulty processing and encoding that information. Our data on lower memory scores for high-DES participants support this speculation. (Recall that the words high-DES participants had trouble remembering were those related to sex and to trauma, suggesting that they were "tuning out" when those words were presented.) This suggests that many abuse victims who are exposed to HIV/STD and pregnancy-prevention messages and who are taught risk prevention skills (e.g., condom use and negotiation) may not be fully present to process and store that information; thus, they will have difficulty using the information.

One obvious intervention for people with dissociative tendencies is to practice being present in sex—both when engaging in sexual activities and when merely talking about them. The former might best be accomplished with a supportive partner—someone who can gently remind the CSA survivor where she is and what is happening, who will ask about her emotional state. This could also be done alone, though; for example, by imagining consensual sex and then focusing on the feelings that come up. In either case, an intervention that starts small and builds gradually is advisable.

Note that helping someone to learn not to dissociate can also be done in nonerotic settings. For example, if any mention of sex causes someone to mentally disappear, then it would be useful to talk one-on-one with a counselor who knows about this tendency toward dissociation. Together, therapist and client could work toward having longer and longer discussions in which the client was mentally present.

### Damaged Consensual Sex Decision Mechanisms

Freyd (1996) has proposed that under healthy conditions people develop consensual sex decision mechanisms, or CSDMs. Damage to one's sexual being, however, may cause a breakdown of the ability to freely consent to sexual activities with another person. Although there are probably many mental mechanisms involved in determining whether sex is consensual or not, for simplicity we label all of them as CSDMs.

CSDMs are the set of mental functions that, in the absence of external force, allow a person to make a choice about whether to engage in a sexual behavior (or continue to engage in it, once it has begun). Consensual sex is possible only when two necessary conditions are met, neither of which alone is sufficient: The situation must be free from all external force, even subtle force, and each participant must have a functioning set of CSDMs.

Damaged CSDMs may be thought of as inaccurate beliefs, unhealthy (unhelpful) cognitions about the self, a lack of access to one's internal affective state, and the presence of risk-seeking sexual decision rules. We are particularly interested in studying sexual decision rules that may be used by those who have been sexually victimized, and we are engaged in research to clarify

the content and structure of these rules as well as their correlates. Currently, we conceptualize these rules as a collection of "if-then" statements, as in a computer programming language. If certain conditions are met, then certain outcomes will result. The *if* conditions can be situational (e.g., if a sexual partner says "I love you" . . .), affective (e.g., if I feel angry . . .), or cognitive (e.g., if I believe that premarital sex is immoral . . .). The *then* outcomes can also be affective or cognitive, or they can be behavioral (e.g., . . . then ask partner to use a condom). The process whereby these rules are executed is straightforward—if the conditions in the "if" portion of the decision rule are met, then the behaviors, affects, or cognitions in the "then" portion of the rule are enacted. An example of a simple decision rule might be:

if My sexual partner smiles at me . . . [situational input]  
then Smile back. [behavior]

To give a better sense of how damaged or undeveloped CSDMs might lead to sexually risky behavior, we discuss some hypothetical examples. In particular, we consider three distinct scenarios: (a) the person in question does not want to be having sex at all (at least not with this particular partner), (b) the person wants to be doing something sexual but wants one or more things to be different (e.g., wants to be using a condom, or not having intercourse), and (c) the sexual activity is proceeding exactly as the person wants (even though it involves risky behavior).

#### Scenario 1: No Desire for Sexual Contact

Consider the case of a person who does not want to be sexual (at this moment or with this person), yet is doing so anyway. We can imagine a number of potentially helpful decision rules that are apparently damaged, not present, or not active. These include such rules as: "If I don't like what is happening sexually, then stop" or "If I don't feel safe, then don't continue with sex" or "If I don't trust my sexual partner, then don't engage in sexual behavior with him or her." One possibility is that these rules are simply not present. There is no cognitive connection between level of trust and choice of behavior, between assessment of affective state and decisions to continue or stop. Another possibility is that the rules are present in some form, but one or both of the two clauses (the *if* or the *then* clause) are damaged or cannot be accessed or executed. For example, the evaluation that is an inherent part of the *if* clause might not occur—I might not attempt to assess the trustworthiness of my partner or I might be unable (perhaps due to alexythymia) to evaluate my own affective state. In contrast, the evaluation portion of the rule may be operating in a satisfactory way, but the *then* clause is suboptimal. For example, a rule that said "If I don't like what is happening sexually, then dissociate" would have been a helpful and adaptive rule for a dependent child, but is likely to be unhelpful and dangerous for an adult, in that it would prevent him or her from ending an encounter that felt assaultive.

It is not difficult to imagine how decision rules such as the above, rules that would appear naturally during normal sexual development, might be damaged as a result of CSA. When a child is abused, he or she does not have the power to stop the sex act. The rules outlined above cannot be acted on, and thus cannot be incorporated as part of one's set of CSDMs. Instead, alternative rules (e.g., *if it feels bad, then dissociate*) are likely to develop.

#### *Scenario 2: Desire for a Different Type of Sexual Contact*

Now consider a second type of situation, one in which the person does want to be sexual, but there is something about the situation that he or she would like to change. For example, he might prefer to engage in mutual masturbation rather than anal sex, or she might want to have intercourse but with a condom rather than without one.

Here are some possibilities for beliefs, cognitions, and decision rules that might not be present: (a) My health is important; (b) I am important; (c) I deserve to be treated with respect; (d) I deserve to be listened to when I talk about what I want; (e) This person doesn't seem to care about me very much, but other people do; (f) *If someone is treating me badly, then speak up about it*; and (g) *If someone continues to treat me badly even after I've asked them to stop, then stop spending time with them.*

Again, it is not hard to imagine these kind of decision rules and cognitions being damaged or eliminated by an abuser and by the process of abuse. Because victimized children are not listened to and are not treated with respect, they internalize the idea that they are not deserving of respect. This is especially likely to happen when verbal abuse occurs (as it commonly does) and the child is explicitly told that he or she is unimportant, bad, and evil, that no one else cares about her, that he deserves to die. It is also easy to imagine the ways in which these types of cognitive constructs could lead to sexually risky behavior. If I believe that my health is unimportant, I am unlikely to take steps to protect it (e.g., I am less likely to screen partners carefully or to use condoms or other latex barriers on a regular basis). If I believe that I am not deserving of respect, it will be more difficult to break out of an abusive relationship, or to escape from an exploitative experience of prostitution.

#### *Scenario 3: Sexual Contact Is Desired (Albeit Risky)*

In this third scenario the sexual situation, while risky, is proceeding just as desired. One of the most important mental mechanisms contributing to such an experience might be dissociative style. If a general "tuning out" occurred whenever sex was discussed, the person might be woefully underinformed about AIDS and other STDs and may not understand the risk involved in the sexual behaviors he or she is engaged in. A second possibility is that the person might have some understanding of the risk involved but be using denial and rationalization to minimize the dissonance between

his or her knowledge and behavior. The person may think, "just this once without a condom won't hurt" or "you can't get AIDS from heterosexual intercourse" or "the risk is really low" or "I only date 'nice' boys who don't have STDs" or "my boyfriend doesn't sleep with other women (or doesn't inject drugs)" or any number of other (inaccurate) cognitions. It makes sense that victims of sexual abuse would be especially likely to rely on denial as a defense mechanism. Denial (by the perpetrator and others) is a pervasive part of the experience of being abused, so denial is modeled as normative. Also, dissociation and repression are a form of denial, so to the extent that those defenses were used as coping strategies by the child, it makes sense that they would also be used by the adult.

A third possibility is that there might be an actual attraction to risk. Not all risk-seeking people are unconsciously suicidal, of course, but some are. Some percentage of people who were sexually victimized as children are likely to be depressed or even suicidal. More relevant for the focus on CSDMs are associations formed during victimization between sexual pleasure and risky behaviors. The victimization may contribute to an eroticization of risk and danger, or to an erotic association with particular context variables (e.g., an aggressive partner) that correlate with risk. This is in contrast to seeking risk merely for its own sake (perhaps as part of a self-destructive tendency), which could also be present in some adult survivors.

#### **Conscious and Unconscious Consensual Sex Decision Mechanisms**

We believe that some CSDMs are open to a person's conscious awareness (explicit cognitive mechanisms and decision rules) but that others might not be (implicit mechanisms and rules). Other researchers have investigated some explicit decision rules related to initiation and refusal of condom use (Morokoff et al., 1997). We are currently conducting research aimed at examining both implicit and explicit CSDMs and their relationship to child trauma and adult sexually risky behavior.

#### **SUGGESTIONS FOR FURTHER RESEARCH**

We have discussed a number of cognitive mechanisms that may be important mediators of the relationship between CSA and sexually risky behavior. To conclude this chapter, we describe a number of important research questions that remain and highlight some of our ongoing studies that attempt to address some of these questions.

Figure 6.3 summarizes many of the mediational pathways that we believe are the most deserving of immediate study, but it does so in a general way. That is, rather than drawing causal pathways from specific mental mechanisms to specific outcomes, we have left the picture more abstract. We do

not believe, however, that every type of cognitive adaptation to abuse is equally likely to lead to every type of high-risk outcome. One research priority, then, is to attempt to link specific mental mediational mechanisms to specific behavioral outcomes.

To do that, one must describe and quantify the mental mechanisms in enough detail that they can be adequately assessed. Dissociative style and self-esteem can both be reliably measured using existing scales. Reality-detecting mechanisms, cheater detectors, and CSDMs, however, do not at this point have accepted and reliable methods of assessment. One of the major goals of our immediate research program is to find methods to assess both the conscious and unconscious components of these mental mechanisms. In particular, we are currently using several techniques from cognitive psychology to measure implicit CSDMs related to sexual initiation and refusal.

The paths from abuse experiences to cognitive mechanisms also need to be specified with greater precision. There are many dimensions to a trauma, not all of which would be expected to contribute equally to each type of cognitive adaptation. For example, our work to date suggests that a dissociative style may be especially adaptive when abuse is perpetrated by a caretaker. We believe that much more detailed and specific questions about all aspects of a traumatic experience must be asked, if we are to fully understand the resulting cognitive adaptations that can result in adult high-risk behavior.

Finally, we believe that it may be helpful to consider this mediational viewpoint when designing interventions. That is, if we can work directly on improving consensual sex decision making and decreasing dissociation about and during sex, we believe that a reduction in risky behaviors will result.

## REFERENCES

- Allers, C. T., Benjack, K. J., White, J., & Rousey, J. T. (1993). HIV vulnerability and the adult survivor of childhood sexual abuse. *Child Abuse and Neglect, 17*, 291-298.
- American Academy of Pediatrics. (2000). Clinical practice guideline: Diagnosis and evaluation of the child with attention-deficit/hyperactivity disorder. *Pediatrics, 105*, 1158-1170.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Banyard, V. L. (1999). Childhood maltreatment and the mental health of low-income women. *American Journal of Orthopsychiatry, 69*, 161-171.
- Becker, K. A. (2002). *Attention and traumatic stress in children*. Unpublished doctoral dissertation, University of Oregon, Eugene, OR.
- Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease, 174*, 727-735.

- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin, 99*, 66-77.
- Cameron, C. (1993, April). *Recovering memories of childhood sexual abuse: A longitudinal report*. Paper presented at the meeting of the Western Psychological Association, Phoenix, AZ.
- Chu, J., & Dill, D. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *American Journal of Psychiatry, 147*, 887-892.
- Cosmides, L., & Tooby, J. (1992). Cognitive adaptations for social exchange. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 163-228). New York: Oxford University Press.
- DePrince, A. P. (2001). *Trauma and posttraumatic symptoms: An examination of fear and betrayal*. Unpublished doctoral dissertation, University of Oregon, Eugene, OR.
- DePrince, A. P., & Freyd, J. J. (1999). Dissociative tendencies, attention, and memory. *Psychological Science, 10*, 449-452.
- DiTomasso, M. J., & Routh, D. K. (1993). Recall of abuse in childhood and three measures of dissociation. *Child Abuse and Neglect, 17*, 477-485.
- Feldman-Summers, S., & Pope, K. S. (1994). The experience of "forgetting" childhood abuse: A national survey of psychologists. *Journal of Consulting and Clinical Psychology, 62*, 636-639.
- Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1997). Childhood sexual abuse, adolescent sexual behaviors and sexual revictimization. *Child Abuse and Neglect, 21*, 789-803.
- Foa, E. B., Feske, U., Murdock, T. B., Kozak, M. J., & McCarthy, P. (1991). Processing of threat-related information in rape victims. *Journal of Abnormal Psychology, 100*, 156-162.
- Freud, S. (1913). *The interpretation of dreams* (3rd ed.) (J. Riviera, Trans.). London: Allen & Unwin.
- Freyd, J. J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. *Ethics and Behaviour, 4*, 307-329.
- Freyd, J. J. (1996). *Betrayal trauma: The logic of forgetting childhood abuse*. Cambridge, MA: Harvard University Press.
- Freyd, J. J. (2002). Memory and dimensions of trauma: Terror may be "all-too-well remembered" and betrayal buried. In J. R. Conte (Ed.), *Critical issues in child sexual abuse: Historical, legal, and psychological perspectives* (pp. 139-173). Thousand Oaks, CA: Sage.
- Freyd, J. J., DePrince, A. P., & Zurbriggen, E. L. (2001). Self-reported memory for abuse depends upon victim-perpetrator relationship. *Journal of Trauma and Dissociation, 2*(3), 5-17.
- Freyd, J. J., Martorello, S. R., Alvarado, J. S., Hayes, A. E., & Christman, J. C. (1998). Cognitive environments and dissociative tendencies: Performance on the standard Stroop task for high versus low dissociators. *Applied Cognitive Psychology, 12*, S91-S103.

- Fritz, R. B. (1998). AIDS knowledge, self-esteem, perceived AIDS risk, and condom use among female commercial sex workers. *Journal of Applied Social Psychology*, 28, 888-911.
- Glass, J. M., Schumacher, E. H., Lauber, E. J., Zurbriggen, E. L., Gmeindl, L., Kieras, D. E., & Meyer, D. E. (2000). Aging and the psychological refractory period: Task-coordination strategies in young and old adults. *Psychology and Aging*, 15, 571-595.
- Goleman, D. (1985). *Vital lies, simple truths: The psychology of self-deception*. New York: Simon & Schuster.
- Green, L. (1992). *Ordinary wonders: Living recovery from sexual abuse*. Toronto, Ontario, Canada: Women's Press.
- Greenson, R. R. (1967). *The technique and practice of psychoanalysis* (Vol. 1). New York: International Universities Press.
- Hinshaw, S. P., March, J. S., Abikoff, H., Arnold, L. E., Cantwell, D. P., Conners, C. K., et al. (1997). Comprehensive assessment of childhood attention-deficit hyperactivity disorder in the context of a multisite, multimodal clinical trial. *Journal of Attention Disorders*, 1, 217-234.
- Hollar, D. S., & Snizek, W. E. (1996). The influences of knowledge of HIV/AIDS and self-esteem on the sexual practices of college students. *Social Behavior and Personality*, 24, 75-86.
- Janet, P. (1889). *L'Automatisme psychologique* [Psychological Automatism]. Paris: Felix Alcan.
- Knutson, J. F. (1995). Psychological characteristics of maltreated children: Putative risk factors and consequences. *Annual Review of Psychology*, 46, 401-431.
- Lisak, D., Hopper, J., & Song, P. (1996). Factors in the cycle of violence: Gender rigidity and emotional constriction. *Journal of Traumatic Stress*, 9, 721-743.
- Low, G., Jones, D., MacLeod, A., Power, M., & Duggan, C. (2000). Childhood trauma, dissociation, and self-harming behaviour: A pilot study. *British Journal of Medical Psychology*, 73(Pt. 2), 269-278.
- MacLeod, C. M. (1991). Half a century of research on the Stroop effect: An integrative review. *Psychological Bulletin*, 109, 163-203.
- McKenna, F. P., & Sharma, D. (1995). Intrusive cognitions: An investigation of the emotional Stroop task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21, 1595-1607.
- McNally, R. J., Kaspi, S. P., Riemann, B. C., & Zeitlin, S. B. (1990). Selective processing of threat cues in posttraumatic stress disorder. *Journal of Abnormal Psychology*, 99, 398-402.
- Meyer, D. E., Kieras, D. E., Lauber, E., Schumacher, E. H., Glass, J., Zurbriggen, E., et al. (1995). Adaptive executive control: Flexible multiple-task performance without pervasive immutable response-selection bottlenecks. *Acta Psychologica*, 90, 163-190.
- Miller, D. A. F., McCluskey-Fawcett, K., & Irving, L. M. (1993). The relationship between childhood sexual abuse and subsequent onset of bulimia nervosa. *Child Abuse and Neglect*, 17, 305-314.
- Morokoff, P. J., Quina, K., Harlow, L. L., Whitmire, L., Grimley, D. M., Gibson, P. R., & Burkholder, G. J. (1997). Sexual Assertiveness Scale (SAS) for women: Development and validation. *Journal of Personality and Social Psychology*, 73, 790-804.
- Putnam, F. W., & Trickett, P. K. (1997). Psychobiological effects of sexual abuse: A longitudinal study. In R. Yehuda (Ed.), *Psychobiology of posttraumatic stress disorder* (pp. 150-159). New York: New York Academy of Sciences.
- Romans, S. E., Martin, J., & Mullen, P. (1996). Women's self-esteem: A community study of women who report and do not report childhood sexual abuse. *British Journal of Psychiatry*, 169, 696-704.
- Sanders, B., & Giolas, M. H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *American Journal of Psychiatry*, 148, 50-54.
- Schumacher, E. H., Lauber, E. J., Glass, J. M., Zurbriggen, E. L., Gmeindl, L., Kieras, D. E., & Meyer, D. E. (1999). Concurrent response-selection processes in dual-task performance: Evidence for adaptive executive control of task scheduling. *Journal of Experimental Psychology: Human Perception and Performance*, 25, 791-814.
- Seal, A., Minichiello, V., & Omodei, M. (1997). Young women's sexual risk taking behaviour: Re-visiting the influences of sexual self-efficacy and sexual self-esteem. *International Journal of STD and AIDS*, 8, 159-165.
- Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology*, 18, 643-662.
- Thompson, N. J., Potter, J. S., Sanderson, C. A., & Maibach, E. W. (1997). The relationship of sexual abuse and HIV risk behaviors among heterosexual adult female STD patients. *Child Abuse and Neglect*, 21, 149-156.
- Urquiza, A. J., & Capra, M. (1990). The impact of sexual abuse: Initial and long-term effects. In M. Hunter (Ed.), *The sexually abused male: Vol. 1. Prevalence, impact, and treatment* (pp. 105-135). Lexington, MA: Lexington Books.
- van der Kolk, B. A., Perry, J. C., & Herman, J. L. (1991). Childhood origins of self-destructive behavior. *American Journal of Psychiatry*, 148, 1665-1671.
- Walser, R. D., & Kern, J. M. (1996). Relationships among childhood sexual abuse, sex guilt, and sexual behavior in adult clinical samples. *Journal of Sex Research*, 33, 321-326.
- Williams, L. M. (1994). Recall of childhood trauma: A prospective study of women's memories of child sexual abuse. *Journal of Consulting and Clinical Psychology*, 62, 1167-1176.
- Williams, L. M. (1995). Recovered memories of abuse in women with documented child sexual victimization histories. *Journal of Traumatic Stress*, 8, 649-674.
- Zurbriggen, E. L. (2000). Social motives and cognitive power/sex associations: Predictors of aggressive sexual behavior. *Journal of Personality and Social Psychology*, 78, 559-581.