2 Women, Trauma, and Post-Traumatic Stress Disorder

Darlene is a young woman in her early twenties of Puerto Rican descent who has never married and has three young children, though the children are currently in foster care. She is employed at McDonald's in a suburban shopping area, rents a small apartment, and takes care of her basic needs. Darlene dropped out of high school during her junior year and has not obtained her GED. She had one sibling, an older brother, who was murdered while in his teens. Darlene reports using alcohol, marijuana, and crack cocaine in the recent past. Darlene states that she was physically, emotionally, and sexually abused as a child and spent most of her life in foster care. She was emancipated at age 16. The murder of her brother was a very traumatic event for her, and she states that she feels powerless and hopeless with regard to getting the children returned to her care. Darlene reports that she has had continual thoughts about suicide. She has few friends or sources of emotional support in the community.

Post-traumatic stress disorder (PTSD) includes the symptoms that occur in the short or long term following exposure to a traumatic event, whether by experiencing or by witnessing the event. Vogel and Marshall (2001) concluded that socioeconomic status contributes more than ethnicity to women's vulnerability to abuse and symptoms of stress, though it is important to note that many women who have a low income or who live in poverty are not abused. Due to an inability to afford housing in less violent neighborhoods, many women are exposed to both community and interpersonal violence. Browne and Bassuk (1997) concluded that, among homeless mothers receiving welfare, PTSD was the main contributor to substance abuse and depression (Browne and Bassuk, 1997).

Clinical Description

Numerous symptoms are commonly seen when the trauma is an interpersonal stressor, specifically childhood sexual abuse, physical abuse in childhood, or domestic battering (American Psychiatric Association, 2000). Those symptoms include, but are not limited to: self-destructive and impulsive behavior; somatic complaints; and feelings of shame, despair, and hopelessness. In young children, however, PTSD may present in the form of nightmares about monsters and of rescuing others or of threats to self or others. It is noteworthy that PTSD may also be associated with general medical conditions that can be measured in terms of changes in vital signs, such as increased heart rate and glandular activity.

Prevalence

Findings in community-based studies show that the lifetime rate of PTSD is 8% among adults in the United States (American Psychiatric Association, 2000). By comparison, Breslau and Davis (1992) found in a large community sample that women are at greater risk than men of developing PTSD after exposure to trauma (see also Breslau, Davis, Andreski, Peterson, & Schultz, 1997). Although Breslau and colleagues noted that the risk of PTSD among all individuals is 9%, the risk for women is 13% and for men 6%. Exposure to multiple trauma experiences places both men and women at greater risk of developing PTSD; it is women's exposure to sexual assault that contributes to the gender difference in risk (Breslau et al., 1997).

In the Trauma Recovery Project, a large epidemiological study designed to examine multiple outcomes after major trauma, including PTSD, researchers found that, depending on whether full or partial *DSM* diagnostic criteria were used, women in the general population were 2.4 to 2.8 times more likely than men to experience PTSD (Holbrook, Hoyt, Stein, & Sieber, 2002). Moreover, the researchers found that being female, perceiving threat to one's life, and symptoms of acute stress disorder (ASD) significantly and independently predict risk of PTSD. The prevalence of PTSD among women takes on salience when one considers its well-documented comorbidity with depression, generalized anxiety, and substance use and abuse disorder (SUD).

It is important to note that ASD may precede PTSD and that panic disorder (PD) often co-occurs with PTSD. ASD refers to symptoms that one might experience within the first month following a traumatic event and prior to the PTSD diagnosis (see Bryant, 2006). Dissociation, or the feeling of being disconnected from one's surroundings, may occur, and this may include having no memories for an extended period of time. In addition to experiencing a traumatic event and reacting to it with strong feelings of fear, one must experience three of the following symptoms: numbness or detachment; being dazed or unaware; feelings that people, places, and things are not real;

feelings of separateness; and being unable to recall key aspects of the traumatic experience. Seeking treatment for ASD is critical in preventing PTSD.

PD is more likely than ASD to co-occur with PTSD, as well as with depression and SUD (see Nixon, Resick, & Griffen, 2004). A panic attack is the experience of intense fear or discomfort and must actually be experienced before a diagnosis can be made. For the diagnosis, four of the following symptoms must be reported: pounding heart or increased heart rate; sweating; trembling or shaking; feeling of suffocation; choking; chest pain; abdominal problems; dizziness; detachment; loss of control; fear of death; numbness; and chills or hot flashes.

One must also have experienced an unexpected attack, and at least one attack must be followed by a month or more of either concern about having an additional panic attack, worry about the consequences of a panic attack, or a change in behavior due to the attack. It is possible to have panic attacks without having the disorder. Approximately 13% of women with PTSD develop PD as compared to 7% of men with PTSD, which is likely due to high rates of childhood sexual abuse and physical abuse among women with panic disorder. In addition, women are more likely than men to be raped.

Etiology

Genetic factors may influence the risk of exposure to some forms of trauma, specifically as a result of differences in personality that contribute to environmental and behavioral choices of individuals (Gilbertson et al., 2002; Stein, Jang, Taylor, Vernon, & Livesley, 2002). If this is so, genes that influence one's vulnerability to assaultive trauma may also influence susceptibility to PTSD. In monkeys, researchers have found that serotonin may modulate the effect of adversity in females but not in males (Barr et al., 2004), which may be helpful in understanding responses of humans in certain stress-related syndromes, including PTSD. In the case of childhood sexual abuse, researchers have found that the trauma may induce abnormal blood flow to the hippocampus, the part of the brain associated with memory, processing emotions, and visual perception (Bremner et al., 1999; Shors et al., 2001). In one study, researchers found that early trauma in women may result in a sensitized stress system that responds in an overly active way to subsequent stresses (Heim et al., 2000).

Using naturalistic, qualitative studies, researchers have explored the possibility that dissociation during and immediately following the trauma predicts PTSD. The research indicates that if one has an out-of-body experience *at the time* the trauma occurs in order to protect herself or himself from being emotionally overwhelmed by the traumatic event, that specific, acute dissociation predicts PTSD (Brewin & Holmes, 2003; Ozer, Best, Lipsey, & Weiss, 2003). In contrast, using multivariate analysis, Briere, Scott, and Weathers (2005) found that *persistent* trauma-related dissociation is the best predictor

of PTSD, and thus, they concluded that what happens at the time of trauma is less important than what happens afterward (see also Halligan, Michael, Clark, & Ehlers, 2003; Murray, Ehlers, & Mayou, 2002).

Within the context of cognition, evidence indicates that individuals have normative schemas that allow them to make sense of experiences relative to established norms of behavior and affect. However, traumatic experiences damage and violate expectations and emotions inherent in these basic schemas (see Kronenberger & Meyer, 2001, pp. 260–261), and as a result, individuals who experience PTSD often perceive the world as an unsafe place and themselves to be incompetent (Foa & Jaycox, 1999). If the discrepancy between memories of the experience and normative schemas goes unresolved, individuals find mechanisms for coping with the discrepancy, such as dissociating, that result in mental disorders, specifically PTSD. This cognitive discrepancy could explain both immediate and prolonged onset of PTSD (Holbrook et al., 2002).

For girls and women, the antecedents to abuse-related traumatic events are most often external stressors, including physical or sexual assault in childhood (PA/CSA), adult sexual assault (ASA), and domestic battering. Elliot, Mok, and Briere (2004) found that, among 941 participants, 22% of women reported ASA, as compared to 3.8% of men, and when multivariate analysis was conducted, the risk factors for ASA were: being of younger age, being female, being divorced, having experienced CSA, and having experienced PA in adulthood. It is also noteworthy that PTSD and stressful life events are associated with greater odds of chronic medical conditions among women, particularly among women who were sexually assaulted both as children and adults (see also Dobie et al., 2004; Ouimette et al., 2004; Ulman & Brecklin, 2003). In a sample of 1,225 women who were members of an urban HMO, health care costs doubled among women whose PTSD scores were high (Walker et al., 2003). It is a reasonable conclusion that low-income women suffering from PTSD often have additional health problems or issues that contribute to difficulties in functioning and self-sufficiency.

Screening and Assessment Measures

Given the emotional and financial costs associated with PTSD among women, assessment in the form of both structured clinical interviews and objective, self-report measures take on special importance in identifying the disorder in child, adolescent, and adult females. Females with whom social workers practice may have been sexually assaulted in childhood and adulthood, so it is especially important that they screen females for PTSD as early as possible. Moreover, the measures we identify in the following sections are ones that social workers can administer with relative ease, speed, and reliability.

Clinician Structured Interviews

Most experts argue that there is no substitute for a good clinical interview, and we agree. This is especially true with respect to assessing PTSD. The structured interview schedule allows for in-depth exploration of any information that women are willing and able to share about a traumatic event, as well as their emotional responses to it. It is important to note that this assessment approach has potential to reveal multiple traumatic events, including a woman's experience of sexual assault as a child and as an adult. Although we have identified three schedules that social workers might use in identifying the extent to which women have experienced trauma or PTSD, structured interview schedules may be developed and standardized for particular client populations if desired.

Adult Female

Structured Clinical Interview for *DSM-TR* (SCID-RV)

Post Traumatic Stress Disorder Interview (PTSD-I)

Clinician-Administered PTSD Scale (CAPS-1)

Young Female

Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA)

Clinician Administered PTSD Scale (CAPS-1)

SCID, PTSD-I, and CAPS-1

The SCID (Spitzer & Williams, 1985) requires that a social worker ask specific questions about the client's symptoms. The instrument has a PTSD component that has been shown to be a clinically valuable measurement of the construct. The SCID-RV reflects the latest revisions; information about the instrument can be obtained at http://www.scid4.org/contact.html.

The PTSD-I (Watson, Juba, Manifold, Kucala, & Anderson, 1991) is comprised of 20 DSM-related items. The questions assess whether the respondent has experienced a traumatic event and various symptoms of mental disorders subsequent to the event. With an alpha coefficient of .92 and test-retest reliability coefficient of .95, the instrument has utility in cross-validating other measures of PTSD. In addition to the SCID and PTSD-I, the CAPS-1 (Blake, Weathers, Nagy, Kaloupek, Klauminzer, Charney, & Keane, 1990) also measures current PTSD status. The instrument measures the frequency and intensity of distress associated with PTSD, such as the occurrence of unpleasant dreams about the event.

CAPS-CA

The CAPS-CA was adapted from the CAPS-1 in order to screen for PTSD among children and adolescents between 8 and 15 years of age (Newman, Weathers, Nader, Kaloupek, Pynoos, et al., 2004). In using this measure, the clinician asks the client to rate the frequency and intensity of 17 symptoms of PTSD that are consistent with a formal diagnosis. The CAPS-CA is also helpful in evaluating the impact of the symptoms on the child's social, occupational, and developmental functioning, as well as the level of subjective distress, global severity, and the validity of the interview. The instrument allows for assessing lifetime PTSD even when there is no diagnosis of current PTSD.

Objective Measures

Self-report, objective measures also have utility in assessing PTSD. Several measures are described in this section, though this may not include all measures of the construct, primarily because many instruments include some component or components of PTSD. It is important to note that some of the instruments are in the public domain while others must be purchased. From among the numerous instruments that can be used to assess trauma, we have selected for discussion several rapid assessment instruments that have utility in screening for PTSD in females.

Adult Female

> PTSD Symptom Checklist (PCL)
>
> PTSD Symptom Scale (PSS)
>
> Impact of Events Scale-Revised (IES-R)
>
> Harvard Trauma Questionnaire (HTQ)
>
> Beck's Depression Inventory (BDI/BDI-II)

Young Female

> Child Post-Traumatic Stress Disorder Reaction Index (CPSD-RI)

PCL

The PCL is a 17-item brief self-report instrument that can be used to screen for PTSD (Weathers, Litz, Herman, Huska, & Keane, 1993). It was first administered to motor vehicle accident and sexual assault victims using diagnoses and scores from the CAPS as the criteria. As a whole, the PCL is highly correlated with the CAPS (.93), providing a measure of its concurrent

validity. The purpose in using the PCL is to screen for PTSD rather than for diagnosis, and its utility is in its use as a rapid assessment instrument.

PSS

The PSS (Foa, Cashman, Jaycox, & Perry, 1997) contains 17 items that assess the severity of PTSD symptoms. An interview and self-report version of the PSS were administered to a sample of 118 recent victims of sexual and nonsexual assault. The results indicate that both versions of the PSS have satisfactory internal consistency, high test-retest reliability, and good concurrent validity. The interview version yielded high interrater agreement when administered separately by two interviewers and excellent convergent validity with the SCID. When used to diagnose PTSD, the self-report version of the PSS was somewhat more conservative than the interview version (Foa, Riggs, Dancu, & Rothbaum, 2005).

IES-R

The IES-R (Weiss, 1994) is a self-administered, 22-item questionnaire based on three clusters of symptoms that indicate PTSD. The instrument is not a diagnostic or screening tool for PTSD, but is used to obtain a respondent's report of symptoms in response to a traumatic event within 2 weeks of the event. In this regard, it can be used to measure and evaluate recovery as well. Respondents are asked to rate the degree of distress for each of 22 symptoms on a 5-point Likert-type scale (*0 = not at all; 1 = a little bit; 2 = moderately; 3 = quite a bit; 4 = extremely*). A version of the instrument is also available for use with children and adolescents.

HTQ

The HTQ has four parts that address traumatic events, description of events, events leading to head injury, and trauma symptoms (Mollica & Caspi-Yavin, 1991). Part IV is used to screen for PTSD and consists of 16 items that focus on key symptoms of PTSD. Those items as a whole have good reliability and internal consistency; in particular, the test-retest reliability on the HTQ ranges between 0.89 and 0.92. The fourth part of the HTQ has special utility in assessing PTSD because it has been used extensively across cultures and in numerous countries.

BDI/BDI-II

The BDI/BDI–II consists of 21 items to assess the intensity of depression in clinical and normal patients (Beck, 1967). Each item is a list of four statements arranged in increasing severity about a particular symptom of depression. Several items on the original instrument have been replaced on the BDI-II,

primarily to address loss of energy, as well as the increases and decreases in sleep and appetite. Respondents are now asked to respond regarding symptoms experienced during the preceding two weeks, as opposed to one week on the original BDI. These new items bring the BDI–II into alignment with *DSM–IV* criteria. With the new items added, the coefficient alpha for the BDI-II is .92 versus .86 for the original version.

CPTSD-RI

The CPTSD-RI was developed for use with individuals 5 years of age and older (Pynoos et al., 1987). The instrument asks children and youth to report the extent to which they have experienced 20 symptoms of PTSD during the week prior to completing the measure. This instrument has good internal consistency, with alpha coefficients that range from 0.74 to 0.84 and interrater reliability of 0.88. The CPTSD-RI was developed to screen for fear and anxiety and for disturbances in sleep and concentration.

In sum, the measures identified herein are ones that social workers can administer quickly and with relative ease in a variety of settings. When one considers the prevalence of childhood and adult sexual assault among women, it is critical that much more attention be given to screening for PTSD. This is especially true regarding screening for PTSD among young girls, so that they can be referred to appropriate programs and services as soon as possible.

Effective Treatment

In general, Bradley, Greene, Russ, Dutra, and Westen (2005) found that the majority of patients treated with psychotherapy for PTSD in randomized trials recover or improve, though they noted several caveats when treatment is applied to consumers in the community. First, most consumers have numerous symptoms that may indicate disorders apart from PTSD, so it may be difficult to generalize positive results of studies to the population of PTSD consumers. Second, there are few studies that follow consumers for an extended period of time, and consumers may have residual symptoms. With these caveats in mind, more research is needed that follows consumers for at least two years (Bradley, et. al. 2005).

In the field of social work, it is important that practitioners are able to assess PTSD in women and refer them to appropriate clinicians, or, when feasible, intervene themselves to address PTSD. The results of nonsystematic and systematic reviews indicate that the most effective interventions in treating PTSD are trauma-focused cognitive behavior therapy (TF-CBT; Bisson & Andrew, 2007; Bisson, Ehlers, & Matthews, 2007; Bradley, Greene, Russ, Dutra, & Westen, 2005; Kornør et al., 2008; Seidler & Wagner, 2006) and eye movement desensitization and reprocessing (EMDR) (Bisson & Andrew, 2007;

Bisson et al., 2007; Bradley et al., 2005; Davidson & Parker, 2001). Even though the results of nonsystematic reviews indicate that prolonged exposure (PE) and stress inoculation training (SIT) are effective in treating PTSD when compared to therapies such as psychoanalysis and unmodified psychodynamic therapy (Nemeroff et al., 2006), the results of the most current systematic reviews show that TF-CBT and EMDR are the most effective evidence-based interventions to use with women in cases of childhood sexual abuse, battering, and rape.

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)

Cognitive Trauma Therapy-Battered Women (CTT-BW)

Prolonged Exposure (PE)

Eye Movement Desensitization and Reprocessing (EMDR)

Stress Management or Stress Innoculation Therapy (SIT)

TF-CBT

TF-CBT is a Substance Abuse and Mental Health Services Administration (SAMHSA) model program and psychotherapeutic intervention designed to help children and adults address the negative effects of traumatic life events, including sexual or physical abuse, loss of a loved one, various types of violence, disasters, and terror attacks. This intervention blends cognitive and behavioral interventions with a focus on empowerment and trust. TF-CBT targets the depression and behavioral problems that often co-occur with PTSD. TF-CBT alleviates poor self-esteem, mood instability, and self-injurious behavior by encouraging children and adults to talk directly about their traumatic experience in a supportive environment where they feel safe. Guidelines for implementing the intervention are as follows:

- Intervention can be divided into 12 to 16 sessions, on average, including several sessions for parents of children.
- Each session lasts 60 minutes to 90 minutes and a session is provided weekly.
- Even though the process may be completed in 16 sessions, the process may take longer, depending on the circumstances.

The results of initial studies of TF-CBT validate its effectiveness, particularly with traumatized children (Cohen, Deblinger, & Mannarino, 2004; Deblinger, Lippman, & Steer, 1996). While TF-CBT is recommended for use with young children, particularly young females who have been sexually abused, this intervention can be used with adult females as well (Kornør et al., 2008). In sum,

social workers should use this intervention for addressing childhood sexual abuse among young females or adult women who were sexually abused as children. If social workers are not in a position to implement the intervention, they can and should make a referral to a clinician who uses TF-CBT.

CTT-BW

Cognitive trauma therapy for battered women (CTT-BW), a variation on TF-CBT, has been proven to be effective in the treatment of PTSD among battered women (Kubany, Hill, & Owens, 2003; Kubany et al., 2004). CTT-BW involves the use of several cognitive approaches, including trauma history exploration, education, stress management, exposure, self-monitoring of negative self-talk, and cognitive therapy for guilt. Kubany et al. (2004) randomly assigned 125 ethnically diverse women to immediate or delayed CTT-BW. They found that PTSD remitted in 87% of women who completed CTT-BW, and the gains were maintained at 3- and 6-month follow-ups. The gains included decreases in depression and guilt, as well as a substantial increase in self-esteem. There were no differences in benefits between clients who were White and those from ethnic minority groups, or between those treated by therapists with different levels of education and training.

EMDR

EMDR is a comprehensive, integrative psychotherapy approach that includes aspects of several therapies, including psychodynamic, cognitive-behavioral, interpersonal, experiential, and body-centered therapies (Shapiro, 2002). Despite the debate about the effectiveness of EMDR, it is an information processing therapy that allows individuals to accurately process information associated with a traumatic or negative event wherein strong negative feelings or dissociation may interfere with processing information. The technique involves the patient moving her eyes back and forth while she concentrates on the event.

Usually, the clinician waves a stick or light in front of the patient and expects her to move her eyes to follow the stick or light. EMDR involves an eight-phase approach to processing past experiences that trigger negative feelings, beliefs, and emotions related to a traumatic event. With successful treatment, individuals identify the positive experiences that are needed to enhance future adaptive behaviors and mental health, and the proposed explanation is that rapid eye movements somehow unblock the information-processing system in such a way that patients can process information more effectively. The eight phases of the treatment are as follows:

- **Phase 1:** Take a history and develop a treatment plan targeting distressing events, current situations that elicit emotional disturbance, and development of skills and behaviors needed to cope.

- **Phase 2**: Stabilize the individual sufficiently to be able to handle emotional distress.
- **Phase 3**: Focus the individual on a negative belief about the traumatic event; simultaneously, focus individual on a preferred positive belief. After the intensity of both are rated, the individual is instructed to focus on the image of the event, as well as on negative thoughts and sensations associated with the event, while simultaneously moving eyes back and forth following the therapist's fingers as they move across his or her field of vision. The time needed for this may vary depending on the circumstance, and the process is repeated numerous times in a session until the individual experiences no distress in thinking about the image that is the focus of the session.
- **Phase 4**: Focus on different negative belief.
- **Phase 5**: Focus on a second different negative belief.
- **Phase 6**: Focus on third different negative belief.
- **Phase 7**: Closure: the therapist asks the client to keep a journal during the week to document any related material that may arise and reminds the client of the self-calming activities that were mastered in Phase 2.
- **Phase 8**: Re-evaluate previous work, as well as progress since the previous session. EMDR treatment ensures processing of all related historical events, current incidents that elicit distress, and future scenarios that will require different responses (anticipation).

Rothbaum, Astin, and Marsteller (2005) compared the efficacy of EMDR and exposure therapy in work with female rape victims. While these researchers found that both interventions were equally effective, primarily because they are both exposure interventions, they believed that the "blanking" component of EMDR allowed women a break from the exposure. Similarly, Edmond and colleagues have used EMDR with adult female survivors of childhood sexual abuse (Edmond, Rubin, & Wambach, 1999; Edmond, Sloan, & McCarty, 2004). Researchers have also found EMDR to be effective in treating Iranian girls who were sexually abused (Jaberghaderi, Greenwald, Rubin, Dolatabadim, & Zand, 2004).

SIT and PE

Despite findings in the most recent systematic reviews and meta-analyses, Foa, Rothbaum, Riggs, and Murdock (1991) examined the extent to which stress inoculation training (SIT) and prolonged exposure (PE) positively impacted PTSD among 45 rape victims. Within the context that SIT includes a combination of strategies, including relaxation, restructuring thinking, and role-playing, PE involves activating and fully experiencing the fear associated with a traumatic event albeit in a safe setting. The researchers found that directly after intervention, 50% of women who received SIT improved, 26% of women who received PE improved, and 20% of women in a waiting list

control group (supportive counseling) improved. At a 3-month follow-up, PE reduced symptoms in 60% of women compared to symptom reduction in 49% of women who received SIT, while supportive counseling reduced symptoms in 36% of women. Foa et al. (1999) conducted additional research with 96 female assault victims and found that PE was significantly more effective than SIT, a combination of both treatments, and no treatment among women in a wait list group. Even so, the relative gains in all groups of women were maintained at a 12-month follow-up.

Exposure therapies include step-by-step desensitization and flooding, and thus, require that women face their fears via images and memories just enough to avoid being overwhelmed. In general, cognitive therapy per se utilizes strategies that address the discrepancies between the damaged and violated expectations that result from a traumatic event, such as sexual abuse or assault, and the normative schemas that allow young girls and women to make sense of the experiences. In conjunction, managing the anxiety associated with a traumatic event involves using relaxation techniques, as well as distraction, primarily to manage anxiety associated with fears. It is noteworthy that interpersonal therapy, or the focus on relationship interactions, may also be used as well in treating women who have experienced traumatic experiences (Bleiberg, & Markowitz, 2005; Resick, Neshith, Weaver, Astin, & Fuer, 2002).

Summary

Several conclusions can be drawn from the review of literature on evidence-based practice with females who experience trauma and subsequently PTSD. First, it is important for social workers to understand that trauma may actually change brain functioning as a response to stress, and thus affect long-term functioning in terms of PTSD (as well as depression and other disorders). Second, the extent to which social workers can determine how PTSD has developed over time may be important in determining which intervention is most efficacious. Third, social workers can and should screen for PTSD among the women with whom they work, especially low-income women who may be exposed more often to trauma in their families and communities than other women. Finally, some social workers may have the education and training to be able to effectively address PTSD, but those who are unable to provide intervention should make every effort to refer women to appropriately trained service providers.

Discussion Topics

1. Explain why the rate of PTSD among women is greater than the rate among men in the general population.

2. Delineate between ASD and PTSD, and discuss why it is important to screen women for ASD shortly after the experience of a traumatic event.

3. Discuss the importance of researchers understanding at what point in time the onset of PTSD occurs. Consider why women with PTSD who live in low-income neighborhoods have more health problems than other women.

4. Clearly explain the differences in using the following treatments to address PTSD: CBT, PE, SIT, CTT-BW, and TF-CBT. Use additional research to learn more about each type of intervention.

CASE STUDY 2.1

Emily is 16 years of age and was brought to the clinic by her adoptive mother. Her biological parents were drug users and neglected to adequately meet Emily's needs, and as a result, their parental rights were terminated. While between the ages of 8 and 12, Emily was sexually abused by her father and an adoptive brother, and she was sexually assaulted at age 13 by an adult male who broke in through her bedroom window. In addition, Emily was hospitalized at age 13 for a methamphetamine overdose. At about 14 years of age, Emily began having flashbacks related to her sexual assault, occasional auditory hallucinations, and episodes of depersonalization. She expresses intense anger with men. Her adoptive mother reports that Emily has poor personal boundaries with males, is defiant toward authority figures, has been self-injurious, and has also attempted to overdose on her prescription medication. During the interview at the clinic, Emily expressed shame and hopelessness, and she complained of having headaches and stomachaches.

Discussion Questions: Emily

How would you go about selecting an assessment instrument for Emily given her multiple experiences of sexual assault; her physical illness and complaints; and her feelings of anger, shame, and hopelessness?

Given the instruments you administer and the resulting assessment(s) you make, how would you prioritize her treatment needs? What would be the advantages and disadvantages of using cognitive behavioral therapy? Are both forms of treatment equally appropriate for her?

Is her self-injurious behavior independent of her other symptoms? If not, how might they be related with respect to etiology and possible treatment?

What unmet needs does Emily's case suggest, and how would you go about assessing and prioritizing these?

Illustrative Reading

Resource Loss and Naturalistic Reduction of PTSD Among Inner-City Women

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    Halting the process of psychosocial and material resource loss has been theorized as being associated with the reduction of post-traumatic stress disorder (PTSD). This study examines how the limiting of resource loss is related to alleviation of PTSD symptoms among 102 inner-city women, who originally met diagnostic criteria for PTSD after experiencing interpersonal traumatic events such as child abuse, rape, and sexual assault. Participants whose PTSD symptoms improve and become nondiagnostic for PTSD are compared with those who remain diagnostic. The two groups are not significantly different at pretest. However, at the 6-month time point, those who become nondiagnostic for PTSD report less resources loss in three of four domains. This pattern suggests that as PTSD symptoms decrease, women's material and psychosocial resource loss diminishes, which in turn, may aid their recovery process.

Keywords: PTSD; resources; symptom reduction

    Considerable research has examined the etiology and treatment of post-traumatic stress disorder (PTSD). Epidemiological studies have estimated that the lifetime prevalence of PTSD ranges from 8% to 12% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Although there is a well-established relationship between traumatic events and the risk for developing PTSD, not everyone exposed to traumatic events will develop PTSD or continue to have resulting symptoms (Kulka et al., 1990; Wolfe, Keane, Kaloupek, Mora, & Wine, 1993). Studies of PTSD have identified risk factors for onset and chronicity of the disorder (Koenen, Stellman, Stellman, & Sommer, 2003), but little is known about how circumstances in people's lives might influence the waxing or waning of their symptoms. This is especially important to study among inner-city women and women of color because both are more likely to be exposed to childhood and adult trauma (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999; Switzer et al., 1999) and are less likely to obtain mental health treatment if they develop PTSD (Cooper-Patrick et al., 1999; Kessler et al., 1999).

Although risk factor studies provide essential information relating to who does and does not develop PTSD, they have seldom examined the course of PTSD once present. This is particularly important because PTSD is a persistent disorder, especially in the context of multiple traumas (Kessler, 2000). The typical person with PTSD experiences active symptoms of the disorder for approximately two decades in duration (Kessler, 2000). Yet only about 38% of individuals with PTSD seek treatment (Kessler et al., 1999). This relatively low rate of treatment seeking may be related to avoidance, but it is possible that natural symptom remission processes, even if temporary, occur and also decrease motivation and in some cases the need for treatment. Consequently, it is imperative to determine the course of symptoms of PTSD and the factors that influence the alleviation of symptoms once a person develops the disorder.

A few recent studies examined the course of PTSD symptoms (Koenen et al., 2003; Orcutt, Erickson, & Wolfe, 2004). Most individuals with PTSD do not experience consistent, stable PTSD symptoms continually for a long duration but rather experience a fluctuation of symptoms over the course of their disorder (Orcutt et al., 2004). Various symptom trajectories are possible for individuals with PTSD. Studies have shown a tendency toward decreasing the rate of symptoms over time (Blanchard et al., 1996; Ehlers, Mayou, & Bryant, 1998). However, other studies have indicated that symptoms may actually increase over time (Southwick et al., 1995) and/or display a variable time course (Mayou, Tyndel, & Bryant, 1997). Clearly, further understanding of the factors that influence the course of PTSD symptom trajectories is an important endeavor.

Research, albeit scant, has demonstrated evidence for factors related to the longitudinal fluctuation of PTSD symptoms. Orcutt et al. (2004) found two growth curves that described the course of PTSD among Gulf War veterans.

The first symptom course was characterized by low levels of PTSD symptoms that barely increased over time. The second symptom course revealed a pattern where veterans had higher levels of initial PTSD symptoms that subsequently increased further. Veterans in the lesser symptomatic course group had higher levels of education, less combat exposure, and were more likely to be White and male. Given that education and being from the ethnic majority group are associated with having greater access to material resources (D. R. Williams & Jackson, 2005), the influence of material resource factors may be relevant.

Another study examined the longitudinal process of psychological disorders among Dutch Cambodia veterans. Veterans who had greater self-efficacy and perceived control over situations were found to have a reduction in psychological disorder symptoms, including PTSD, than those who were lower in self-efficacy and perceived control (de Vries, Soetekouw, Van Der Meer, & Bleihenberg, 2001). This suggests that personal resources, such as self-efficacy and a sense of personal control, contribute to improvement of psychological symptoms, even though these same resources are vulnerable to loss owing to PTSD and the nature of the original trauma experience.

One way to conceptualize the onset and maintenance of PTSD, as evidenced by these studies, is that the disorder is accompanied by a rapid loss of material and psychosocial resources (Hobfoll, 1991). The loss of these resources may contribute to further stress, decreasing the probability for easing symptoms. In turn, the halting of these resource loss

(Continued)

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cycles may be a key to alleviating symptoms. Just as psychological treatment frequently focuses on increasing patients' resources such as social support, employment, and self-esteem, the natural course of PTSD may be related to similar factors.

This process, whereby resources are theoretically connected to PTSD, is illustrated by the conservation of resources (COR) theory (Hobfoll, 1989; Hobfoll & Lilly, 1993). Resources are defined in the COR theory as things that people value or that assist in obtaining what is valued (Hobfoll, 1989; Hobfoll & Lilly, 1993). The COR theory posits that stress can be conceptualized in terms of resource loss and asserts that there is a basic human motivation to obtain, retain, and protect resources. Because humans desire to obtain, retain, and protect these resources, they act to minimize loss and maximize resource gain. Stress results, in particular, from a loss of resources, and this process may lead to a downward spiral as the resources needed to cope with the trauma are also depleted (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Hence, trauma causes both a rapid decline of resources, and the resultant state of resource loss, in turn, undermines recovery processes (Hobfoll, 1991).

A key principle of the COR theory is that people must invest in resources to retain resources, protect against resource loss, recover from losses, and gain further resources. Hence, those who lack resources are at additional risk because they have fewer resources to invest in recovery (Ennis, Hobfoll, & Schröder, 2000; Hobfoll, Johnson, Ennis, & Jackson, 2003). They may experience loss spirals, as initial coping efforts cycle into further resource loss (Benight et al., 1999; Hobfoll et al., 2003; Norris & Kaniasty, 1996). Thus, those with PTSD will have depleted resource reservoirs; however, to the extent that they can halt the resource loss process, they can enhance their chances of reducing symptoms of PTSD (Schumm, Hobfoll, & Keogh, 2004).

The importance of halting or reversing resource loss cycles has been noted. Holahan, Moos, Holahan, and Cronkite (1999) found that over the course of 10 years, those with initial depression who continued to experience resource loss also continued to report continued depression. In comparison, those who reversed resource loss cycles no longer reported depressive symptoms. Similarly, women who were able to halt resource loss cycles had diminished likelihood of PTSD stemming from childhood and adult trauma history (Schumm et al., 2004). This process is also cited in the social support deterioration deterrence model (Kaniasty & Norris, 1997; Norris & Kaniasty, 1996), which asserts that after traumatic circumstances, social relationships are crucial to coping with the subsequent stressors but are themselves often lost in the process.

Halting of resource loss cycles has also been shown to be related to PTSD in U.S. veteran samples and following disaster. In a longitudinal examination of 348 Gulf War returnees, PTSD symptoms increased over time, whereas resources decreased (Benotsch et al., 2000). In the same study, even after controlling for Time-1 resources, PTSD symptoms predicted later coping and relationship efforts, alluding to a reciprocal effect of halting resource loss and PTSD symptoms (Benotsch et al., 2000). In another study of 775 Persian Gulf War troops, PTSD diagnosis was related to resource loss areas, including less commitment, less family cohesion, and lower satisfaction with social support (Sutker, Davis, Uddo, & Ditta, 1995). Similarly, Arata, Picou, Johnson, and McNally (2000) found that among Alaskan

fisherman affected by the *Exxon Valdez* oil spill, 6 years postdisaster, resource loss still predicted PTSD and depression. These studies indicate the critical role of halting resource loss for reducing PTSD.

We examined naturalistic PTSD symptom remission among a sample of 102 women receiving gynecological medical care at two inner-city clinics to achieve a reasonably representative sample because such a high percentage of women receive gynecological care. It was hypothesized that those women whose PTSD symptoms decreased over time and became nondiagnostic would experience a halting of resource loss compared with those whose symptoms did not show improvement and remained diagnostic for PTSD. Although these women might again increase in PTSD symptoms, we know that symptom remission is accompanied by less emotional suffering and might opportune women to improved quality of life and even further symptom relief.

Method

Participants

A total of 102 women who met diagnostic criteria for probable PTSD were selected from a larger sample of 940 women involved in a study of stress and health. The use of the sample for this study was approved by the institutional review boards of Kent State University and Summa Health System. The original sample of 940 women was selected because single, inner-city women are known to be at risk for violence and trauma (Horowitz, McKay, & Marshall, 2005; Urquiza, Wyatt, & Root, 1994). The selected subsample included participants who met *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) diagnostic criteria for probable PTSD at the pretest assessment (diagnosis based on the Posttraumatic Stress Scale–Interview [PSS-I]). Participants experienced interpersonal trauma such as childhood physical abuse, childhood sexual abuse, physical assault, and sexual assault/rape.

Participants were, on average, 22.37 (*SD* =4.22) years of age, 66% were unemployed, and 69% had annual household incomes under US$10,000. Forty-four percent of the sample had some high school education, with an additional 32% earning a high school diploma. The large majority of the sample had never been married, comprising 88% of the respondents. African Americans constituted 62% of the sample, and 27% of the sample were European American. The remaining 11% of respondents were Hispanic, Asian, or of other ethnic backgrounds. Only 2 participants did not provide assessment data at the 6-month follow-up. The initial sample consisted of 104 participants, but the 2 participants who did not attend the 6-month follow-up assessment point were removed from the analyzed sample.

Measures

Demographic questionnaire. A self-report demographic questionnaire was used to collect information relating to age, racial group, education, employment status, marital status, income, religion, and pregnancy status.

PSS–I version. The PSS-I (Foa, Riggs, Dancu, & Rothbaum, 1993) is a 17-item scale that contains items which correspond to PTSD symptom criteria found in the *Diagnostic*

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and Statistical Manual of Mental Disorders, fourth edition, text revision (*DSM-IV-TR;* American Psychiatric Association, 2000). The PSS-I is the interview version of the Posttraumatic Stress Scale–Self-Report version (PSS-SR; Foa et al., 1993). Each symptom criterion is rated in terms of frequency or severity on a 0 (*not at all*) to 3 (*very much*) scale. The Cronbach's alpha for the PSS-I ranges from .65 to .86 (Foa & Tonlin, 2000). Cronbach's alpha for this study was .81, and probable PTSD was scored as having a minimum of one re-experiencing symptom, three avoidance symptoms, and two hypera-rousal symptoms. A symptom was recorded if the respondent reported a 1 (*a little*), 2 (*moderately*), or 3 (*very much*) in terms of severity. In addition, women were provided with a list of A1 criterion events to ensure that the reported interpersonal event met this criterion before administering the PSS-I.

Conservation of Resources–Evaluation (*COR-E;* Hobfoll & Lilly, 1993). We selected 45 resources relevant for inner-city women's lives from the full 74-item measure. Resource categories were gleaned from broader categories of resources. Resource item categories included material resources (i.e., money for transportation), energy resources (i.e., financial assets), nonfamilial interpersonal resources (i.e., loyalty of friends), family resources (i.e., intimacy with spouse/partner), and work resources (i.e., necessary tools for work). The loss variables were rated on a scale from 1 (*no loss* or *threat of loss*) to 3 (*a great deal of loss*). Cronbach's alpha was found to be .86 in this study.

Study Procedures

Women were recruited at two community obstetrics/gynecological clinics in a medium-sized midwestern city serving low-income populations. Obstetrics/gynecological clinics were selected because women coming for such care reflected the general population of all but the most severely disenfranchised, as medical care is covered by welfare benefits at these clinics. Previous studies showed this method to produce samples that were broadly representative of inner-city women (Hobfoll, Jackson, Lavin, Johnson, & Schröder, 2002).

When women showed interest, a female interviewer explained the content of the study and offered US$25 for participating in interviews. They were assured that their participation was voluntary and would not affect their medical care. Study inclusion criteria comprised being single and not cohabitating with a partner, currently not being in the third trimester of pregnancy (out of respect for women's time and commitment), participating in risky sexual behavior, and being in the 16 to 29 years age range, to identify women at risk for violence and ongoing sexual disease risk. Risky sexual behav-ior included situations such as suspecting that a partner was unfaithful, having unpro-tected sex, or having multiple partners in the past 6 months. Minors could participate with their assent and their parent or guardian's informed consent. Interviewers were trained in multicultural sensitivity by two clinical supervisors who were women of color and experts on multicultural interviewing. Supervision of the interviewers occurred weekly throughout the project.

Female interviewers followed a written protocol of an interview questionnaire. Questionnaires were administered at pretest and 6-month follow-up. Interviewers were trained to ask questions and to clarify responses when misunderstandings or inconsistencies

arose. Care was taken not to prompt a certain response, and women were assured that their honest response was appreciated.

After women were initially interviewed, they were randomly assigned to one of two health promotions or a standard care control condition (for a further detailed description see Hobfoll et al., 2002). The health promotion groups focused primarily on AIDS prevention, which included an emphasis on safer sex behaviors and interpersonal negotiation skills designed to reduce the risk of HIV/AIDS. The control group condition received individual sessions with a master's-level clinical psychology graduate student that focused on safer sexual and general health behaviors. The health promotion groups consisted of 5 to 8 women, which were again led by master's-level clinical psychology graduate students. Women in the health promotion groups received both health education and psychoeducation combined with negotiation skill training targeted to reduce the physical and psychological impact of unsafe sexual behaviors. Women engaged themselves in role-plays to practice specific skills and to increase empowerment in areas related to positive health behaviors and the prevention of sexually transmitted diseases. These groups might have indirectly affected recovery from PTSD; however, there were no significant health intervention group differences on probable PTSD diagnosis.[1] Although there were no significant health group differences, health group was used as a control group to focus entirely on its impact. The information obtained at pretest and 6-month follow-up provided the data for analysis.

Table 1 Intercorrelations Between Resource Variables at Pretest Assessment (*n* = 102)

Resource Loss Variable	1.	2.	3.	4.
1. Energy	1	.63*	.62*	.74*
2. Family		1	.72*	.63*
3. Nonfamilial interpersonal			1	.60*
4. Material				1

*p <.01 level.

Table 2 Intercorrelations Between Resource Variables at 6-Month Follow-Up Assessment (*n* = 102)

Resource Loss Variable	1.	2.	3.	4.
1. Energy	1	.67*	.63*	.77*
2. Family		1	.65*	.69*
3. Nonfamilial interpersonal			1	.59*
4. Material				1

*p <.01 level.

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Analysis Plan

The multivariate analysis of covariance (MANCOVA) procedure was selected for the analysis as multiple dependent variables can be examined in the context of the independent variable while also controlling for covariates. The four resource variables, that is, energy, material, nonfamilial interpersonal, and family interpersonal resources, constituted the dependent variables in the analyses. Work resources were not included in the analyses as the majority of the sample were unemployed. The dependent variables were all normally distributed at both time points in the study. Although all variables were significantly correlated at the $p < .01$ level, the variables were not correlated highly enough to be multicollinear (i.e., $r \geq .80$; see Tables 1 and 2 for correlations). Tolerance and variance inflation factor (VIF) values were reviewed to further examine multicollinearity. Tolerance values were greater than .2 and VIF values were less than 4, indicating that multicollinearity is not evident (Hutcheson & Sofroniou, 1999). Mahalanobis distance values were used to identify any multivariate outliers in the sample; however, no multivariate outliers were present in this analysis.

  PTSD symptom groups. Probable PTSD diagnosis (improved vs. nonimproved) served as the independent variable. The improvement/alleviation course of PTSD symptoms was defined as a reduction in symptoms from PTSD at the 6-month follow-up. Thus, the improved group met criteria for PTSD at pretest but did not meet criteria at 6-month follow-up. The non-improved group consisted of individuals who met diagnostic criteria for PTSD at both pretest and 6-month assessments. To eliminate those individuals who improved only slightly, half of the standard deviation ($SD = 9.30$, cutoff $= 5$) was used as a cutoff to include individuals. Therefore, those individuals who improved by 5 points or less on the PSS-I were not included in the analyses, even if they no longer met criteria for PTSD, so as to make the sample more reflective of those whose symptoms were likely to represent true alleviation. Fifty-nine women comprised the improved symptom group and 43 women were included in the nonimproved symptom group in the analyses.

Results

Pretest MANCOVA Analysis

Independent samples t tests were used to compare women who experienced a decrease in symptoms from probable PTSD and those who did not experience symptom alleviation on continuous-scaled demographic variables, at pretest when both groups experienced probable PTSD. The groups significantly differed in terms of age, $t(105) = 54.59$, $p < .001$. As a result, age was entered as a covariate in the analyses. In addition to independent t tests, chi-square tests were conducted to assess the differences on categorical demographic variables between individuals whose PTSD symptoms alleviated and those whose symptoms did not. No significant differences were found on racial group, employment status, or education level between the two groups. Demographic variables were comparable between groups on factors other than age in this sample.

  A MANCOVA analysis was conducted to determine the differences in pretest resources between those participants who experienced symptom alleviation from PTSD and those

who did not, although controlling for age. Intercorrelations between variables for the analysis can be found in Tables 1 and 2. Analyses examined the level of resource loss including material, energy, interpersonal, and family interpersonal resources. The MANCOVA analyses failed to yield significant results on any of these resources, indicating the two groups did not differ on the level of resources, $F(4, 96) = 0.50$, NS ($p > .70$), at the initial pretest assessment (see Figure 1).

**Figure 1** Pretest Resource Loss Means
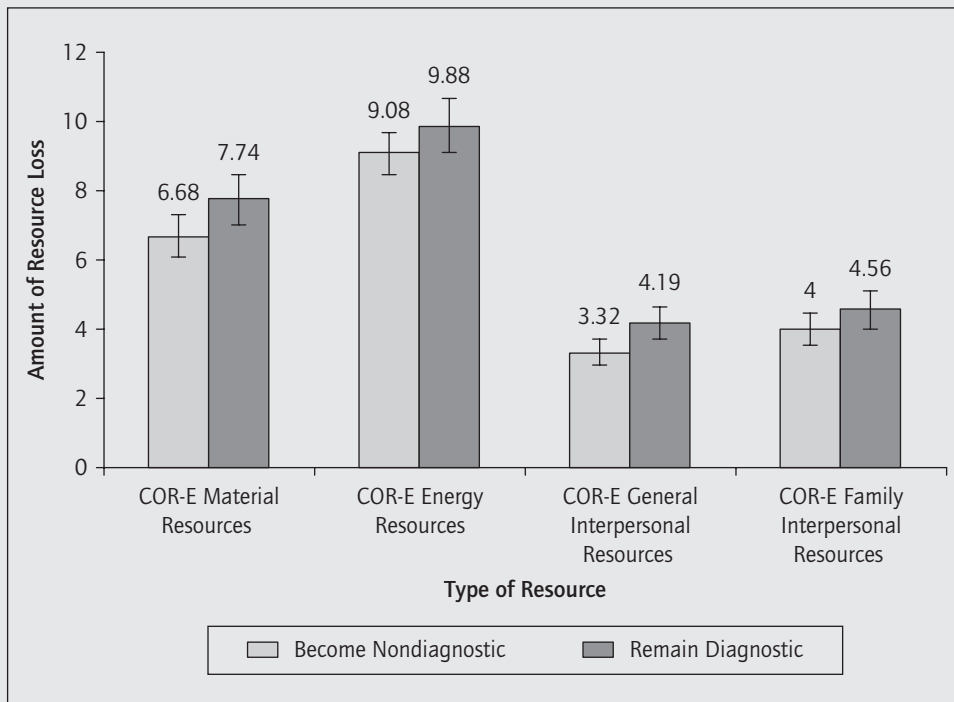
Note: COR-E = Conservation of Resources Evaluation.

Six-Month Follow-Up MANCOVA Analysis

A MANCOVA was conducted to determine mean differences between individuals whose symptoms improved from probable PTSD and individuals whose symptoms did not at 6-month follow-up. Specifically, material, energy, family, and nonfamilial interpersonal losses were entered as dependent variables. Time-1 resource loss, age, and intervention group were entered as covariates, and symptom improvement was entered as the predictor variable. Controlling for Time-1 levels of resource loss, the overall analysis was significant, indicating differences among the level of resource loss between those whose symptoms improved and those whose symptoms did not improve from probable PTSD, $F(4, 91) = 4.59$, $p < .01$ (see Figure 2).

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Figure 2   Six-Month Follow-Up Resource Loss Means
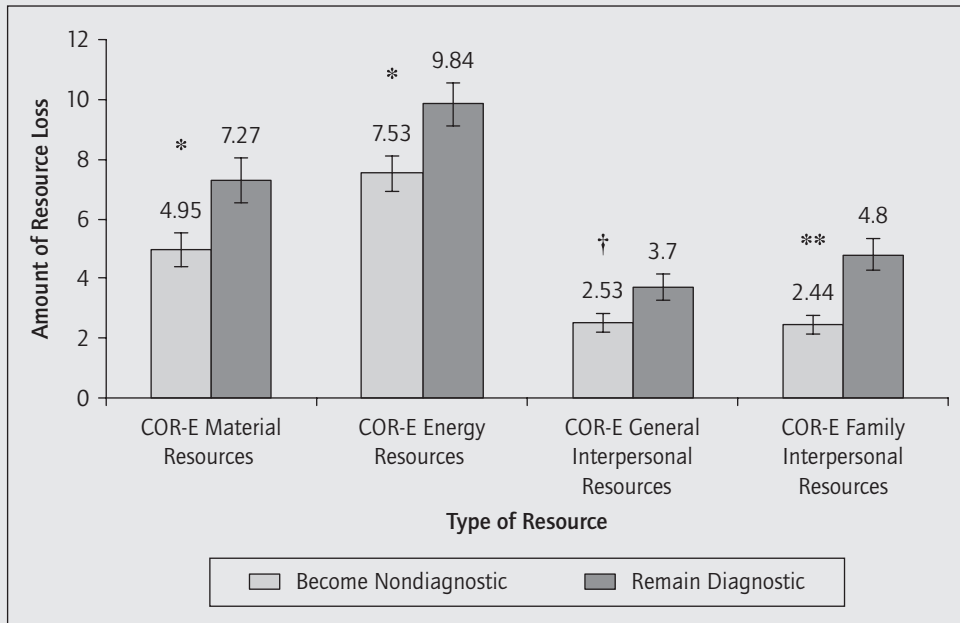
Note: COR-E =Conservation of Resources Evaluation. *p <.05. **p <.001. †Trend.

Follow-up examination of resource loss categories indicated that those who no longer met the criteria for PTSD did not experience as many resource losses on three of the four resource variables as compared with those who continued to meet the criteria for PTSD. This was significant for material resources, F (1, 94) =6.08, p <.05; partial eta squared (η^2_p) =.03; family interpersonal losses, F (1, 94) =16.87, p <.001; η^2_p =.11; and energy resources, F (1, 94) =4.58, p <.05; η^2_p =.03. Although nonfamilial resource losses were not significant in the follow-up analysis, they did reveal a trend in the data, F (1, 94) =2.70, p <.10, such that those who became nondiagnostic reported less resource loss in this domain as compared with women who remained diagnostic.

Discussion

The hypothesis that women whose PTSD symptoms lessened would have less resource loss over the course of 6 months than those whose symptoms did not improve was supported. Specifically, women whose PTSD symptoms improved had significantly less resource loss at 6-month follow-up controlled for earlier loss levels than women whose symptoms did not improve. Hence, halting resource loss cycles separated the groups with regard to their symptom course at 6-month follow-up. Material, energy, and familial interpersonal resources were significantly different between the groups, with nonfamilial interpersonal resources indicating a trend in the same predicted direction.

This pattern of halting resource loss cycles in women who showed improvement in symptoms of PTSD attests to the contribution of resources to psychological functioning. The maintenance of family relationships, personal energy resources, and material resources appear to foster psychological well-being. These findings among inner-city women support recent work examining the relationship between halting of resource loss cycles and psychological well-being among Dutch Cambodian veterans (de Vries et al., 2001), PTSD among Alaskan fisherman affected by the *Exxon Valdez* oil spill (Arata et al., 2000), Gulf War returnees (Benotsch et al., 2000), Persian Gulf War troops (Sutker et al., 1995), and individuals with depression (Holahan et al., 1999). This suggests the importance of an array of psychosocial resources in not just promoting resistance to psychological distress but perhaps by fostering symptom improvement in those who have experienced significant psychological distress. As noted by King, King, Foy, Keane, and Fairbank (1999) and Holahan et al. (1999), although stress depletes resources, those who preserve resources are more likely to experience a decrease in PTSD symptoms.

Not only is it important to improve our knowledge about the impact of resources on preventing psychological distress, but the course of PTSD also needs further exploration. Given that the majority of individuals with PTSD do not seek treatment for the disorder (Kessler et al., 1999), the findings of the study illuminate possible naturalistic processes that help individuals reduce their symptoms without professional psychological treatment. Prior research has examined resiliency factors that clarify who does and who does not develop PTSD; however, very few studies have focused on the variables that assist people in recovery once they develop the disorder. This examination thus increases this body of literature by going beyond risk/resiliency factors of developing PTSD. The mechanisms that contribute to and, most importantly, sustain halting resource loss cycles and symptom reduction now need to be explored as there are most certainly complex processes involved (Norris, Perilla, Riad, Kaniasty, & Lavizzo, 1999).

This study has several strengths. First, the study employs a longitudinal design. This longitudinal approach allowed for demonstration of the variable nature of resource loss and how it is not necessarily a static phenomenon but one that changes as those with PTSD attempt to cope with their psychological distress. This is critical as most resource models depict resiliency resources as static, rather than varying under stress as has been noted by Norris et al. (1999) and Monnier, Cameron, Hobfoll, and Gribble (2002).

A second strength of the study is the ethnic composition of the sample, with African Americans constituting 62% of the sample. Furthermore, the majority of these women live below the poverty line, thus allowing for an analysis of a demographic group potentially affected by resource loss and gain to a great extent. As these women are at high risk for PTSD (Horowitz et al., 2005; Urquiza et al., 1994), such information is especially important. It should be recognized, however, that African Americans were oversampled with respect to the population of the United States and thus can affect the generalizability of the sample. Nevertheless, this population is largely understudied and often lacks access to resources, making the focus of the study especially pertinent.

Another strength of the study is that the majority of studies examining the relationship between resources and PTSD have used samples of male veterans (Benotsch et al., 2000;

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de Vries et al., 2001; Sutker et al., 1995), and this study explores the link between the variables in inner-city women. Although it may be inappropriate to compare samples with vastly different demographic and traumatic event characteristics, our findings support previous research findings using veteran samples (Benotsch et al., 2000; de Vries et al., 2001; Sutker et al., 1995). Thus, it is possible that although there are differences between the samples, these findings allude to the important relationship between resources and PTSD symptoms.

Limitations of this research should also be noted. First, although the study employs a longitudinal design, the results cannot be used to imply causality between the variables. The two groups experienced similar levels of resource loss at pretest; however, exactly when these levels changed is unclear. It may be as likely that naturalistic recovery from PTSD preceded halting of resource loss cycles, as it is that halting of resource loss cycles that resulted in naturalistic recovery from PTSD. For example, when people experience an alleviation of PTSD symptoms, they may be more likely to engage in their environment and to obtain additional resources. The improvement in symptoms may lead to the acquisition of resources such as renewed interpersonal relationships or improved work performance. These resources may then create an "upward spiral" resulting in further resource gain. The alternative hypothesis also presents a possibility; individuals attain initial resources that aid in reducing the symptoms of PTSD. The initial resource gains may help ease stressors in peoples' lives contributing to the reduction of PTSD symptoms. Resource gains could explain why naturalistic recovery occurs—people are able to halt their loss cycles and, as a result, decrease their PTSD symptoms. In a therapeutic setting, perhaps resources obtained in psychotherapy, such as increased self-esteem, hope, and support, provide a pathway to the reduced PTSD symptoms that clients experience. Importantly, these findings nevertheless support the notion, argued by Holahan et al. (1999), that resources are not necessarily stable factors in individuals' lives and that fluctuations are common. Results should only be interpreted as an association between halting resource loss and naturalistic recovery outcome. Additional assessment points would help solve this problem in future research and shed light on the directionality of the role of resources in the alleviation of PTSD symptoms.

Another limitation is that PTSD diagnosis and naturalistic recovery were assessed and determined based on the PSS-I scale. The PSS-I contains one question for each of the 17 criteria items found in the *DSM* and as such may not be sufficient for placing individuals in a diagnostic category. The PSS-SR correctly classified 86% of individuals when the Structured Clinical Interview for the *DSM-IV-TR* (SCID; J. B. Williams et al., 1992) was used as criterion reference. However, this scale still does not correctly classify individuals as well as the SCID.

This research has important implications. Clearly, resources play a part in the healing efforts following a traumatic event. In psychotherapy, treatment often focuses on emotions and cognitions, which are integral to alleviating psychological distress. However, considering other psychological resources, as well as social and material resources, can provide additional tools for both assessment and treatment of PTSD. By facilitating psychological

resource acquisition and reversing resource loss cycles of material and tangible resource possessions, this could have an impact on affected individuals and provide them an enhanced ability to decrease PTSD symptoms.

Further understanding of the course of PTSD is an important endeavor. Recognizing the natural mechanisms that ameliorate symptoms of PTSD should be further examined. The course of PTSD symptoms and its relation to resources may help clarify people's adaptive strengths, capacity for resilience, and personal growth in the face of difficulty and challenge (Bonanno, 2004; Holahan & Moos, 1991). These mechanisms further our knowledge of the spirit of human recovery and the ability to find strength after the devastating effects of trauma.

Note

1. Only specific psychological treatments have acquired empirical support in alleviating post-traumatic stress disorder symptoms including exposure therapy, stress inoculation training, cognitive-behavioral therapy, and eye movement desensitization/reprocessing (Chemtob, Tolin, van der Kolk, & Pitman, 2000; Foa et al., 1999; Rothbaum, Meadows, Resick, & Foy, 2000).

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examining the effects of women's health intervention on the physical and mental health of inner-city women. In addition, she is a research assistant on an NIMH-funded randomized clinical trial studying mental health outcomes of female domestic abuse survivors at the Summa-Kent State Center for the Treatment and Study of Traumatic Stress. Walter has presented research on the topic of post-traumatic stress disorder (PTSD) at national and international conferences. Her research interests focus on the influence of trauma and PTSD on specific populations, such as victims of interpersonal violence. Specifically, her current research examines the relationship of resource loss and PTSD symptoms in survivors of interpersonal violence.

Stevan E. Hobfoll has authored and edited 11 books, including *Traumatic Stress, The Ecology of Stress,* and *Stress, Social Support and Women.* In addition, he has authored over 160 journal articles, book chapters, and technical reports. He is currently Distinguished Professor of Psychology at Kent State University and Director of their Applied Psychology Center and the Summa-KSU Center for the Treatment and Study of Traumatic Stress.

3

Women and Depression

Latika is a black female who is 30 years of age with two children who are 6 and 8 years of age. Recently, she was admitted to a mental health unit due to alcohol intoxication. She reported that she became depressed after the birth of her first child 8 years ago and was treated successfully with antidepressant medicine. Latika reported that she has been experiencing insomnia and a decrease in appetite, and has lost approximately twenty pounds. She believes she "feels down" due mostly to the fact that her children were removed from the home and placed in foster care. Latika was charged with child endangerment because she drove one time while intoxicated with the children in the car. Although she is currently married, she and her husband are separated after only a year of marriage. Her husband is currently incarcerated for physical assault with a deadly weapon and will be eligible for parole in six months. Latika indicated that her drinking has increased because she is depressed over the loss of her children. She would like to get help so she can regain custody of her children.

Experts generally agree that depression affects many women in the United States. However, lack of income is perhaps the major stressor in the lives of women, and across racial and ethnic groups, poverty is a major risk factor for major depression. The rate of major depressive disorder among persons living in poverty is approximately 1.5 times that among the general population, and this rate is significantly associated with the prevalence of major depressive disorder in White persons (Riolo, Nguyen, Greden, & King, 2005). Belle and Doucet (2003) posited that poverty is a consistent predictor of depression in women, and specifically, that poverty is a major contributor to depressive symptoms in women who reside in rural areas of the United States (Simmons, Braun, Charnigo, Havens, & Wright, 2008).

Given the link between poverty and depression, it is easy to see that poor women are at particular risk of dysthymic disorder or major depression. Corcoran, Danziger, and Tolman (2003) examined the mental and physical