

The Influence of Victimization History on PTSD Symptom Expression in Women Exposed to Intimate Partner Violence

Ryan B. Matlow and Anne P. DePrince
University of Denver

Repeated exposure to victimization, including instances of intimate partner violence (IPV), is associated with increased psychological distress generally and posttraumatic stress disorder (PTSD) symptom severity specifically. Although most research has focused on increases in PTSD symptoms broadly, in the current study we tested the hypothesis that the context in which victimization occurs will be uniquely linked to severity of specific PTSD symptoms. For example, multiple instances of victimization by different perpetrators, defined here as *revictimization*, may lead to different psychological consequences than repeated victimization by the same perpetrator, defined here as *chronic victimization*. In the current study, we examined associations between individual PTSD symptoms and revictimization and chronic victimization in a sample of 236 ethnically diverse women recruited following exposure to police reported IPV. When looking at individual symptoms, revictimization (and not chronic victimization) predicted symptoms associated with “passive” avoidance or emotional numbing, whereas chronic victimization (and not revictimization) predicted symptoms associated with “active” avoidance. The findings suggest that particular forms of victimization may correspond with specific PTSD symptoms.

Keywords: intimate partner violence, revictimization, posttraumatic stress disorder, avoidance, emotional numbing

Intimate partner violence (IPV) is linked with particularly deleterious mental and physical health outcomes when compared to nonintimate violence, such as stranger assault, and/or noninterpersonal trauma, such as disasters (e.g., DePrince, Zurbriggen, Chu, & Smart, 2010; Goldsmith, Freyd, & DePrince, 2012; Norris, Foster, & Wesshaar, 2002). Indeed, IPV puts women at risk for a range of severe and chronic physical and mental health consequences (Bonomi, Anderson, Rivara, & Thompson, 2007; Campbell, 2002; Coker, Weston, Creson, Justice, & Blakeney, 2005; Gielen, McDonnell, O’Campo, & Burke, 2005; Johnson & Bunge, 2001; McDonnell, Gielen, O’Campo, & Burke, 2005; Stover, 2005). In

addition, exposure to multiple instances of violence, including IPV, is associated with substantial increases in risk for negative physical and mental health outcomes (Arata, 1999, 2000; Classen, Palesh, & Aggarwal, 2005; Cloitre, Scarvalone, & Difede, 1997; Kilpatrick & Acierno, 2003; Messman-Moore, Ward, & Brown, 2009).

Research examining links between cumulative violence exposure and symptoms has focused on overall increases in distress generally, even for constructs such as posttraumatic stress disorder (PTSD) that comprise diverse individual symptoms. For example, two clients meeting criteria for PTSD may have very different symptom profiles that are best addressed using different intervention strategies. However, research to date tells us little about how specific IPV experiences contribute to diverse PTSD symptoms across clients, even though intervention efforts may be optimized by considering specific victimization histories and PTSD symptom profiles. Thus, there is a need to improve understanding of links between the characteristics of IPV experiences and specific PTSD symptoms. In the current study, we predicted that the severity of specific PTSD symptoms would vary as a function of two major characteristics of IPV victimization: chronic victimization by the same offender versus new victimization by a different offender. Thus, the current study aims to advance research and intervention efforts by distinguishing specific characteristics of IPV and analyzing links with specific PTSD symptoms.

Chronic Victimization Versus Revictimization

To date, psychological research has focused on why individuals exposed to multiple instances of victimization (vs. nonvictimized or singly victimized individuals) are more likely to experience negative outcomes such as additional violence exposure, elevated

This article was published Online First March 12, 2012.

Ryan B. Matlow and Anne P. DePrince, Department of Psychology, University of Denver.

This project was funded by Award 2007–WG–BX–0002 given by the National Institute of Justice Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this report are those of the authors and do not necessarily reflect those of the Department of Justice. The views expressed in this report do not necessarily represent those of the National Institute of Justice. We thank our study partners, including Joanne Belknap, Susan Buckingham, Jennifer Labus, and Angela Gover; Denver District Attorney’s Office; City Attorney’s Office; Denver Police Department Victim Assistance Unit; Denver Domestic Violence Coordinating Council; SafeHouse Denver; Project Safeguard; AMEND; and the Triage Steering Committee. We also thank the Traumatic Stress Studies Group, particularly Melody Combs, Courtney Mitchell, Annarheen Pineda, and Claire Hebenstreit. Finally, we thank the women who participated in this study.

Correspondence concerning this article should be addressed to Ryan Matlow, Department of Psychology, University of Denver, 2155 South Race Street, Denver, CO 80208. E-mail: ryanmatlow@gmail.com

trauma-related distress, and psychiatric disability (Classen et al., 2005; Cloitre et al., 1997; Marx, Heidt, & Gold, 2005; Messman-Moore et al., 2009). In addition, extensive research has documented the factors linking IPV to PTSD symptoms, such factors include perceived social support, socioeconomic status, coping style, and the presence of additional psychopathology, including depression and peritraumatic dissociation (Babcock, Roseman, Green, & Ross, 2008; Coker et al., 2005; Johansen, Wahl, Eilertsen, & Weisaeth, 2007; Lilly & Graham-Bermann, 2010; Taft, Resick, Watkins, & Panuzio, 2009). However, this body of work has yet to address basic differences in victimization experiences. In particular, patterns of PTSD symptom expression following exposure to multiple instances of victimization by different (or new) perpetrators may differ from PTSD symptoms experienced in response to multiple instances of victimization by the same perpetrator. Indeed, betrayal trauma theory (Freyd, 1996; Freyd, DePrince, & Gleaves, 2007) suggests that differences in the nature of a victim's relationship with the perpetrator influence psychological responses to abuse. Thus, within the context of IPV and the influence of the protective and risk factors identified in previous research, there may exist specific relationships between different forms of IPV and specific PTSD symptoms. The aim of the current study is to examine the presence of such specific associations to inform future research and intervention efforts.

In the current study, we use the term *revictimization* (RV) to refer to the experience of multiple instances of victimization at the hands of different perpetrators; and the term *chronic victimization* (CV) to refer to the experience of multiple instances of victimization at the hands of the same perpetrator or intimate partner. This represents the first study to our knowledge to distinguish between multiple victimization by different perpetrators and ongoing victimization by the same perpetrator. By grouping RV and CV together, researchers may be conflating critical contextual, relational, and psychological factors that may be differentially related to PTSD symptom expression.

Victimization History and PTSD Symptomatology

Previous IPV research has focused on the relationship between victimization and PTSD status (e.g., Classen et al., 2005; Marx et al., 2005) with little attention to the particular symptoms that make up the diagnosis. As defined by the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994), PTSD diagnosis requires that an individual meet a certain number of criteria within each set of symptom clusters (i.e., re-experiencing, avoidance, and arousal). Thus, individuals with PTSD diagnoses may have very different symptom profiles from one another. We propose that differences in PTSD symptomatology based on victimization history will emerge when looking at individual symptoms because even cluster-level analyses may obscure specific links between IPV and PTSD symptoms. A substantial body of research has utilized data- and theory-driven approaches (such as exploratory and confirmatory factor analysis) for distinguishing PTSD symptoms and symptom clusters (for a review, see Palmieri, Weathers, Difede, & King, 2007). In the current study, we apply theoretical models of responses to IPV to make a priori predictions regarding the specific PTSD symptoms that may be particularly related to the experience of RV and CV.

Distinctions in PTSD symptomatology associated with CV versus RV may be particularly apparent when looking at specific PTSD avoidance symptoms. For instance, women involved in ongoing abusive relationships (such as in CV) avoid focusing on negative aspects of the relationship to maintain a necessary attachment based on economic, legal, and/or emotional dependence on the perpetrator (Mitchell & Hodson, 1983; Waldrop & Resick, 2004). Thus, CV may be particularly related to active efforts to avoid IPV-related thoughts, feelings, or activities. Such efforts toward "active" avoidance are specifically reflected in PTSD avoidance symptoms of "efforts to avoid thoughts, feelings, or conversations associated with the trauma" (*DSM-IV* Criterion C1) and "efforts to avoid activities, places, or people that arouse recollections of the trauma" (*DSM-IV* Criterion C2). In contrast, repeat exposure to victimization by different perpetrators (as in RV) may be related to automatic deficits in risk recognition (for a review, see Marx et al., 2005). The ability and tendency to detect, orient, and respond to risk cues may be particularly important for maintaining safety when with new partners in new situations and new environments. However, the presence of PTSD symptoms involving automatic, involuntary distancing or emotional numbing in response to IPV-related cues may negatively impact the ability and tendency to detect risk in such situations (Wilson, Calhoun, & Bernat, 1999). Thus, RV may be specifically related to "passive" avoidance or numbing symptoms such as "inability to recall an important aspect of the trauma" (*DSM-IV* Criterion C3), "feeling of detachment or estrangement from others" (*DSM-IV* Criterion C5), and "restricted range of affect" (*DSM-IV* Criterion C6). Indeed, previous research has demonstrated that emotional numbing symptoms in particular (as opposed to other PTSD symptom clusters) are associated with exposure to multiple incidents of victimization (Ullman, Najdowski, & Filipas, 2009). In a similar way, prior studies have demonstrated links between IPV, dissociation, and PTSD symptoms (e.g., Taft et al., 2009). However, such studies have not examined the differential impact of different forms of victimization, such as CV and RV, on symptom outcomes.

The distinction between active avoidance symptoms and passive avoidance or emotional numbing symptoms is consistent with divisions according to the emerging four-factor emotional numbing model of PTSD (King, Leskin, King, & Weathers, 1998; Miller et al., 2010; Palmieri et al., 2007; Yufik & Simms, 2010). Given substantial empirical support for distinguishing between active and passive avoidance PTSD symptoms and the move to include such distinctions in the upcoming *DSM-V*, there is good conceptual rationale for examining specific relationships with different forms of IPV (i.e., RV and CV). However, given the novelty of the current distinction between RV and CV, we propose an item-level analysis of IPV-PTSD symptom relationships to detect potential relationships that may be obscured in cluster-level analyses. For example, even within the proposed emotional numbing symptom cluster, some symptoms are theoretically related to victimization history (i.e., *DSM-IV* Criteria C3, C5, and C6, see above) whereas others are not (i.e., *DSM-IV* Criteria C4 and C7; "markedly diminished interest or participation in significant activities" and "sense of foreshortened future," respectively). In addition to examining specific avoidance symptoms, the current study provides new evidence regarding specific associations between RV and CV

and re-experiencing and arousal symptoms, where there exists scant evidence to drive current theory.

In sum, in the current study we investigated relationships between specific forms of multiple victimization (i.e., RV and CV) and specific PTSD symptoms in a sample of women recently exposed to IPV (many of whom had also been exposed to prior incidents of victimization). Consistent with previous research examining categorical differences in victimization history (e.g., DePrince, Combs, & Shanahan, 2009), we examined the differential impact of histories of no previous victimization, single previous victimization, and multiple previous victimization in predicting specific PTSD symptoms in this sample of women exposed to IPV. Within the context of a larger study examining responses to IPV, we hypothesized that exposure to RV (i.e., multiple incidents of victimization by different perpetrators) would be specifically related to passive avoidance PTSD symptoms (i.e., *DSM-IV* Criteria C3, C5, and C6), whereas exposure to CV (i.e., multiple incidents of victimization by the same perpetrator) would be specifically related to active avoidance PTSD symptoms (i.e., *DSM-IV* Criteria C1 and C2). Given the lack of existing evidence and theory, no a priori predictions were made regarding associations between RV/CV and re-experiencing and arousal symptoms, nor for the two remaining avoidance symptoms (i.e., *DSM-IV* Criteria C4 and C7). Finally, hypotheses were tested utilizing multiple regression analyses in which we controlled for the severity and recency of IPV exposure to account for the potential impact of recent victimization experiences on current PTSD symptoms.

Method

Participants

A sample of 236 women was recruited as part of a larger study on coordinated community response programs. Participants were referred to the study following involvement in an IPV incident reported to law enforcement (hereon referred to as the "referral incident"). Participants completed the initial interview a median of 26 days following the referral incident. Participants ranged in age from 18 to 64, with a mean age of 33.4 years ($SD = 11.0$). Participants identified with the following racial/ethnic groups: 39% Hispanic, 47% White, 30% African American, 11% Native American/Alaska Native, 2% Asian American, 1% Native Hawaiian or other Pacific Islander, and 6% other (note that participants could indicate multiple ethnicities). Participants indicated highest level of education completed as follows: 3% first through eighth grade, 27% some high school, 26% completed high school, 25% some college, 8% associate's degree, 7% 4-year college degree, 2% postgraduate education, and 2% other education (e.g., trade school, specialized training). Participants' median income (including salary and nonsalary sources) was \$7,644 (range: 0–108,000) and average occupational prestige (coded based on Hollingshead, 1975) was 31.91 ($SD = 21.59$). For a full description of the sample and results from the larger study, see DePrince, Belknap, Labus, Buckingham, and Gover (in press) and DePrince, Labus, Belknap, Buckingham, and Gover (2012).

Materials

RV. Participants' self-reports on the Trauma History Questionnaire (THQ; Green, 1996) were used to determine RV scores

(i.e., scores indicating histories of multiple incidents of victimization by different perpetrators). The THQ includes 24 items assessing a range of traumatic events in four areas: crime-related events, general disaster, general and interpersonal trauma, and unwanted physical and sexual experiences. Participants indicated whether each item happened to them, and if so, the number of times and approximate age(s) of occurrence as well as the nature of their relationship with the perpetrator (when applicable). For the current study, analyses were restricted to items assessing interpersonal traumas (including crime-related events and unwanted physical and sexual experiences). Based on reports on the THQ, counts of the number of different perpetrators reported across interpersonal trauma items were performed. Perpetrator counts were then dummy coded to create a revictimization score of -1 , 0 , or 1 , such that -1 indicated *no revictimization* (i.e., no prior incidents of interpersonal trauma were reported on the THQ, thus the referral incident was the participants' only reported interpersonal victimization experience), 0 indicated *one instance of revictimization* (i.e., the participant reported one incident of victimization on the THQ involving a perpetrator different from the one involved in the referral incident), and 1 indicated *multiple instances of revictimization* (i.e., the participant reported multiple interpersonal victimizations by multiple perpetrators different from the one involved in the referral incident). RV was coded in this way to account for the potential impact of having been revictimized multiple times, in addition to the presence or absence of a history of revictimization. Internal consistency for the interpersonal items of the THQ was excellent (Cronbach's $\alpha = .94$).

CV. Participants' self-reports on the Revised Conflict Tactics Scales (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) were used to determine CV scores (i.e., scores indicating histories of multiple victimization by the perpetrator involved in the referral incident). The CTS-2 is a self-report measure that addresses the frequency and severity of various conflict resolution behaviors used in relationships, including psychological aggression, physical aggression, and sustained injuries. Given the current focus on responses to chronic versus new instances of IPV, analyses were restricted to the occurrence of physical and sexual assault by the perpetrator involved in the referral incident during the previous 6 months. Based on reports on the CTS-2, participants were given a chronic victimization score of -1 , 0 , or 1 , such that -1 indicated *no chronic victimization* (i.e., there were no reported incidents of IPV by the current partner/perpetrator prior to the referral incident), 0 indicated *one instance of chronic victimization* (i.e., the participant reported one incident of prior IPV by the perpetrator involved in the referral incident), and 1 indicated *multiple instances of chronic victimization* (i.e., the participant reported multiple previous incidents of IPV by the perpetrator involved in the referral incident). Similar to RV, CV was coded in this way to account for potential differences between having experienced two incidents of victimization by the same perpetrator versus experiencing multiple ongoing incidents of victimization by the same perpetrator, in addition to presence/absence distinctions. Cronbach's alpha for the CTS-2 physical and sexual assault items used to determine CV scores demonstrated good reliability ($\alpha = .73$).

PTSD symptoms. The 28-item Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997) was administered to assess symptoms of PTSD experienced following expo-

sure to the reported IPV incident. Items on the PDS directly correspond with *DSM-IV* criteria for PTSD, including symptoms of re-experiencing, avoidance, and hyperarousal. Participants rated the frequency of PTSD symptoms over the previous 1 month on a scale of 0 (*not at all or only one time*) to 3 (*5 or more times a week/almost always*). The PDS is widely used and has been shown to have high diagnostic agreement with structured clinical interviews assessing PTSD (Foa et al., 1997), including use with samples of female domestic violence survivors (Griffin, Uhlman-siek, Resick, & Mechanic, 2004). In the current study, internal consistency for the PDS was excellent (Cronbach's $\alpha = .93$).

Referral incident severity. Participants' reports on the CTS-2 also were used to calculate a severity score for the IPV event that led to participants' referral to the current study. Target event severity was calculated by summing the number of different types of aggression (including psychological aggression, physical aggression, and sustained injuries) endorsed by the participant with regard to the referral incident. The CTS-2 Psychological aggression subscale was included in incident severity calculations to control for the potential impact of emotional abuse during the referral incident on current PTSD symptoms. Internal consistency for CTS-2 subscales was good; Cronbach's alpha was .72 for the psychological aggression subscale, .80 for the physical aggression subscale, and .80 for the injury subscale.

Socioeconomic status. Participants' socioeconomic status was calculated using information on level of education, occupational prestige, and total income. Level of education was measured using a self-report 1 to 8 scale ranging from 1 (*no schooling*) to 8 (*postgraduate education*). Occupational prestige was coded according to Hollingshead (1975). Total income represents a sum of yearly salary and nonsalary (i.e., contributions from family and others, welfare support, food stamps, etc.) income. An estimate of socioeconomic status was computed by averaging z scores for education, occupation, and total income variables.

Procedure

All procedures were approved by a university institutional review board. For a full description of recruitment and study procedures, see DePrince et al. (in press) and DePrince et al. (2012). Women ($N = 236$) were recruited from the population of publicly accessible IPV incident reports referred from the local police department to an interdisciplinary victim's outreach support team. Referred cases involved an adult male perpetrator and an adult female victim and no cross arrest (i.e., no cases in which both parties were arrested). The research team initiated contact with potential participants via a lead letter and a follow-up phone call inviting women to participate in a study involving completion of interviews and questionnaires about women's health. The principal investigator (DePrince) or female graduate research assistants administered interviews and questionnaires assessing victimization history and symptomatology. Participants were compensated \$50 for the 3-hr assessment. Following completion of the research interview, women were debriefed as to the purposes of the interview and were provided with referrals to community agencies dealing with health and violence issues, including mental health services. In addition, women completed the Responses to Research Participation Questionnaire (Newman & Kaloupek, 2004) to monitor responses, including potential negative reactions, to the re-

search protocol. Women who were not able to provide their own transportation to the interview site at a university campus were offered cab rides to and from the interview. Childcare was provided as needed.

Analysis Plan

Planned analyses consisted of simultaneous linear regression analyses predicting PTSD symptoms. Separate analyses were conducted for each of the 17 *DSM-IV* individual PTSD symptoms. RV and CV scores were simultaneously entered into linear regression models predicting PTSD outcomes. In addition, all analyses controlled for referral incident severity and recency (i.e., number of days between the referral incident and the interview).

Results

In terms of frequencies of prior victimization by a perpetrator other than the one involved in the referral incident (i.e., RV), 33% ($n = 78$) of the current sample reported no prior victimization, 29% ($n = 61$) reported a single previous incident, and 31% ($n = 74$) reported multiple previous incidents. For prior victimization by the perpetrator involved in the referral incident (i.e., CV), 29% ($n = 69$) of the sample reported no prior victimization, 9% ($n = 22$) reported a single previous incident, and 57% ($n = 135$) reported multiple previous incidents.

Bivariate correlations between victimization history (i.e., RV and CV), PTSD symptoms, and demographic variables were examined (see Table 1) to determine if demographic variables should be included in regression models predicting PTSD symptoms. Because none of the demographic variables (i.e., age, ethnicity, socioeconomic status) were significantly correlated with total PTSD symptoms, these variables were generally excluded from subsequent analyses. However, given the current focus on item-level analyses, we also conducted bivariate correlations with individual items from the PDS (not presented). In the few instances in which significant correlations between specific PDS items and demographic variables were detected, the given demographic variable(s) was included in subsequent regression analyses. Age was significantly correlated with PDS Item 5 ($r = .15, p < .05$) and Item 9 ($r = .15, p < .05$), otherwise, correlations ranged from $r = -.06$ to $r = .13$. Socioeconomic status was significantly correlated with PDS Item 1 ($r = .14, p < .05$) and Item 9 ($r = .13, p < .05$), otherwise, correlations ranged from $r = -.08$ to $r = .12$. African American ethnicity was significantly correlated with PDS Item 14 ($r = .17, p < .01$), otherwise, correlations between ethnicity and specific PDS items ranged from $r = -.12$ to $r = .11$.

In terms of descriptive statistics for control variables, mean referral incident severity from the CTS-2 was $M = 9.58$ ($SD = 6.45$). For referral incident recency (i.e., number of days between the referral incident and interview), extreme outliers were detected. Thus, the recency variable was Winsorized to 2.5 standard deviations above the mean, resulting in a mean of 39.15 days ($SD = 40.20$) and a range of 7 to 203 days ($Mdn = 26$ days). Mean values for referral incident severity and recency were subsequently entered into all regression models.

Table 2 provides descriptive statistics for each symptom (mean, standard deviation), as well as results from regression analyses predicting PTSD symptoms according to RV and CV history,

Table 1
Bivariate Correlations Among Victimization History, PTSD Symptoms, and Demographic Variables

Variable	RV	CV	PTSD total	Age	SES
RV					
CV	.07				
PTSD symptom total	.30**	.22**			
Age	.07	-.11	.10		
SES	-.01	-.03	.05	.06	
Hispanic	-.12	-.06	-.10	.08	-.06
White	.09	.06	.02	.00	.24**
African American	-.09	-.02	.02	-.04	-.14*
Asian American	.13	.04	.02	-.03	.01
Hawaiian or Pacific Islander	.00	.09	.00	-.04	-.05
Native American	.17*	-.11	.07	.02	-.04
Other ethnicity	.14*	.08	.01	-.11	-.01

Note. RV (revictimization) scored was based on reports on the Trauma History Questionnaire. CV (chronic victimization) score was based on reports on the Conflict Tactics Scales–2. SES (socioeconomic status) was a *z* score composite of level of education, occupational prestige, and annual income. PTSD symptoms were measured using the Posttraumatic Diagnostic Scale. PTSD = posttraumatic stress disorder.

* $p < .05$. ** $p < .01$.

while controlling for referral incident severity, incident recency, and demographic variables, where appropriate. Complete data was not available for 30 participants (i.e., they were missing data from the THQ, CTS–2, or PDS), thus, regression analyses were conducted for the 206 participants for whom all data was available.

Prior to examining results from regression models, we conducted Bonferroni corrections to account for the risk of Type I error when conducting 17 tests of significance ($\alpha = .05/17 = .003$). As a consequence, we restrict our interpretation of significant results to instances in which alpha values were below .003. *F* values for regression models were significant below the $\alpha = .003$ level for all symptoms excepting *DSM–IV* Criteria B2, B3, and C2 (see Table 2 for full display of results, including R^2 values for each model tested). Review of individual betas (provided in Table 2) indicated that RV and CV histories accounted for differential proportions of unique variance in symptom scores across various items. Consistent with hypotheses, CV, but not RV, accounted for a significant proportion of unique variance in the active avoidance *DSM–IV* Criterion C1 symptom. Contrary to hypotheses, this result was not replicated for the Criterion C2 symptom, in which neither RV nor CV significantly contributed to the model. Consistent with hypotheses, RV, but not CV, accounted for a significant proportion of unique variance in each of the passive avoidance symptoms (*DSM–IV* Criteria C3, C5, and C6). Both RV and CV contributed significantly to the additional avoidance symptoms (*DSM–IV* Criteria C4 and C7), in which no a priori predictions were made. In addition, RV, but not CV, was uniquely significantly associated with specific re-experiencing (*DSM–IV* Criterion B4) and arousal symptoms (*DSM–IV* Criteria D1, D2, D3, and D4).

Discussion

The current study provides evidence that different histories of IPV experiences—that is, chronic versus new victimizations—are associated with different patterns of IPV-related PTSD symptomatology, even when controlling for the time since and severity of

the most recent IPV incident. In addition, the current results suggest that detection of such differences may require analysis of individual symptoms, rather than total symptom or cluster scores. In particular, a history of victimization by multiple perpetrators (RV) explained significant levels of unique variance in PTSD passive avoidance and arousal symptoms (as well as one re-experiencing symptom), although a history of repeat victimization by the same perpetrator (CV) did not. However, CV was found to significantly predict unique variance in one of two active avoidance PTSD symptoms, although the impact of RV was nonsignificant. These findings reflect basic differences in experiences and outcomes related to repeat victimization by the same perpetrator (i.e., CV) versus multiple victimizations by different perpetrators (i.e., RV), thus setting stage for future studies to examine the factors specifically associated with RV and CV that lead to differential outcomes. Although previous research has identified multiple factors linking IPV and PTSD symptoms (e.g., Babcock et al., 2008; Coker et al., 2005; Johansen et al., 2007; Lilly & Graham-Bermann, 2010; Taft et al., 2009), such studies have yet to distinguish between RV and CV or to identify specific factors that may be uniquely important in these different experiences of IPV.

A potential explanation for the present results is that differences in IPV experiences and victimization history (i.e., RV vs. CV) reflect differences in the victim–perpetrator relationship, which, in turn, impacts PTSD symptoms. Such an interpretation is consistent with predictions from betrayal trauma theory (Freyd, 1996; Freyd et al., 2007) that emphasize the impact of the nature of a victim’s relationship with the perpetrator on subsequent psychological outcomes. Studies that have distinguished between sexual assault victims who define rape as involving (1) a known perpetrator and less force versus (2) an unknown perpetrator and greater force have found that the latter group exhibits greater PTSD symptom severity and larger delays in risk recognition (Layman, Gidycz, & Lynn, 1996; Marx & Soler-Baillo, 2005). In a similar fashion a recent study by Feinstein, Humphreys, Bovin, Marx, and Resick (2011) demonstrated that, in instances of rape, the victim–

Table 2

Summary of Simultaneous Regression Models Predicting DSM-IV PTSD Symptoms According To Revictimization History, Chronic Victimization History, Controlling for Referral Incident Severity, Recency (Number of Days), and Demographic Variables (Where Appropriate)

PTSD symptom	<i>M</i> (<i>SD</i>)	<i>R</i> ²	<i>F</i>	<i>B</i>	<i>SE B</i>	β
Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to (B1)	1.02 (1.00)	.09	3.75*			
Revictimization				.11	.08	.10
Chronic victimization				.10	.08	.09
Referral incident severity				.02	.01	.19
Time since incident				.00	.00	-.11
Socioeconomic status				.15	.09	.12
Having bad dreams or nightmares about the traumatic event (B2)	0.66 (0.90)	.05	2.57			
Revictimization				.16	.08	.15
Chronic victimization				.04	.07	.04
Referral incident severity				.02	.01	.16
Time since incident				.00	.00	.01
Reliving the traumatic event, acting or feeling as if it was happening again (B3)	0.52 (0.88)	.06	2.94			
Revictimization				.16	.07	.16
Chronic victimization				.07	.07	.07
Referral incident severity				.02	.01	.13
Time since incident				.00	.00	-.06
Feeling emotionally upset when you were reminded of the traumatic event (B4)	1.46 (1.00)	.14	7.37**			
Revictimization				.28	.08	.24**
Chronic victimization				.17	.08	.16
Referral incident severity				.02	.01	.16
Time since incident				.00	.00	-.05
Experiencing physical reactions when you were reminded of the traumatic event (B5)	0.80 (1.02)	.09	5.09**			
Revictimization				.20	.08	.17
Chronic victimization				.06	.08	.05
Referral incident severity				.03	.01	.21*
Time since incident				.00	.00	-.03
Age				.02	.01	.22*
Trying not to think about, talk about, or have feelings about the traumatic event (C1)	1.32 (1.10)	.18	9.90**			
Revictimization				.19	.09	.14
Chronic victimization				.37	.09	.31**
Referral incident severity				.03	.01	.16
Time since incident				.00	.00	-.03
Trying to avoid activities, people, or places that remind you of the traumatic event (C2)	0.96 (1.12)	.08	3.76			
Revictimization				.19	.10	.14
Chronic victimization				.21	.09	.17
Referral incident severity				.02	.01	.12
Time since incident				.00	.00	-.01
Not being able to remember an important part of the traumatic event (C3)	0.46 (0.81)	.08	4.15*			
Revictimization				.23	.07	.23**
Chronic victimization				.05	.07	.05
Referral incident severity				.02	.01	.14
Time since incident				.00	.00	.05
Having much less interest or participating much less often in important activities (C4)	0.72 (0.91)	.20	7.66**			
Revictimization				.26	.07	.24**
Chronic victimization				.22	.07	.22*
Referral incident severity				.01	.01	-.08
Time since incident				.00	.00	-.05
Age				.01	.01	.17
Socioeconomic status				.22	.08	.19
Feeling distant or cut off from people around you (C5)	0.95 (1.06)	.14	7.48**			
Revictimization				.39	.09	.31**
Chronic victimization				.19	.08	.16
Referral incident severity				.01	.01	.04
Time since incident				.00	.00	.00
Feeling emotionally numb (C6)	0.94 (1.07)	.15	7.94**			
Revictimization				.38	.09	.30**
Chronic victimization				.18	.08	.15
Referral incident severity				.02	.01	.11
Time since incident				.00	.00	-.03

Table 2 (continued)

PTSD symptom	<i>M</i> (<i>SD</i>)	<i>R</i> ²	<i>F</i>	<i>B</i>	<i>SE B</i>	β
Feeling as if your future plans or hopes will not come true (C7)	0.98 (1.07)	.12	6.11**			
Revictimization				.28	.09	.22*
Chronic victimization				.29	.09	.24*
Referral incident severity				-.02	.01	-.09
Time since incident				.00	.00	.01
Having trouble falling or staying asleep (D1)	1.42 (1.11)	.14	7.23**			
Revictimization				.41	.09	.32**
Chronic victimization				.10	.09	.08
Referral incident severity				.01	.01	.07
Time since incident				.00	.00	-.07
Feeling irritable or having fits of anger (D2)	1.02 (0.98)	.14	6.01**			
Revictimization				.24	.08	.21*
Chronic victimization				.13	.08	.12
Referral incident severity				.03	.01	.20
Time since incident				.00	.00	-.01
African American ethnicity				.35	.15	.16
Having trouble concentrating (D3)	1.04 (1.04)	.10	5.16**			
Revictimization				.30	.08	.25**
Chronic victimization				.15	.08	.14
Referral incident severity				.01	.01	.08
Time since incident				.00	.00	.00
Being overly alert (D4)	1.26 (1.20)	.11	5.67**			
Revictimization				.34	.10	.23**
Chronic victimization				.15	.10	.11
Referral incident severity				.03	.01	.16
Time since incident				.00	.00	-.02
Being jumpy or easily startled (D5)	1.14 (1.18)	.09	4.64**			
Revictimization				.24	.10	.17
Chronic victimization				.16	.10	.12
Referral incident severity				.03	.01	.18
Time since incident				.00	.00	.02

Note. *N* = 206 for all analyses. Specific *DSM-IV* PTSD criteria labels are listed in parentheses. *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); PTSD = posttraumatic stress disorder.

* *p* < .003 (adjusted for Bonferroni correction). ** *p* < .001.

perpetrator relationship moderates the relationship between fear and PTSD symptom severity. The current results thus add to this body of literature by demonstrating that differences in IPV experiences (which are likely related to differences in victim-perpetrator relationships) not only impact overall PTSD symptom severity, but are also uniquely related to specific PTSD symptoms.

These relationships between specific PTSD symptoms and specific IPV experiences may also be related to differences in patterns of information processing. Previous research has shown that information processing style following victimization is related to the nature of the victim's relationship with the perpetrator (DePrince & Freyd, 2001, 2004). In addition, the studies by Layman et al. (1996) and Marx and Soler-Baillo (2005) both demonstrated that differences in sexual assault victims' perception of rape as involving either a stranger or a known perpetrator also impact the tendency to recognize risk or danger, a pattern of information processing that is thought to be related to risk for multiple victimization (Classen et al., 2005; Marx et al., 2005). The current findings demonstrating distinctions between RV and CV are consistent with this previous work and provide preliminary evidence to further understanding of the specific information processes involved in different forms of multiple victimization. In particular, multiple victimizations by the same perpetrator or intimate partner (i.e., CV) may be particularly related to active efforts to avoid focusing on negative aspects of the relationship. Such patterns of

information processing may help to preserve necessary attachments to perpetrators on whom victims are emotionally, physically, or economically dependent. In contrast, victimization by multiple partners (i.e., RV) may be specifically related to involuntary or automatic distancing or numbing from IPV-related thoughts, feelings, or experiences. Such styles of information processing may influence the ability or tendency to notice and respond to risk or danger in new situations with new perpetrators. In addition, the current findings that RV (and not CV) is related to PTSD re-experiencing and arousal symptoms indicates that information processing difficulties associated with these symptom clusters may also be related to risk for repeat victimization by different perpetrators, though the nature of causality in this relationship cannot currently be inferred.

Given the current findings, researchers and practitioners working with victims of IPV may wish to consider specific victimization histories (i.e., RV vs. CV) when developing and implementing assessment and intervention strategies. For example, given a history of RV, it may be particularly important to assess and target symptoms of re-experiencing, arousal, and emotional numbing, as well as risk detection ability, in treatment. Such targeted interventions may emphasize work to improve victims' ability to (1) cope with and manage symptoms of re-experiencing and arousal, (2) practice emotional engagement strategies, and (3) recognize danger cues in various environments. In contrast, given a history of

CV, it may be particularly important to target avoidance coping strategies (i.e., efforts to avoid IPV-related thoughts and activities) and build strategies for active coping.

In addition, the current item-level analysis proved informative in understanding specific links between victimization history and PTSD symptomatology. Restriction of analyses to the global- or cluster-level (as is typical in most prior research on victimization and PTSD) may have obscured the specific relationships detected here. Thus, the current study underscores the value of item-level analyses and also may echo calls for person-based approaches (e.g., latent profile analysis) to understanding the impact of victimization and trauma (e.g., Chu, DePrince, Wilhelm, & Mauss, 2011).

The current results are consistent with the growing body of research indicating that the classic *DSM-IV* three-factor model of PTSD does not adequately characterize patterns of symptom expression, particularly with regard to avoidance symptoms (Asmundson, Stapleton, & Taylor, 2004; Palmieri et al., 2007). Previous studies have shown that differences in avoidance and emotional numbing symptoms are related to (1) differences in treatment outcomes (Taylor et al., 2001; Taylor et al., 2003), and (2) differences in emotional and behavioral correlates of PTSD (Asmundson, Stein, & McReary, 2002; Milanak & Berenbaum, 2009; Palmieri & Berenbaum, 2003). In the current study, particular avoidance and emotional numbing symptoms appeared to be differentially related to victimization experiences (i.e., RV and CV). The important associations between PTSD symptomatology and trauma history, emotional and behavioral functioning, and treatment outcome would likely be obscured without consideration of avoidance-emotional numbing distinctions and individual PTSD symptoms. Thus, the current study is in line with work supporting the proposed revisions for *DSM-V*, which distinguishes between avoidance and emotional numbing PTSD symptom clusters.

One limitation of the current study is the inability to infer causal relationships due to reliance on cross-sectional data. We cannot know whether the presence of specific PTSD symptoms put women at risk for particular forms of victimization, or whether specific forms of victimization lead to particular symptom outcomes. Although some studies have shown that PTSD symptoms predict risk for revictimization (Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999; Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003; Ullman et al., 2009), others have indicated that revictimization leads to elevations in PTSD symptoms (Nishith, Mechanic, & Resick, 2000; Schumm, Hobfoll, & Keogh, 2004). It could also be the case that multiple victimization and PTSD outcomes interact in a cyclical feedback loop in which each increases risk for the other. More research, including longitudinal and prospective studies, is needed to better understand the causal nature of this relationship. In a similar fashion, although hypotheses were tested based on a priori predictions, the current study is exploratory in nature and findings require replication across multiple samples. Additional limitations are related to instrumentation used in the current study. First, CV was assessed via the CTS-2 based on reports of abuse experienced in the previous 6 months; thus, CV may be conflated with recency of abuse. Although CV is by nature and by definition more recent, and while analyses controlled for recency of the referral incident, associations between CV and PTSD symptoms may nonetheless be partially based on the more recent nature of this form of victimization.

Second, although CV was assessed via the CTS-2, RV was assessed using reports on the THQ. Thus, differences in relationships between PTSD symptoms and RV, and PTSD symptoms and CV may partially be due to method variance. Future similar studies should attempt to utilize a single instrument or measure to capture both RV and CV. Finally, the current study was specifically focused on detecting unique associations between different forms of victimization and PTSD symptoms; future studies may also wish to consider the impact of additional forms of trauma (i.e., disaster, accident, illness) and/or the potential contribution of having a history of both RV and CV on PTSD symptoms.

In conclusion, the current study demonstrates that specific IPV characteristics are associated with particular PTSD symptoms. While controlling for the severity and recency of a recent IPV incident, RV was more strongly related to passive avoidance and emotional numbing PTSD symptoms (relative to CV), while CV was more strongly related to active avoidance PTSD symptoms (relative to RV). These specific links imply that different forms of repeat victimization may be related to different patterns of information processing in response to IPV-related cues. Continuing to draw out these links between particular forms of multiple victimization and specific PTSD outcomes will be important for informing intervention efforts (including approaches to PTSD treatment and revictimization prevention) and for informing conceptualizations of repeat victimization and PTSD symptom expression.

References

- Acierno, R., Resnick, H., Kilpatrick, D. G., Saunders, B., & Best, C. L. (1999). Risk factors for rape, physical assault, and posttraumatic stress disorder in women: Examination of differential multivariate relationships. *Journal of Anxiety Disorders, 13*, 541–563. doi:10.1016/S0887-6185(99)00030-4
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Arata, C. M. (1999). Sexual revictimization and PTSD: An exploratory study. *Journal of Child Sexual Abuse, 8*, 49–65. doi:10.1300/J070v08n01_04
- Arata, C. M. (2000). From child victim to adult victim: A model for predicting sexual revictimization. *Child Maltreatment, 5*, 28–38. doi:10.1177/1077559500005001004
- Asmundson, G. J. G., Stapleton, J. A., & Taylor, S. (2004). Are avoidance and numbing distinct PTSD symptom clusters? *Journal of Traumatic Stress, 17*, 467–475. doi:10.1007/s10960-004-5795-7
- Asmundson, G. J. G., Stein, M. B., & McReary, D. R. (2002). Posttraumatic stress disorder symptoms influence health status of deployed peacekeepers and nondeployed military personnel. *Journal of Nervous and Mental Disorders, 190*, 807–815. doi:10.1097/00005053-200212000-00002
- Babcock, J. C., Roseman, A., Green, C. E., & Ross, J. M. (2008). Intimate partner abuse and PTSD symptomatology: Examining mediators and moderators of the abuse-trauma link. *Journal of Family Psychology, 22*, 809–818. doi:10.1037/a0013808
- Bonomi, A. E., Anderson, M. L., Rivara, F. P., & Thompson, R. S. (2007). Health outcomes in women with physical and sexual intimate partner violence exposure. *Journal of Women's Health, 16*, 987–997. doi:10.1089/jwh.2006.0239
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *Lancet, 359*, 1331–1336. doi:10.1016/S0140-6736(02)08336-8
- Chu, A. T., DePrince, A. P., Wilhelm, F. H., & Mauss, I. B. (2011). *Risk for revictimization in sexual assault survivors: Risk detection abilities,*

- trauma symptoms, and physiological reactivity. Manuscript submitted for publication.
- Classen, C. C., Palesh, O. G., & Aggarwal, R. (2005). Sexual revictimization: A review of the empirical literature. *Trauma, Violence, & Abuse, 6*, 103–129. doi:10.1177/1524838005275087
- Cloitre, M., Scarvalone, P., & Difede, J. (1997). Posttraumatic stress disorder, self- and interpersonal dysfunction among sexually re-traumatized women. *Journal of Traumatic Stress, 10*, 437–452. doi:10.1002/jts.2490100309
- Coker, A. L., Weston, R., Creson, D. L., Justice, B., & Blakeney, P. (2005). PTSD symptoms among men and women survivors of intimate partner violence: The role of risk and protective factors. *Violence and Victims, 20*, 625–643.
- DePrince, A. P., Belknap, J., Labus, J. S., Buckingham, S. E., & Gover, A. R. (in press). The impact of victim-focused outreach on criminal legal system outcomes following police-reported intimate partner abuse. *Violence Against Women*.
- DePrince, A. P., Combs, M. D., & Shanahan, M. (2009). Automatic relationship-harm associations and interpersonal trauma involving close others. *Psychology of Women Quarterly, 33*, 163–171. doi:10.1111/j.1471-6402.2009.01486.x
- DePrince, A. P., & Freyd, J. J. (2001). Memory and dissociative tendencies: The roles of attentional context and word meaning. *Journal of Trauma and Dissociation, 2*, 67–82. doi:10.1300/J229v02n02_06
- DePrince, A. P., & Freyd, J. J. (2004). Forgetting trauma stimuli. *Psychological Science, 15*, 488–492. doi:10.1111/j.0956-7976.2004.00706.x
- DePrince, A. P., Labus, J., Belknap, J., Buckingham, S., & Gover, A. (2012, February 13). The impact of community-based outreach on psychological distress and victim safety in women exposed to intimate partner abuse. *Journal of Consulting and Clinical Psychology*. Advance online publication. doi:10.1037/a0027224
- DePrince, A. P., Zurbriggen, E. L., Chu, A. T., & Smart, L. (2010). Development of the Trauma Appraisal Questionnaire. *Journal of Aggression, Maltreatment, & Trauma, 19*, 275–299. doi:10.1080/10926771003705072
- Feinstein, B. A., Humphreys, K. L., Bovin, M. J., Marx, B. P., & Resick, P. A. (2011). Victim-offender relationship status moderates relationships of peritraumatic emotional responses, active resistance, and posttraumatic stress symptomatology in female rape survivors. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*, 192–200. doi:10.1037/a0021652
- Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: The posttraumatic diagnostic scale. *Psychological Assessment, 9*, 445–451. doi:10.1037/1040-3590.9.4.445
- Freyd, J. J. (1996). *Betrayal trauma: The logic of forgetting childhood abuse*. Cambridge, MA: Harvard University Press.
- Freyd, J. J., DePrince, A. P., & Gleaves, D. (2007). The state of betrayal trauma theory: Reply to McNally (2007)—Conceptual issues and future directions. *Memory, 15*, 295–311. doi:10.1080/09658210701256514
- Gielen, A. C., McDonnell, K. A., O'Campo, P., & Burke, J. G. (2005). Suicide risk and mental health indicators: Do they differ by abuse and HIV status? *Women's Health Issues, 15*, 89–95. doi:10.1016/j.whi.2004.12.004
- Goldsmith, R., Freyd, J. J., & DePrince, A. P. (2012). Betrayal trauma: Associations with psychological and physical symptoms in young adults. *Journal of Interpersonal Violence, 27*, 547–567. doi:10.1177/0886260511421672
- Green, B. L. (1996). *Trauma history questionnaire*. Lutherville, MD: Sidran Press.
- Griffin, M. G., Uhlmansiek, M. H., Resick, P. A., & Mechanic, M. B. (2004). Comparison of the Posttraumatic Stress Disorder Scale versus the Clinician-Administered Posttraumatic Stress Disorder Scale in domestic violence survivors. *Journal of Traumatic Stress, 17*, 6, 497–503. doi:10.1007/s10960-004-5798-4
- Hollingshead, A. B. (1975). *Four factor index of social status*. Unpublished manuscript. Yale University, Department of Sociology.
- Johansen, V. A., Wahl, A. K., Eilertsen, D. E., & Weisaeth, L. (2007). Prevalence and predictors of post-traumatic stress disorder (PTSD) in physically injured victims of non-domestic violence. *Social Psychiatry and Psychiatric Epidemiology, 42*, 583–593. doi:10.1007/s00127-007-0205-0
- Johnson, H., & Bunge, V. P. (2001). Prevalence and consequences of spousal assault in Canada. *Canadian Journal of Criminology, 43*, 27–45.
- Kilpatrick, D. G., & Acierno, R. (2003). Mental health needs of crime victims: Epidemiology and outcomes. *Journal of Traumatic Stress, 16*, 119–132. doi:10.1023/A:1022891005388
- King, D. W., Leskin, G. A., King, L. A., & Weathers, F. W. (1998). Confirmatory factor analysis of the Clinician-Administered PTSD Scale: Evidence for the dimensionality of posttraumatic stress disorder. *Psychological Assessment, 10*, 90–96. doi:10.1037/1040-3590.10.2.90
- Layman, M. J., Gidycz, C. A., & Lynn, S. J. (1996). Unacknowledged versus acknowledged rape victims: Situational factors and posttraumatic stress. *Journal of Abnormal Psychology, 105*, 124–131. doi:10.1037/0021-843X.105.1.124
- Lilly, M. M., & Graham-Bermann, S. A. (2010). Intimate partner violence and PTSD: The moderating role of emotion-focused coping. *Violence and Victims, 25*, 604–616. doi:10.1891/0886-6708.25.5.604
- Marx, B. P., Heidt, J. M., & Gold, S. D. (2005). Perceived uncontrollability and unpredictability, self-regulation, and sexual revictimization. *Review of General Psychology, 9*, 67–90. doi:10.1037/1089-2680.9.1.67
- Marx, B. P., & Soler-Baillo, J. M. (2005). The Relationships among risk recognition, autonomic and self-reported arousal, and posttraumatic stress symptomatology in acknowledged and unacknowledged victims of sexual assault. *Psychosomatic Medicine, 67*, 618–624. doi:10.1097/01.psy.0000171809.12117.79
- McDonnell, K. A., Gielen, A. C., O'Campo, P., & Burke, J. (2005). Abuse, HIV status, and health related quality of life among a sample of HIV positive and HIV negative low income women. *Quality of Life Research, 14*, 945–957. doi:10.1007/s11136-004-3709-z
- Messman-Moore, T. L., Ward, R. M., & Brown, A. L. (2009). Substance use and PTSD symptoms impact the likelihood of rape and revictimization in college women. *Journal of Interpersonal Violence, 24*, 499–521. doi:10.1177/0886260508317199
- Milanak, M. E., & Berenbaum, H. (2009). The relationship between PTSD symptom factors and emotion. *Journal of Traumatic Stress, 22*, 139–145. doi:10.1002/jts.20401
- Miller, M. W., Wolf, E. J., Harrington, K. M., Brown, T. A., Kaloupek, D. G., & Keane, T. M. (2010). An evaluation of competing models for the structure of PTSD symptoms using external measures of comorbidity. *Journal of Traumatic Stress, 23*, 631–638. doi:10.1002/jts.20559
- Mitchell, R. E., & Hodson, C. A. (1983). Coping with domestic violence: Social support and psychological health among battered women. *American Journal of Community Psychology, 11*, 629–654. doi:10.1007/BF00896600
- Newman, E., & Kaloupek, D. G. (2004). The risks and benefits of participating in trauma-focused research studies. *Journal of Traumatic Stress, 17*, 383–394. doi:10.1023/B:JOTS.0000048951.02568.3a
- Nishith, P., Mechanic, M. B., & Resick, P. A. (2000). Prior interpersonal trauma: The contribution to current PTSD symptoms in female rape victims. *Journal of Abnormal Psychology, 109*, 20–25. doi:10.1037/0021-843X.109.1.20
- Noll, J. G., Horowitz, L. A., Bonanno, G. A., Trickett, P. K., & Putnam, F. W. (2003). Revictimization and self-harm in females who experienced childhood sexual abuse: Results from a prospective study. *Journal of Interpersonal Violence, 18*, 1452–1471. doi:10.1177/0886260503258035
- Norris, F. H., Foster, J. D., & Wesshaar, D. L. (2002). The epidemiology

- of gender differences in PTSD across developmental, society, and research contexts. In R. Kimerling, P. Ouimette, & J. Wolfe (Eds.), *Gender and PTSD* (pp. 3–42). New York, NY: Guilford Press.
- Palmieri, P. A., & Berenbaum, H. (2003). Emotional processing in sexually assaulted women. In L. L. Vernon (Chair), *Emotional functioning following trauma: Alexithymia and emotional numbing*. Symposium conducted at the annual meeting of the International Society for Traumatic Stress Studies, Chicago, IL.
- Palmieri, P. A., Weathers, F. W., Difede, J., & King, D. W. (2007). Confirmatory factor analysis of the PTSD Checklist and the Clinician-Administered PTSD Scale in disaster workers exposed to the World Trade Center ground zero. *Journal of Abnormal Psychology, 116*, 329–341. doi:10.1037/0021-843X.116.2.329
- Schumm, J. A., Hobfoll, S. E., & Keogh, N. J. (2004). Revictimization and interpersonal resource loss predicts PTSD among women in substance-use treatment. *Journal of Traumatic Stress, 17*, 173–181. doi:10.1023/B:JOTS.0000022624.53181.21
- Stover, C. S. (2005). Domestic violence research: What have we learned and where do we go from here? *Journal of Interpersonal Violence, 20*, 448–454. doi:10.1177/0886260504267755
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scale (CTS2). *Journal of Family Issues, 17*, 283–316. doi:10.1177/019251396017003001
- Taft, C. T., Resick, P. A., Watkins, L. E., & Panuzio, J. (2009). An investigation of posttraumatic stress disorder and depressive symptomatology among female victims of interpersonal trauma. *Journal of Family Violence, 24*, 407–415. doi:10.1007/s10896-009-9243-6
- Taylor, S., Fedoroff, I. C., Koch, W. J., Thordarson, D. S., Fecteau, G., & Nicki, R. M. (2001). Posttraumatic stress disorder arising after road traffic collisions: Patterns of response to cognitive-behavior therapy. *Journal of Consulting and Clinical Psychology, 69*, 541–551. doi:10.1037/0022-006X.69.3.541
- Taylor, S., Thordarson, D. S., Maxfield, L., Fedoroff, I. C., Lovell, K., & Orgrodniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three treatments for PTSD: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology, 71*, 330–338. doi:10.1037/0022-006X.71.2.330
- Ullman, S. E., Najdowski, C. J., & Filipas, H. H. (2009). Child sexual abuse, post-traumatic stress disorder, and substance use: Predictors of revictimization in adult sexual assault survivors. *Journal of Child Sexual Abuse, 18*, 367–385. doi:10.1080/10538710903035263
- Waldrop, A. E., & Resick, P. A. (2004). Coping among adult female victims of domestic violence. *Journal of Family Violence, 19*, 5, 291–302. doi:10.1023/B:JOFV.0000042079.91846.68
- Wilson, A. E., Calhoun, K. S., & Bernat, J. A. (1999). Risk recognition and trauma-related symptoms among sexually revictimized women. *Journal of Consulting and Clinical Psychology, 67*, 705–710. doi:10.1037/0022-006X.67.5.705
- Yufik, T., & Simms, L. J. (2010). A meta-analytic investigation of the structure of posttraumatic stress disorder symptoms. *Journal of Abnormal Psychology, 119*, 764–776. doi:10.1037/a0020981

Received August 30, 2011

Revision received January 9, 2012

Accepted February 6, 2012 ■