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Impact of Childhood Traumatic Events, Trauma-Related Guilt, and Avoidant Coping Strategies on PTSD Symptoms in Female Survivors of Domestic Violence

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This investigation utilized path analyses to examine the direct and indirect effects of experiences of potentially traumatic events in childhood, trauma-related guilt, and the use of avoidant coping strategies on level of PTSD symptomatology among a sample of female survivors of domestic violence. The results of this investigation indicated that individuals with more extensive histories of potentially traumatic events in childhood were more likely to report the experience of trauma-related guilt after exposure to domestic violence victimization in adulthood. Further, the path model indicated that experiencing trauma-related guilt was associated with greater use of avoidant coping strategies. Trauma-related guilt was related to increased PTSD symptomatology both directly and indirectly through the use of avoidant coping strategies. These findings highlight the importance of attending to guilt-based affective and cognitive reactions, maladaptive coping strategies, and the association between these constructs when treating survivors of relationship violence with multiple exposures to potentially traumatic events.

While the experience of a traumatic event is a necessary precursor to the development of posttraumatic stress disorder (PTSD), the psychological mechanisms linking potentially traumatizing events to the development of PTSD are not well understood. Several recent studies have suggested that posttraumatic symptoms increase in proportion to the amount of cumulative traumatic events experienced (e.g., Arata, 1999; Banyard, Williams, & Siegel, 2001; Follette, Polusny, Bechtle, & Naugle, 1996), and that individuals exposed to earlier traumatic events are more likely to develop PTSD in response to a later traumatic event (Breslau, Chilcoat, Kessler, & Davis, 1999). The explanatory mechanisms behind these associations, however, remain largely unexplored. Accordingly, the development and maintenance of PTSD symptoms and other posttraumatic affective, cognitive, and behavioral reactions are in need of further research.

The "self-conscious" emotions such as guilt and shame have long been identified as entrenched and painful aftereffects of both child and adult victimization (e.g., Feiring, Taska, & Lewis, 1998; Finkelhor & Browne, 1985; Kubany et al., 1996; Polusny & Follette, 1995; Resick & Schnicke, 1996). In addition, higher levels of emotions such as guilt and shame are associated with more severe levels of PTSD symptomatology in a variety of traumatized populations, including survivors of domestic violence, child sexual abuse, and adult sexual assault (e.g., Feiring, Taska, & Chen, 2002; Gibson & Leitenberg, 2001; Kubany et al., 1996; and a growing empirical

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literature suggests that guilt and shame play a role in increasing the likelihood of developing PTSD symptoms after potentially traumatizing events (e.g., Andrews, Brewin, Rose, & Kirk, 2000; Coffey, Leitenberg, Henning, Turner, & Bennett, 1996a; Kessler & Bieschke, 1999; Kubany et al., 1996). Several investigations have now identified shame as a mediator of the relationship between traumatic events history and subsequent psychological distress (Coffey et al., 1996a) and PTSD (Andrews et al., 2000; Street & Arias, 2001). Further, in a study of women who had been sexually assaulted in adulthood, it was found that those women with a prior history of child sexual abuse reported higher levels of shame and self-blame in response to the adult sexual assault (Gibson & Leitenberg, 2001). The authors hypothesized that the revictimization experience may have "reignited" or reinstated existing feelings of guilt or shame that were linked to the earlier experience of child sexual abuse. This would be consistent with a biobehavioral learning theory perspective on traumatic stress, which suggests that traumatic sequelae are never "erased" and may reemerge in contexts similar to the original traumatic event (Bouton & Waddell, in press).

In addition to exacerbating PTSD symptoms, guilt and shame may be associated with an avoidant or disengaged style of coping. After reviewing the literature on these self-conscious emotions, Tangney and Fischer (1995) observed that feelings of shame have consistently been found to motivate an avoidance response and that individuals who experience shame often report a desire to escape from the shame-inducing situation. Furthermore, a recent empirical investigation of this question found that higher levels of guilt and shame associated with childhood sexual abuse predicted an avoidant style of coping with a recent sexual assault among sexually revictimized women (Gibson & Leitenberg, 2001). Meanwhile, there is a vast body of research that suggests that avoidance methods of coping are associated with increased PTSD symptoms in the face of a broad range of potentially traumatic experiences including motor vehicle accidents (Bryant & Harvey, 1995), rescue work (Clohessy & Ehlers, 1999), childhood sexual abuse (e.g., Coffey, Leitenberg, Henning, Turner, & Bennett, 1996b; Leitenberg, Greenwald, & Cado, 1992), adult sexual assault (e.g., Gibson & Leitenberg, 2001; Santello & Leitenberg, 1993), and adult nonsexual assault (e.g., Valentiner, Foa, Riggs, & Gershuny, 1996).

While several studies have examined individual relationships between the experience of potentially traumatic events, methods of coping, self-conscious emotions, and PTSD, no studies to date have attempted to empirically explain the interrelationships between these constructs in a sample with history of exposure to multiple traumatic events. The current investigation examines these constructs in a sample of female domestic violence survivors—a population that reports high rates of prior exposure to potentially traumatic events (Weaver & Clum, 1995) and also endorses high levels of trauma-related guilt (e.g., Kubany et al., 1995). In addition, rates of PTSD in this population are high, ranging from 33% (Astin, Lawrence, & Foy, 1993) to 84% (Kemp, Rawlings, & Green, 1991), depending on the method of assessment and duration of time passed since the traumatic event. The decision to examine predictors of PTSD in this sample reflects a movement away from the study of the impact of a single traumatic event toward a focus on individuals with more complex traumatic-event histories.

The current investigation utilized path analysis to examine the direct and indirect effects of experiences of potentially traumatic events in childhood, trauma-related guilt, and the use of avoidant coping strategies on level of PTSD symptomatology among a sample of female survivors of domestic violence. Unlike previous investigations examining these questions, the use of this analytic strategy allowed us to simultaneously examine the direct and indirect effects of early potentially traumatic events and trauma-related guilt on PTSD symptomatology through use of the avoidant coping strategies. Based on the existing literature, our working hypothesis was that experiences of potentially traumatic events in childhood would be associated with higher levels of trauma-related guilt in response to later exposure to potentially traumatic events. Trauma-related guilt, in turn, was hypothesized to be associated with greater severity of PTSD symptomatology, both directly and indirectly through its relationship with avoidant coping strategies.

Method

Participants

Sixty-three women seeking services from 23 battered-women shelters in the southeastern United States participated in the current investigation. All reported experiencing both physical and psychological abuse from their romantic partners within the past year. At the time of data collection, 89% of participants were shelter residents while the remaining 11% of participants were receiving other shelter services (e.g., legal advocacy, social work services).

The majority of women (63%) reported their race as White/Caucasian, while 29% reported their race as African American, 5% reported their race as Latina, and

3% identified their race as "other." Participant ages ranged from 19 to 64 years, with a mean of 32 years. Participants' annual income ranged from $0 to $35,000, with a mean of $7,277. Thirty-two percent of participants reported having had some high-school education, 31% reported having completed high school, 23% reported having had some college education, 6% reported having completed college, and 8% reported having obtained a technical or vocational degree.

Measures

Childhood Potentially Traumatic Events

The participant's history of potentially traumatic events in childhood was assessed by a count of types of childhood traumatic experiences using the Traumatic Stress Survey (TSS; Gallagher, Riggs, Byrne, & Weathers, 1998). The TSS is a 23-item self-report measure developed at the VA Boston's National Center for PTSD to assess a range of potentially traumatic events such as natural disasters, severe car accidents, sexual assault, childhood sexual abuse, physical abuse, and witnessing severe injury or death. For each potentially traumatizing event, the participant is first asked to indicate whether she experienced that type of event, and subsequently asked at what age the event first occurred. For the purposes of this investigation, items were included in the count of childhood traumatic events only if the participant indicated that she experienced this event before the age of 16.

Trauma-Related Guilt

The participant's report on the Trauma-Related Guilt Inventory (TRGI; Kubany et al., 1996) served as the measure of guilt and responsibility related to the participant's experience of domestic violence. The TRGI is a 32-item event-focused measure of trauma-related guilt, consisting of three scales designed to capture the affective and cognitive components of the guilt construct: the Global Guilt Scale (four items, e.g., *I experience intense guilt that relates to what happened*), the Distress Scale (six items, e.g., *What happened causes a lot of pain and suffering*), and the Guilt Cognitions Scale (22 items, e.g., *I was responsible for causing what happened* and *I should have had certain feelings that I did not have*). Participants indicate how they feel about each statement using one of five possible response sets ranging from 1 (*Not at all true* or *Never true*) to 5 (*Extremely true* or *Always true*). Validity studies conducted with survivors of domestic violence and with combat veterans suggest that the TRGI possesses adequate construct- and criterion-related validity across different types of traumas (Kubany et al., 1996). The TRGI is highly correlated with measures of trait guilt and measures of social anxiety and avoidance, and negatively correlated with measures of self-esteem. Due to content overlap between the Distress Scale and symptoms of PTSD as assessed by the PCL (discussed later), only the Global Guilt Scale and the Guilt Cognitions Scale were used for the current analyses. Kubany and colleagues (1996) reported internal-consistency estimates in a sample of battered women of .90 for the Global Guilt Scale and .86 for the Guilt Cognitions Scale. In the current sample, internal-consistency estimates were .88 and .87 for the Global Guilt and Guilt Cognitions Scales, respectively.

Avoidant Coping Strategies

Participants' use of avoidant coping strategies was assessed using nine items from the Brief COPE (Carver, 1997). The Brief COPE is a 28-item self-report measure that asks respondents about "ways you've been dealing with problems in the past month or so." Response options range from 1 (*You haven't been doing this at all*) to 4 (*You've been doing this a lot*). Psychometric analyses within a sample of natural-disaster survivors indicated that 14 a priori subscales exhibited adequate internal validity and were generally supported by an exploratory factor analysis (Carver, 1997); however, the scoring suggested by Carver (1997) does not conceptualize any items as suggestive of an avoidant coping style. Accordingly, the identification of items from the Brief COPE that were indicative of an avoidant coping style for the purposes of this investigation followed a two-stage process. First, five clinician–researchers with expertise in the area of traumatic stress were presented with a list of all the Brief COPE items along with directions to identify those items that in their opinions were representative of "an avoidant or disengaged style of coping." Consensus from the expert ratings, which was defined by agreement of at least four of the five raters, identified nine avoidant coping items. Second, an exploratory factor analysis was conducted on the Brief COPE items. Examination of the scree plot suggested a possible three-factor solution. Three principal components were extracted and rotated orthogonally (varimax). The same nine items identified through expert review loaded primarily on a factor suggestive of avoidant coping. These nine items, comprising five of the subscales initially identified by Carver, were summed to create the measure of avoidant coping. The relevant items were drawn from the following subscales: self-distraction (two items; e.g., *You've been doing something to think*

about it less, such as watching TV, sleeping, reading.), use of alcohol/drugs (one item; i.e., *You've been using alcohol or other drugs to make yourself feel better.*), behavioral disengagement (two items; e.g., *You've been giving up trying to deal with it.*), denial (two items; e.g., *You've been saying to yourself that the problem isn't real.*), and stoicism (two items; e.g., *You've been trying to ignore your emotions about the stressful situation.*). In the current sample, the internal-consistency estimate for the avoidant coping scale was .75.

PTSD Symptomatology

Current PTSD symptomatology was assessed using the PTSD Symptom Checklist, Civilian Version (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL is a widely used self-report instrument of PTSD symptomatology. It consists of 17 items that correspond to the 17 DSM-IV symptoms of PTSD. Participants indicate the extent to which they have been bothered by each symptom related to "a stressful experience from the past" during the previous month using a 5-point Likert-type scale, ranging from 1 (*not at all*) to 5 (*extremely*). The PCL has demonstrated strong internal consistency, test-retest reliability, and convergent validity with self-report and structured interview measures of PTSD among Vietnam and Gulf War veterans (Weathers et al., 1993). The reliability and validity of the PCL were subsequently demonstrated in a primarily female sample of motor vehicle accident victims and sexual assault survivors (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

Table 1 contains descriptive statistics for all study variables.

Procedure

Women were individually approached by shelter staff and invited to participate in a research study examining the ways in which women are affected by relationship conflict. Shelter residents were informed that their participation was completely voluntary, assured that their participation would remain confidential, and reminded that shelter services were in no way contingent on their involvement in the study. Participants gave informed consent and completed the packet of self-report questionnaires. After completing the questionnaires, participants returned them to the investigator in postage-prepaid envelopes. The participants were provided with information about the study hypotheses using a written debriefing form, asked for their reactions to the questionnaires, and provided with information on how to contact the investigator with any questions or concerns about the study. In reimbursement for her time, each participant was compensated $10 by mail.

Analytic Procedures

Path analysis was conducted using the AMOS 4 software package (Arbuckle, 1995). AMOS 4 utilizes full information maximum likelihood estimation in the presence of missing data to preserve the maximum sample size. A series of hierarchically nested models accompanied by chi-square difference tests and other indices of close fit [i.e., root mean square error of approximation (RMSEA; Steiger, 1990), normed fit index (NFI, Bentler & Bonett, 1980), comparative fix index (Bentler, 1990), incremental fit index (Bollen, 1989), and Tucker Lewis

Table 1. Descriptive Statistics for All Variables

Variable	Minimum	Maximum	*M*	*SD*
Childhood Potentially Traumatic Events				
Types of events	0.00	12.00	3.89	2.97
Trauma-Related Guilt (2 scales total)	0.19	6.86	3.32	1.83
TRGI global guilt	0.00	4.00	1.66	1.22
TRGI guilt cognition	0.19	3.10	1.60	0.77
Avoidant Coping Strategies	10.00	33.00	19.23	5.76
COPE self-distraction	2.00	8.00	5.79	1.87
COPE alcohol and drug use	1.00	4.00	1.45	0.99
COPE behavioral disengagement	2.00	8.00	3.58	2.01
COPE denial	2.00	8.00	3.55	1.91
COPE stoicism	2.00	8.00	4.86	2.06
PTSD Symptomatology	24.00	85.00	55.10	15.09
PCL criterion B symptoms	6.00	25.00	15.95	5.57
PCL criterion C symptoms	9.00	35.00	22.02	6.95
PCL criterion D symptoms	5.00	25.00	16.68	4.94

Note. TRGI = Trauma-Related Guilt Inventory; COPE = Brief COPE; PTSD = posttraumatic stress disorder; PCL = PTSD Symptom Checklist, Civilian Version.

Table 2. Simple Order Correlations Among All Variables of Interest

	Childhood Potentially Traumatic Events	Trauma-Related Guilt	Avoidant Coping Strategies
Childhood potentially traumatic events	–		
Trauma-related guilt	.31*	–	
Avoidant coping strategies	.22	.32*	–
PTSD symptomatology	.32*	.53**	.47*

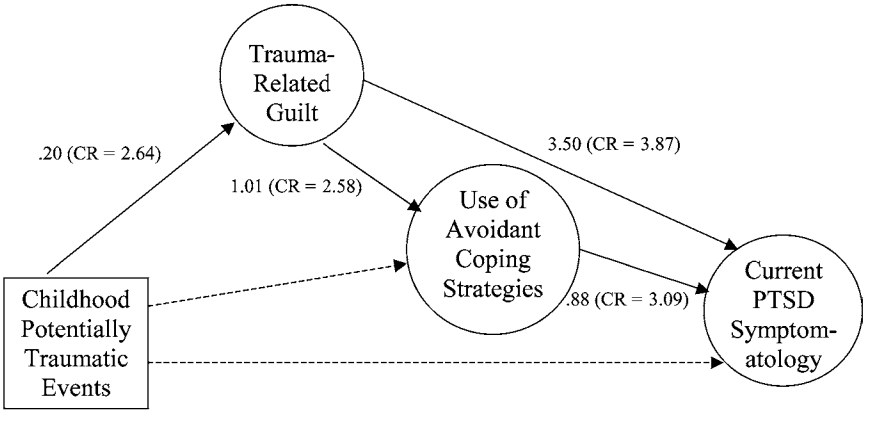
*$p < .05$. **$p < .01$.

Index (Tucker & Lewis, 1973)], were used to systematically evaluate hypotheses concerning direct and indirect effects, proceeding from the most saturated to the most parsimonious model (Anderson & Gerbing, 1988). The goal was to select the most parsimonious model that best fit the data.

Results

Simple order correlations among the variables of interest are reported in Table 2. The modeling process began with a model that included all direct and indirect paths of childhood potentially traumatic experiences on PTSD through trauma-related guilt and avoidant coping strategies. The saturated model also included direct and indirect paths from trauma-related guilt to PTSD symptomatology to further test our mediational hypothesis (see Fig. 1). Weak paths (those with critical ratios <1.5) were removed, and the models were reestimated. First, the weakest path, from childhood potentially traumatic events to avoidant coping, was removed. For the trimmed model, $\chi^2(1, N = 63) = 1.13$, $p = .28$, indicating a nonsignificant difference from the just-identified model. The model was then reestimated, and the weakest path, the direct path between childhood potentially traumatic events and PTSD, was again removed. Removal of this path did not result in worsening of model fit, $\chi^2(2, N = 63) = 2.35$, $p = .31$. This model of best fit is presented in Fig. 1, delineated by solid lines. The RMSEA was .053, with a 90% confidence interval of .000 to .264. The associated probability of close fit was .363. In addition, the NFI was .99, the CFI was .99, the IFI was .99, and the TLI was .99. These values exceed the .90 standard suggested by Kline (1998). The final model accounted for 39% of the variance in women's reports of current PTSD symptomatology.

As illustrated in Fig. 1 and represented in Table 3, experiences of childhood potentially traumatic events were associated with current levels of PTSD symptomatology indirectly, rather than directly, through the participant's feelings of trauma-related guilt and her use of avoidant coping strategies. More specifically, a history of potentially traumatic events in childhood was directly associated with trauma-related guilt. That is, those participants who reported experiencing a greater number of childhood traumatic experiences were more likely to respond to the adult potentially traumatic event of domestic violence victimization with guilt and responsibility. In turn, trauma-related guilt was both directly and indirectly associated with current level of PTSD symptomatology. The



Note. Dotted lines represent paths included in the saturated model that were not included in the final model. Structural coefficients are unstandardized. CR = critical ratio, or parameter estimate divided by its standard error.

Fig. 1. Final path analysis depicting direct and indirect relationships among childhood potentially traumatic events, trauma-related guilt, use of avoidant coping strategies, and PTSD symtomatology.

Table 3. Unstandardized and Standardized Effects of Childhood Potentially Traumatic Events, Trauma-Related Guilt, and Avoidant Coping on PTSD

	Unstandardized Estimates			Standardized Estimates		
Latent Variable	Direct Effect (CR)	Indirect Effect	Total Effect	Direct Effect	Indirect Effect	Total Effect
Childhood potentially traumatic events	–	.89	.89	–	.18	.18
Trauma-related guilt	3.50(3.87)	.89	4.39	.43	.11	.53
Avoidant coping	0.88(3.09)	N/A	.88	.34	N/A	.34

Note. Critical ratios (CR) of unstandardized direct effects are listed in parentheses.

direct relationship between trauma-related guilt and current level of PTSD symptomatology suggests that those participants who experience more guilt related to their domestic violence victimization experience higher levels of PTSD symptomatology. The indirect relationship between trauma-related guilt and PTSD symptomatology is through the use of avoidant coping strategies. That is, trauma-related guilt was associated with an increased reliance on avoidant coping strategies. The use of avoidant coping strategies, in turn, was directly associated with higher levels of current PTSD symptomatology. As noted in Table 3, the direct effect of trauma-related guilt on PTSD symptomatology is stronger than the indirect path; however, both are significant and suggest that avoidance coping partially mediates the relationship between trauma-related guilt and PTSD symptomatology.

Discussion

The goal of the current investigation was to gain a better understanding of the interrelationships between specific affective, cognitive, and behavioral reactions to early potentially traumatic events that may contribute to the development and/or maintenance of later posttraumatic distress. This investigation extended an earlier investigation (Gibson & Leitenberg, 2001), which found that the higher levels of trauma-related stigma among those sexually assaulted women who also reported a history of childhood sexual abuse predicted an avoidant style of coping with a subsequent sexual assault. The current study replicated this finding among a group of women who have been exposed to high levels of domestic violence and extended the findings to include prediction of PTSD symptomatology. This investigation also provided preliminary evidence that an array of potentially traumatic experiences in childhood, not just the experience of childhood sexual abuse, is associated with increased feelings of trauma-related guilt in response to later potentially traumatic experiences.

Results from the current path analysis suggested that women who were exposed to more types of potentially traumatic events early in life are more likely to feel responsible and find fault with their own behavior when exposed to domestic violence victimization as adults (i.e., trauma-related guilt). It may be that the experience of repeated victimization from different perpetrators across a number of years decreases survivors' abilities to identify consistent external explanatory factors for their victimization, resulting in greater responsibility being assigned to their own behavior. That is, during the process of trying to make sense of a traumatic event, the victim of multiple traumatic events may be more likely to make internal responsibility attributions for the event (e.g., "Why do bad things always happen to me? It must have to do with something I'm doing") and therefore experience greater levels of trauma-related guilt. From a learning theory perspective, one might posit that preexisting feelings of guilt that were never "erased" after the first potentially traumatic event are reinstated in the context of a revictimization experience.

Our path analysis further indicated that trauma-related guilt was associated with greater use of avoidant coping strategies such as denial, self-distraction, and use of drugs and alcohol. Exposure to domestic violence victimization is an exceptionally stressful and emotionally painful event. When coupled with the aversive experience of trauma-related guilt, the experience of domestic violence is likely to be even more stressful and painful, perhaps leading to a reliance on avoidant coping strategies as a means of escaping painful thoughts and feelings. Our analysis indicated no direct relationship between exposure to potentially traumatic events in childhood and later use of avoidant coping strategies. Instead, these two variables were related only indirectly through trauma-related guilt. This finding is consistent with Gibson and Leitenberg's (2001) findings that feelings of stigma mediated the relationship between childhood sexual abuse and an avoidant style of coping with a later sexual assault.

Finally, our path analysis indicated that trauma-related guilt was related to increased PTSD symptomatology, both directly and indirectly through the use of avoidant coping strategies. Kubany and Manke (1995) suggested that guilt-related cognitions may be associated

with PTSD symptomatology because these emotionally painful cognitions interfere with an individual's ability to integrate a traumatic event successfully with prior beliefs and experiences. Our model provided empirical support for this theory, suggesting that high levels of trauma-related guilt are associated with increased use of avoidant coping strategies. An overreliance on avoidant coping strategies, in turn, is likely to interfere with the emotional processing that is critical for recovery from traumatic experiences (Bryant & Harvey, 1995; Coffey et al., 1996b). Taken together, the three variables of exposure to potentially traumatic events in childhood, trauma-related guilt, and use of avoidant coping strategies accounted for a substantial amount of the variance (39%) in self-reported PTSD symptomatology in this sample of survivors of domestic violence. This is particularly compelling given that level of recent exposure to domestic violence was not included in the model.

Although limited by the relatively small sample size, the use of path analysis is a strength of the current investigation in that it allows for the simultaneous examination of direct and indirect effects of multiple factors; however, these data are limited by retrospective reports, so no causal conclusions can be drawn. The relationships tested here are based on existing empirical evidence. Nonetheless, the direction of these relationships cannot be confirmed, and it is likely that in reality, many of these relationships are reciprocal. For example, we suggest that the more trauma-related guilt an individual experiences, the more she may utilize avoidant methods of coping. In fact, it also is likely that the more an individual engages in emotional avoidance, the less likely she is to resolve the guilt. Similarly, we propose that the use of avoidant coping strategies increases an individual's level of PTSD symptomatology by preventing the cognitive and emotional processing that clinical research suggests is necessary for recovery from profoundly traumatic life experiences (e.g., Foa & Rothbaum, 1998). It also may be true that individuals with higher levels of PTSD symptomatology are more likely to engage in avoidant coping strategies as the survivor attempts to avoid painful thoughts and feelings. Future investigations utilizing a longitudinal research design are necessary to further disentangle the nature of these relationships.

This investigation examined several factors that influence the way in which exposure to potentially traumatic events in childhood increases the risk of developing PTSD in response to traumatic events experienced as an adult. While there are likely to be numerous factors that impact the relationship between childhood traumatic experiences and adult PTSD, the current findings highlight the importance of attending to trauma-related guilt, avoidant coping strategies, and the association between these constructs when working with survivors exposed to multiple experiences of relationship violence. It is our belief that it is the perpetrators, not the victims, who are ultimately responsible for relationship violence; however, many victims of relationship violence tend to blame themselves. Gaining a better understanding of the causes and consequences of self-blame allows us to design more effective interventions for the treatment of posttraumatic reactions in these women. The current investigation suggests that the efficacy of existing treatment interventions for survivors of relationship violence may be improved by incorporating treatment of guilt-based affective and cognitive reactions into existing treatment interventions.

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