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Initial Examination of a Multidimensional Model of Trauma-Related Guilt: Applications to Combat Veterans and Battered Women

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Guilt is conceptualized as a multidimensional construct consisting of negative affect and a set of interrelated cognitions. Guilt magnitude is thought to be a function of the magnitudes of six variables posited as primary components of guilt: a negative event, distress, perceptions of responsibility, lack of justification, wrongdoing, and false beliefs about preoutcome knowledge. The model was tested with samples of Vietnam veterans and battered women. Participants rated their reactions to and perceived roles in trauma-related events. Among Vietnam veterans, distress ratings were highly correlated with guilt severity. Cognitive guilt-component variables were significantly correlated with guilt in both groups. In multiple regression, guilt components accounted for 61% of variance in veterans' guilt and 44% of variance in women's guilt. Among veterans, distress ratings were highly correlated with measures of PTSD and depression. In both groups, cognitive guilt-component variables were positively correlated with psychopathology. Results support the view that beliefs about one's role in trauma are important factors in posttrauma adjustment.

KEY WORDS: guilt; trauma-related guilt; combat veterans; Vietnam veterans; battered women.

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INTRODUCTION

Researchers interested in studying the construct of guilt have ample opportunities if they work with survivors of traumatic events such as combat, rape, spouse abuse, serious accidents, or sexual abuse in childhood. Individuals who have survived extraordinarily stressful events often experience guilt[7] about some aspects of the trauma (e.g., Andrews & Brewin, 1990; Gerrard & Hyer, 1994; Frazier & Schauben, 1994; Jehu, 1989; Kubany, Haynes *et al.,* 1995; Resick & Schnicke, 1993).

Why many trauma survivors experience guilt and why individuals exposed to similar traumatic events experience varying magnitudes of guilt is not altogether clear. Part of the confusion may stem from a lack of consensus about the meaning of guilt. For example, trauma researchers often discuss "guilt" as if its meaning is self-evident, while failing to make conceptual distinctions that differentiate related constructs such as guilt, self-blame, and responsibility (e.g., Resick & Schnicke, 1993; see McGraw, 1987; Shaver & Drown, 1986). An enhanced understanding of the role of guilt in trauma may be fostered if researchers can reach a consensus about the meaning of guilt and identify with clarity the key elements or components involved in the phenomenology of guilt (c.f., Baumeister, Stillwell, & Heatherton, 1994, p. 263). The role of guilt in trauma may be further clarified by examining relationships between components of guilt and various aspects of posttrauma adjustment.

The purposes of the present research were (a) to describe and test a model of guilt that generates predictions about how much guilt individuals will experience after exposure to traumatic events and (b) to examine the relationships of trauma-related guilt and components of guilt with the severity of other psychopathology, particularly PTSD and depression. The research was replicated across two distinct samples of trauma survivors to assess the generality or specificity of the proposed model and the relationships between guilt and components of guilt with posttrauma adjustment.

The Meaning and Components of Guilt

The theoretical literature on guilt has been characterized by conceptual heterogeneity. Authors have proposed guilt definitions that vary widely in breadth, focus, overlap, and reference to underlying dynamics (Haynes,

[7]Guilt typically involves attributions of responsibility and self-blame (Frijda, 1993; see Kubany & Manke, 1995). Thus, investigations of self-blame among trauma survivors are considered germane to the study of guilt and were included in our review of the trauma-related guilt literature.

1993). One point of consistent agreement is that guilt possesses both affective *and* cognitive or evaluative dimensions (e.g., Klass, 1987; Kugler & Jones, 1992).[8] Thus a dual-dimension conceptualization of guilt is embodied in the following definition which has served to guide the present research. Guilt is viewed as *an unpleasant feeling accompanied by a belief (or beliefs) that one should have thought, felt, or acted differently* (Kubany, 1994; Kubany & Manke, 1995).

Various factors have been postulated to be important components or determinants of guilt. Based on clinical experiences, reviews of the literature on guilt, and structured interviews with trauma survivors, six factors were identified as potentially critical dimensions of the guilt experience: (a) occurrence of a negative event or outcome, (b) distress, (c) wrongdoing, (d) causal responsibility, (e) lack of justification, and (f) false beliefs about preoutcome knowledge caused by hindsight bias (see Kubany, Haynes *et al.,* 1995). Each of these factors is discussed below.

Occurrence of a Negative Event. Several authors have noted that guilt occurs consequent to events that produce "harm" or have "negative outcomes" (Baumeister *et al.,* 1994; Roseman, 1984; Scherer, 1984; Smith & Ellsworth, 1985; Tangney, 1990; Weiner, Graham, & Chandler, 1982). Thus it is generally presumed that guilt is experienced in the context of events that are viewed as negative in some objective or subjective way.

Distress. As mentioned, researchers generally agree that guilt possesses an affective as well as a cognitive dimension. Guilt has been conceptualized as a negative *emotion* (e.g., Baumeister *et al.,* 1994; Izard, 1979; Roseman, 1984), and no matter how an individual appraises his or her role in an event, some degree of negative affect needs to be present for a person to "feel" guilty. Also, the negative affect or distress experienced when a person *feels* guilty may be conceptualized as diffuse emotional arousal or a conditioned emotional response quite independent of any necessary semantic connotation (c.f., Schacter, 1964; Staats, 1975).

Wrongdoing. The factor posited most frequently as a fundamental component of guilt is a belief that one has done something wrong. The following phrases represent a sampling of ways that wrongdoing has been identified as a key feature of guilt: "being bad, having done wrong, or suffering pangs of conscience" (Buss & Durkee, 1957), "violation of internalized standards of moral behavior" (Mosher, 1968); "a sense of wrongdoing, as if one has violated moral principle" (Klass, 1987), "behavior that is in-

[8]This view is consistent with appraisal theories of emotion which operate on the premise that differences in emotions result from differences in ways people interpret physiological arousal (Ellsworth, 1994; Schacter, 1964). For example, guilt involves negative arousal and attitudes about self (e.g., "I should have. . ."), whereas anger involves negative arousal and attitudes about others (e.g., "Somebody else should have. . .") (Kubany, 1994; Weiner, 1985).

consistent with a set of internalized standards—often but not necessarily, moral in nature" (Tangney, 1990), and "recognition that one has violated a personally relevant moral or social standard" (Kugler & Jones, 1992).

Perceived Personal Responsibility for Causing a Negative Event. Several authors have proposed that guilt occurs when a person makes internal attributions about the cause of a negative event (e.g., Foa, Steketee, & Rothbaum, 1989; McGraw, 1987; Weiner *et al.,* 1982). For example, Weiner *et al.* (1982) maintained that guilt occurs when one has brought about a negative consequence for a personally controllable cause. Similarly, Foa *et al.* (1989) view guilt in the context of trauma as "a failure to exert perceived control in the situation to prevent the catastrophe from occurring" (p. 164).

Lack of Justification for Actions Taken. Believing that one's actions were justified has been suggested as a factor that mitigates perceptions of personal responsibility or moral wrongdoing (Fincham & Jaspars, 1980; Heider, 1958; McGraw, 1987). That is, perceptions of extenuating circumstances may diminish or mitigate one's sense of guilt, as, for example, when a soldier kills a civilian "because he was trying to kill me" (i.e., self-defense). Likewise, believing that one's actions were unjustified may exacerbate guilt.

Hindsight Bias. Hindsight bias (Fischhoff, 1975) occurs when an individual learns the outcome of an event and falsely concludes that he/she had foreseen or had prior knowledge about the outcome before it was known. Considerable research has shown that participants who are provided with knowledge about event outcomes are more likely to claim they would have predicted the outcomes than are participants who possess foresight knowledge alone (Hawkins & Hastie, 1990). Kubany (1994) suggested that hindsight bias may be a major determinant of trauma-related guilt among combat veterans. He suggested that many combat veterans experience guilt because they falsely assume they "could have" and "should have" prevented wartime tragedies which were in fact unforseeable. Kubany and Manke (1995) suggest that hindsight-biased thinking may contribute to a general tendency among trauma survivors to exaggerate the importance of their roles in trauma (e.g., Jehu, 1989; Miller & Porter, 1983; Price, 1990).

Proposed Model of Trauma-Related Guilt

We have developed a model that generates predictions about how much guilt individuals will experience after exposure to traumatic events. Traumatic event-related guilt is conceptualized as a multidimensional construct consisting of an affective component and a set of interrelated beliefs about one's role in a negative event. According to the model, guilt is a

function of the presence and magnitude of a combination of six variables hypothesized to be primary determinants or components of guilt. Severity of guilt experienced after an event is thought to depend on the degree to which individuals (a) appraise the event outcome as negative, (b) were distressed by the event, (c) believe that they caused the event, (d) believe that they violated personal standards, (e) believe that their actions were unjustified, and (f) believe that they should have behaved differently because they "knew better."

In the proposed model, the relative contribution of the six factors (as determinants of guilt magnitude) depends importantly on factor *magnitude*. According to the model, the separate components of guilt contribute directly to guilt magnitude to the extent each component is present (see McGraw, 1987). The guilt components may also contribute indirectly to guilt magnitude by virtue of effects the components have on one another (see Kubany & Manke, 1995). For example, perception of responsibility may mediate guilt by its effect on distress; that is, beliefs that one has caused a negative outcome may contribute to distress (see Baumeister *et al.,* 1994). Similarly, hindsight bias may mediate guilt by its effect on perceptions of responsibility.

Trauma-Related Guilt and Psychological Adjustment

Several investigators have found guilt and self-blame to be negatively related to posttrauma adjustment (e.g., Dutton, Burghardt, Perrin, Chrestman, & Halle, 1994; Frazier & Schauben, 1994; Wolfe, Sas, & Wekerle, 1994; see Kubany & Manke, 1995). The relationship between trauma-related guilt and psychological adjustment has been studied most extensively in combat veterans, rape victims, and battered women. The present research focused on two of these populations—combat veterans and battered women.

Trauma-Related Guilt and Psychological Adjustment Among Vietnam Combat Veterans. Several factor analytic studies have identified guilt as a major symptom cluster among Vietnam veterans (Kubany, 1994). There is recent evidence that many Vietnam veterans experience *severe* guilt and have multiple guilt issues resulting from exposure to multiple wartime events of a traumatic nature (Kubany, Abueg, Kilauano, Manke, & Kaplan, 1995).

Kubany, Haynes *et al.* (1995) observed a strong positive relationship between combat-related guilt and PTSD severity in a sample of Vietnam veterans, and Hendin and Haas (1991) observed relatively little guilt in a sample of Vietnam veterans without PTSD. According to Gerrard and Hyer (1994), "untreated guilt in a patient with PTSD will probably be associated

with no progress or a downward spiral" (p. 454). There is also evidence that combat-related guilt may contribute to the maintenance of other trauma-related psychopathology (Fontana, Rosenheck, & Brett, 1992; Hendin & Haas, 1991; Pitman *et al.*, 1991). For example, Hendin and Haas (1984) found that intense combat-related guilt was the most significant predictor of suicidal ideation and suicide attempts among Vietnam veterans with and without PTSD.

Trauma-Related Guilt and Psychological Adjustment Among Battered Women. Battered women represent a second group of trauma survivors for whom guilt is an important issue. Guilt and self-blame have been identified as frequent sequelae of battering by several investigators (e.g., Andrews & Brewin, 1990; Barnett & LaViolette, 1993; Miller & Porter, 1983; Walker, 1979).

Numerous studies have examined the relationship between self-blame and depression in battered women, and several investigators have reported a positive relationship between depression and women's tendencies to blame themselves for occurrence of the violence (e.g., Andrews & Brewin, 1990; Cascardi & O'Leary, 1992). The relationship between PTSD and guilt among battered women has not been investigated even though it is well documented that many battered women suffer from PTSD. For example, in shelter samples of battered women, PTSD prevalence has ranged from 45% to 84% (Houskamp & Foy, 1991; Kemp, Rawlings, & Green, 1991).

Examination of the Proposed Model

Two studies were conducted, each with the following objectives: (a) to assess the relationship between each of the hypothesized components of guilt and guilt magnitude; (b) to assess the ability of the hypothesized guilt components in combination to predict guilt magnitude; (c) to examine the degree to which guilt and the component variables are associated with psychopathology, particularly PTSD and depression; and (d) to assess whether the proposed components of guilt (as they relate to specific traumatic events) are more strongly associated with these *events* than with "trait" guilt [which may be characterized as a proneness to experience guilt in response to multiple life events (see Mischel, 1986).] The studies were virtually identical and were conducted with separate samples of Vietnam combat veterans and battered women in order to assess the generalizability of the findings across trauma populations. We expected to find the same pattern of relationships in both samples. The studies with the veterans and battered women are reported separately because of several confoundings in the two samples, including type of trauma, gender, age, and trauma recency.

STUDY 1

Method

Participants

The sample included 58 Vietnam combat veterans. Thirty of the veterans were enrolled in a residential treatment program at the National Center for PTSD in Menlo Park, California. The remaining participants were members of a Vietnam veteran community organization in the Bay area. A several hundred dollar donation was given in exchange for a solicitation to the membership requesting voluntary participation in the study.

The average age of participants was 45.59 (SD = 3.77). They were ethnically diverse [Caucasian, 62% (N = 36); Hispanic, 16% (N = 9); Black 14% (N = 8); Japanese-American, 3% (N = 2); Native American, 3% (N = 2); and Filipino, 2% (N = 1)]. The veterans' mean score on the Combat Exposure Scale (Keane *et al.,* 1989) was 26.60 (SD = 7.12). Seventy-eight percent of the participants (N = 45) obtained scores on the Mississippi Scale that meet or exceed a cutoff (107) used for making a combat-related PTSD diagnosis (Keane, Caddell, & Taylor, 1988). Seventy-nine percent (N = 46) obtained scores on the Penn Inventory that meet or exceed the cutoff (35) used for making a diagnosis of PTSD (Hammarberg, 1992). Sixty-six percent of the participants (N = 38) were at least moderately to severely depressed based on their scores (>19) on the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Measures

Attitudes About Guilt Survey (AAGS). This eight-item questionnaire, constructed for the present research, instructs respondents to think about and briefly describe the trauma-related (e.g., combat-related) event about which they feel most guilty. Six multiple choice questions (shown in Table I) assess the respondents' appraisal of the posited guilt determinants as they relate to the events described. Guilt frequency is measured by a 5-point item with choices ranging from "never" to "always." Guilt intensity is measured by a 5-point item with choices ranging from "none" to "extreme." The sum of scores on these two items provides an index of traumatic event-related quilt.

Personal Feelings Questionnaire (PFQ; Harder & Lewis, 1986). The PFQ is a well-validated measure of trait guilt and trait shame widely used in personality and social psychology research. Both the Guilt and the Shame

Table I. Attitudes About Guilt Survey Items Used for Predicting Event-Related Guilt Severity

1. How bad was the outcome of what happened?
   a. It was not bad.
   b. It was slightly bad.
   c. It was moderately bad.
   d. It was very bad.
   e. It was extremely bad.

2. How personally responsible were you for causing what happened?
   a. I was in no way responsible for causing what happened.
   b. I was slightly responsible for causing what happened.
   c. I was moderately responsible for causing what happened.
   d. I was largely responsible for causing what happened.
   e. I was completely responsible for causing what happened.

3. How justified was what you did? (i.e., How good were your reasons for what you did?)
   a. What I did was completely justified.
   b. What I did was mostly justified.
   c. What I did was moderately justified.
   d. What I did was slightly justified.
   e. What I did was not justified in any way.

4. To what extent do you think that you should have known better and could have prevented or avoided the outcome?
   a. There is no possible way that I could have known better.
   b. I believe slightly that I should have known better.
   c. I believe moderately that I should have known better.
   d. For the most part I believe that I should have known better.
   e. I absolutely should have known better.

5. Did you do something wrong? (i.e., Did you violate personal standards of right and wrong by what you did?)
   a. What I did was extremely wrong.
   b. What I did was very wrong.
   c. What I did was moderately wrong.
   d. What I did was slightly wrong.
   e. What I did was not wrong in any way.

6. How distressing was this experience for you personally?
   a. What happened was not distressing to me.
   b. What happened was slightly distressing to me.
   c. What happened was moderately distressing to me.
   d. What happened was very distressing to me.
   e. What happened was extremely distressing to me.

subscales possess adequate reliability, concurrent validity with other measures of guilt and shame, and considerable construct validity (Harder & Lewis, 1986; Harder & Zalma, 1990).

Guilt Inventory (GI; Kugler & Jones, 1992). The GI includes subscales which assess trait guilt, state guilt, and moral standards. Only the trait guilt subscale was administered in the present study. Internal consistency was high (α = .89), and test–retest reliability was .75 over 36 weeks. GI Trait Guilt was significantly correlated with other measures of trait guilt, including PFQ Guilt (.66).

Mississippi Scale for Combat-Related Posttraumatic Stress Disorder (Keane et al., 1988). The Mississippi Scale was derived from DSM-III criteria for PTSD. The scale possesses high internal consistency and temporal stability and had an overall hit rate of .90 when used to differentiate between PTSD and non-PTSD comparison groups. Subsequent studies have provided additional strong evidence for discriminative validity (King, King, Fairbank, Schlenger, & Surface, 1993; Watson, 1990).

Penn Inventory for PTSD Assessment (Hammarberg, 1992). This 26-item questionnaire was designed to measure the symptoms of PTSD. Hammarberg reported coefficient α's of .86 for PTSD veterans and .78 for nonveterans. Test–retest reliability ranged from .86 to .92. Penn scores were highly correlated with the Beck depression Inventory, Impact of Event Scale, and the Mississippi Scale, with a high sensitivity and specificity for diagnosing PTSD among samples of veterans and survivors of a civilian disaster.

Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). Widely used in trauma research, the IES consists of two subscales: Intrusions and Avoidance. Horowitz *et al.* (1979) reported an internal consistency of .78 for Intrusions and .80 for Avoidance. In one study, the IES correctly classified the PTSD status of approximately 84 percent of respondents (Arata, Saunders, & Kilpatrick, 1990).

Beck Depression Inventory (BDI; Beck et al., 1961). The BDI is the most widely used measure of depression, and its reliability and validity are well established (Beck, Steer, & Garbin, 1988).

Results

Several kinds of events were described by the veterans as their greatest sources of combat-related guilt. The most frequently described sources of guilt related to concerns about not having done more and an inability to prevent death and suffering of civilians and other Americans (27%; n = 16). Accidental killing of civilians (n = 4) and accidental harm caused due to negligence (n = 3) were reported by 12% of the participants. Brutality and excessive use of force were reported as chief sources of guilt by 10% of the participants (n = 6), and a variety of other sources of guilt was

described to a lesser degree—including guilt about survival, fear, and trading places with someone who suffered misfortune.

The internal consistency of veterans' responses on the AAGS was .86 (as measured by Cronbach's alpha coefficient). Concurrent validity of the AAGS was assessed by correlating scores on the event-related guilt index with the PFQ and GI. The event-related guilt index was positively and significantly correlated with scores on the GI ($r = .65, p < .001$) and the PFQ ($r = .65, p < .001$).

Table II presents the correlations between each guilt-component variable and each of the three guilt measures. Each guilt-component variable was positively and significantly correlated with the event-related guilt index. Results in Table II show that the guilt components tend to be more highly correlated with event-related guilt than with trait guilt. The average correlation of the guilt-component variables with the event-related guilt index was significantly greater than the average correlation of the guilt-component variables with PFQ Guilt ($t = 1.75, p < .05$, one-tailed).

Table III presents the correlations of each of the guilt-component variables with one another. Inspection of Table III shows that participants' ratings on the guilt-component variables were highly intercorrelated.

The ability of the combination of guilt factors to predict guilt severity was assessed with multiple regression. Scores on items 1–6 of the AAGS (see Table I) were used to predict the magnitude of event-related guilt and the magnitude of trait guilt. The results of the regression analyses are shown in Table IV. Inspection of Table IV indicates that the guilt-compo-

Table II. Correlations of Guilt-Component Ratings with Scores on Guilt Measures—Vietnam Veterans ($N = 58$) and Battered Women ($N = 50$)

	Event-related guilt		Trait guilt			
			PFQ		GI	
	Vets	Women	Vets	Women	Vets	Women
Negative outcome	.54**	.21	.38**	.22	.58**	.08
Distress	.77**	.26*	.57**	.19	.58**	.01
Responsibility	.36**	.61**	.18	.38**	.41**	.48**
Lack of justification	.44**	.25*	.29*	.10	.31**	.29*
Hindsight bias	.26*	.26*	.04	.12	.05	.22
Wrongdoing	.52**	.45**	.30**	.25*	.40**	.34**
Average correlation	.51**	.34**	.29*	.21	.39**	.23

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).

Table III. Intercorrelations of Guilt-Component Ratings—Vietnam Veterans (N = 58) and Battered Women (N = 50)

	Negative outcome		Distress		Responsibility		Justification		Hindsight bias	
	Vets	Women	Vets	Women	Vets	Women	Vets	Women	Vets	Women
Negative outcome										
Distress	.60**	.45**								
Responsibility	.49**	.02	.52**	.14						
Lack of Justification	.38*	.05	.51**	.05	.51**	.48**				
Hindsight bias	.18	.08	.35**	.16	.46**	.39**	.66**	.20		
Wrongdoing	.46**	.07	.57**	.13	.44**	.69**	.61**	.51**	.53**	.10

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).

Table IV. Proportion of Variance in Guilt Scores Accounted for by Combinations of Guilt-Component Ratings—Vietnam Veterans (N = 58) and Battered Women (N = 50)

	R^2					
	All components included as predictors		Distress and negative outcome as predictors		Four cognitive components as predictors	
	Vets	Women	Vets	Women	Vets	Women
Event-related guilt	.61**	.44**	.59**	.08	.32**	.38**
Trait guilt						
PFQ	.38**	.21	.33**	.06	.17*	.15
GI	.44**	.26	.35**	.09	.32**	.24*

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

nent variables in combination accounted for 61% of the variance in event-related guilt scores, 38% of the variance in PFQ Guilt scores, and 44% of the variance in GI Trait Guilt scores. The guilt-component variables as a block accounted for significantly more variance in event-related guilt than variance in PFQ Guilt (t = 2.33, $p < .05$, one-tailed) and GI Trait Guilt (t = 1.80, $p < .05$, one-tailed).

To see how well the "cognitive" guilt-component variables could predict guilt severity, a set of regression analyses was performed including scores only on the four items with clear face validity as cognitive variables (responsibility, justification, hindsight bias, and wrongdoing). Results of these analyses are presented in Table IV. R^2 was highly significant in each analysis. The cognitive guilt-component variables, as a block, accounted for 32% of the variance in event-related guilt.

An additional set of regression analyses was performed to see how well the Distress and Negative Outcome variables—as measures of event traumaticity—could predict guilt severity. Results of these analyses are also presented in Table IV. R^2 was highly significant in each analysis. The Distress and Negative Outcome variables in combination accounted for almost as much variance as did the combination of all guilt components.

Table V presents the correlations of event-related guilt with the measures of PTSD, depression, trait guilt, and trait shame. The event-related guilt index was highly positively correlated with every psychopathology measure. Table VI presents the correlations of the guilt-component measures with the psychopathology measures. Each of the guilt-component measures was positively and significantly correlated with three or more of the psychopathology measures. In particular, the Distress measure was highly correlated with all seven psychopathology measures.

Table V. Correlations Between Traumatic Event-Related Guilt Index and Measures of Psychopathology—Vietnam Veterans (N = 58) and Battered Women (N = 50)*

	Event-related guilt	
	Vets	Women
Mississippi Scale	.81	—
Penn Inventory	.70	.51
IES		
Intrusions	.80	.17 (ns)
Avoidance	.66	.51
Beck Inventory	.70	.40
Trait guilt		
PFQ	.65	.52
GI	.65	.59
Trait shame (PFQ)	.56	.48

*All correlations except the one noted "ns" are statistically significant at $p < .01$ (two-tailed).

Discussion

The findings provide strong support for the proposed model of guilt. Each of the six hypothesized components of guilt was significantly related in zero-order correlations with event-related guilt. Furthermore, scores on each of the guilt-component variables tended to be more highly correlated with event-related guilt than with trait guilt. In statistical combination, the guilt-component variables were highly correlated with the event-related guilt index. The guilt-component variables together accounted for 61% of the variance in event-related guilt. In addition, the component ratings in combination accounted for more variance in event-related guilt than variance in trait guilt.

Distress ratings accounted for almost as much variance in event-related guilt as did all of the guilt-component variables in combination. One way of interpreting this finding is that guilt components other than distress do not contribute any unique variance in event-related guilt.[9] However, Dis-

[9]A recently developed Trauma-Related Guilt Inventory was administered to 74 Vietnam combat veterans (Kubany, Haynes *et al.*, 1995). Scores on a Guilt Cognitions Scale contributed 17% unique variance in overall guilt over and above the contribution of scores on a Distress Scale (total R^2 = .74).

Table VI. Correlations Between Guilt-Component Measures and Measures of Psychopathology—Vietnam Veterans (N = 58) and Battered Women (N = 50)

	Negative outcome		Distress		Responsibility		Justification		Hindsight bias		Wrongdoing	
	Vets	Women	Vets	Women	Vets	Women	Vets	Women	Vets	Women	Vets	Women
Mississippi Scale	.58**	—	.72**	—	.39**	—	.34**	—	.26*	—	.53**	—
Penn Inventory	.48**	.00	.55**	.02	.33**	.47**	.28**	.33*	.26**	.38**	.42**	.48**
IES												
Intrusions	.38**	.07	.64**	.16	.29*	.28*	.35**	.24	.29*	.35*	.51**	.01
Avoidance	.32**	.16	.56**	.17	.36**	.28*	.37**	.19*	.32*	.14	.46**	.05
Beck Inventory	.50**	.06	.55**	.00	.33**	.46**	.26*	.39**	.23	.23	.43**	.43**
Trait guilt												
PFQ	.38**	.22	.57**	.19	.16	.38**	.29*	.10	.04	.12	.30*	.25
GI	.58**	.08	.57**	.00	.41**	.48**	.31*	.29	.05	.22	.40**	.34*
Trait shame	.40**	.16	.45**	.12	.17	.37**	.23**	.35*	.02	.08	.31*	.21

*$p < .05$ (two-tailed).
**$p < .01$ (two-tailed).

tress ratings were significantly correlated with scores on each of the cognitive guilt-component variables, suggesting the possibility that guilt-related cognitions may mediate guilt severity by contributing to distress.[10]

The results of Study 1 indicate that combat-related guilt and the variables hypothesized as components or predictors of combat-related guilt phenomenology are associated with levels of psychopathology manifest long after the trauma. Event-related guilt scores were strongly correlated with scores on each of the psychopathology measures. In addition, participants' ratings of the magnitude of each of the guilt components were significantly correlated with the various measures of psychopathology. The fact that each of the cognitive guilt-component variables was significantly correlated with PTSD and depression suggests that veterans' beliefs about their role in combat trauma are important factors in psychological dysfunction that is trauma related.

STUDY 2

Method

Participants

Participants included 50 women, ages 19 to 34 (M = 29.80, SD = 6.18), residing in a battered women's shelter on the island of Oahu in the state of Hawaii. The women were of ethnically diverse ancestry including Hawaiian/part-Hawaiian (24%; n = 12), Caucasian (18%; n = 9), Samoan (8%; n = 4), African-American (6%; n = 3), Asian (6%; n = 3), other mixed ethnicity (6%; n = 3), and unspecified ethnicity (8%, n = 4).

Almost two-thirds of the women (n = 32) indicated that they had been physically abused more than 10 times in their most recent relationship. Ninety percent of the women (n = 45) indicated that they were last abused within the past 3 months, and 82% (n = 41) indicated that the abuse occurred over a span of 1 or more years (M = 7.58 years; SD = 4.93). Thus, for the most part, women who participated in this experiment reported recent and chronic abuse in long-term intimate relationships. In addition, 36% of the women (n = 18) indicated that they were still in a relationship with the batterer. Fifty-four percent of the women (n = 27) obtained Penn Inventory scores that exceed the cutoff used for making a PTSD diagnosis,

[10]In a recent analogue experiment, Kubany, Kaplan, Watson, and Nouchi (1985) found that giving participants information about what they "could have" done to prevent several (hypothetical) traumatic events produced significant increases in participants' ratings of how much distress they thought they would experience.

and 50% (n = 25) obtained Beck Inventory scores indicative of at least moderate to severe depression.

Measures

Participants were administered the same set of questionnaires used in Study 1 except for the Mississippi Scale which is specific to combat-related trauma.

Procedures

Questionnaire packets were individually completed by participants at the shelter. Participants were each paid $10 for taking part in the study.

Results

Several events were described by the women as their greatest source of abuse-related guilt. The most frequently described sources of guilt related to talking back or not being quiet (16%; n = 8) and not doing something (or not doing it "well enough") that the abuser wanted done (14%; n = 7). Other sources of guilt included bad judgment in getting involved or not acting on warning signs of abuse (12%; n = 6), negative effects on the children (10%; n = 5), personal inadequacies (e.g., drug/alcohol use, financial irresponsibility, having an affair; 10%; n = 5), causing the partner distress by leaving (6%; n = 3), calling the police or pressing charges (4%; n = 2), and not leaving or getting help sooner (4%; n = 2). Various other sources of guilt were reported by 16% (n = 8) of the participants (e.g., believing that their partner would change, falsely agreeing with the partner's accusations that she was having sex with someone else).

The internal consistency of women's responses on the AAGS (as measured by coefficient alpha) was .76. Concurrent validity of the AAGS was assessed by correlating event-related guilt with trait guilt. The event-related guilt index was significantly correlated with scores of the GI (r = .59; p < .001) and the PFQ (f = .52, p < .001).

Table II presents the correlations between each of the guilt component variables and the various measures of guilt. As in Study 1, each of the cognitive guilt-component variables was positively and significantly correlated with event-related guilt. In contrast to the results obtained in Study 1, the Distress and Negative Outcome variables were weakly correlated with guilt.

Inspection of Table II indicates that the guilt-component variables tend to be more highly correlated with the event-related guilt measures than with the measures of trait guilt. However, these differences did not reach statistical significance. Table III presents the correlations of each of the guilt-component variables with each other. The cognitive guilt-component variables are highly intercorrelated, but the cognitive component variables are not significantly correlated with the Distress or Negative Outcome variables.

As in Study 1, the ability of the guilt-component factors in combination to predict guilt severity was assessed with multiple regression. The results of the regression analyses are shown in Table IV. The guilt-component ratings in combination accounted for 44% of the variance in event-related guilt; the guilt-component ratings in combination accounted for less variance in trait guilt—21% of the variance in PFQ guilt and 26% of the variance in GI guilt. The guilt-component variables as a block accounted for significantly more variance in event-related guilt than variance in PFQ Guilt ($t = 1.80, p < .05$, one-tailed).

Table V presents the correlations of the event-related guilt index with the measures of PTSD, depression, trait guilt, and trait shame. Event-related guilt was highly positively correlated with all but one of the psychopathology measures.

Table VI presents the correlations of the guilt-component measures with the psychopathology measures. Each of the cognitive guilt-component measures was positively and significantly correlated with two or more of the psychopathology measures. However, the Distress and Negative Outcome measures were only weakly correlated with the measures of psychopathology.

In order to examine the role of cognitive components of guilt as predictors of event-related guilt severity, a set of regression analyses was performed including—as predictors—scores on the four cognitive variable items. The summary of these analyses are shown in Table VI. As a block, the cognitive component variables accounted for 38% of the variance in event-related guilt. To see how well the Distress and Negative Outcome variables—as measures of event traumaticity—could predict guilt severity, an additional set of regression analyses were performed. As shown in Table IV, the Distress and Negative Outcome variables in combination did not account for significant variance in event-related guilt among the battered women.

Discussion

Overall results of Study 2 were consistent with results obtained in Study 1 and provide additional support for the proposed model of guilt.

First, rating on each of the hypothesized *cognitive* guilt-component variables were significantly related in zero-order correlations with the event-related guilt index and were more highly correlated with event-related guilt than with trait guilt. Second, guilt-component ratings as a block accounted for 44% of the variance in event-related guilt and, in combination, more effectively predicted event-related guilt severity than trait guilt severity. Third, event-related guilt was positively and significantly correlated with PTSD, depression, trait guilt, and trait shame. Finally, each of the cognitive guilt-component variables was significantly correlated with the psychopathology variables—suggesting that cognitions about one's role in victimization may play an important role in posttrauma psychopathology.

In contrast to the results obtained in Study 1, the Distress and Negative Outcome variables were not strongly correlated with the measures of guilt and were not significantly related to measures of PTSD and depression. These differences were not predicted and are somewhat difficult to explain. The different pattern of results in the woman sample may have been due to methodological factors (e.g., different reasons for participating) or to differences in sample characteristics (e.g., ages, trauma recency, treatment status). However, some recent evidence suggests that the different pattern of results may represent an anomaly. A new measure of trauma-related guilt was recently administered to 168 battered women, and results were obtained which are consistent with our predictions and with results obtained in Study 1. Scores on a six-item Distress Scale were correlated .62 with a 4-item Global Guilt Scale, .64 with the Beck Depression Inventory, and .73 with the Modified PTSD Symptom Scale (Kubany, Haynes *et al.,* 1995).

As in Study 1, the event-related guilt index was highly correlated with both measures of trait guilt. These results provide strong evidence for the concurrent validity of the event-related guilt index as a measure of proneness to experience guilt.

GENERAL DISCUSSION

Overall results provide considerable initial support for the multidimensional model of guilt. In both studies, each of the cognitive guilt-component variables was significantly correlated with the index of trauma-related guilt, and the guilt-component variables in combination accounted for substantial variance in trauma-related guilt magnitude (61% in the veteran sample and 44% in the battered women's sample). The guilt model may have considerable generality for predicting levels of traumatic-event-related guilt because similar overall results were obtained with two trauma groups differing

strikingly in several respects—including gender, age, type of trauma, and trauma recency.

Overall results also provide strong evidence that guilt-related cognitions specified by the multidimensional model and overall traumatic-event-related guilt are significantly correlated with the severity of psychopathology. In both studies, the cognitive guilt-component variables were positively and significantly correlated with measures of PTSD and depression. Even without considering the role of guilt as a mediating variable, participants' appraisals of their role in guilt-evoking events were strongly associated with psychopathology. The magnitude of psychopathology tended to be greater when participants (a) accepted more responsibility for causing what happened, (b) perceived themselves as less justified for acting as they did, (c) believed more strongly that they violated personal standards, and (d) believed more strongly that they should have known better and could have prevented or avoided the outcome.

The present research has some limitations. First, the sample sizes were relatively small (in relation to the number of variables included in the model), presenting the problem of potentially inflated coefficients in the regression models. Second, our decision to examine guilt in relation to those traumatic events about which individuals experienced most guilt may have produced a biased estimate of the association between guilt and the other measures of psychopathology. In future research, it may be preferable to assess guilt in relation to extreme stressors, selected according to criteria other than guilt. Third, each guilt-component variable was measured by a single item; multiple measures of each variable would have provided greater confidence in reliability (cf., Kubany, Haynes *et al.,* 1995). Fourth, as an initial empirical examination of the multidimensional model of guilt, we attempted to assess only major tenets of the model. We did not attempt to examine potential interactional or mediational effects in the statistical analyses (through the use of interaction terms in the regression model), or, alternatively by other modeling approaches (such as stepwise regression), to examine the effects of variables, given that other variables are also in the model. We have recently begun to investigate our hypotheses that specific guilt components may mediate or moderate effects of other guilt components on overall guilt severity. For example, Kubany, Kaplan, Watson, and Nouchi (1995, April) conducted an analogue experiment to test the prediction that outcome knowledge has causal effects on guilt-related cognitions, trauma-related distress, and overall trauma-related guilt. Giving participants information about how they "could have" prevented a series of traumatic outcomes (presumably engendering hindsight bias) produced highly significant increases in reratings of guilt-related cognitions, distress, and overall guilt.

As an alternative explanation for the strong correlations between trauma-related guilt and other psychopathology, the results may have been due to a shared negative affectivity factor present in all negative mood states—rather than something unique about guilt (e.g., Watson & Clark, 1984). And because the research was correlational, no definitive statements about causal relationships can be drawn from the data. In subsequent research, we plan to utilize path analyses or time-series designs to assess whether guilt-related cognitions are causally related to guilt-related distress, to overall event-related guilt, and to PTSD and depression.

The moderate correlations between guilt-component ratings and trait guilt call for some explanation. Positive correlations were expected to the extent that trait guilt measures assess guilt which relates to personally experienced traumatic events. However, the correlations between guilt-component ratings and "trait" guilt would be expected to decrease to the extent that trait guilt measures assess pervasive guilt susceptibility and to the extent that this susceptibility or guilt proneness is unrelated to tendencies to experience trauma-related guilt. Further examination of the relationship between trait guilt and trauma-related guilt may represent a fruitful line of investigation.

Many researchers have suggested that they know what guilt is and have provided scholarly definitions. However, relatively little work has been designed explicitly to investigate and determine *empirically* what variables cause or comprise guilt. Many guilt researchers have theorized about the types of perceptual experiences that capture, reflect, or define the essence of guilt, but these formulations have rarely been subjected to actual test. The present study represents an initial effort to verify a conceptualization of guilt by making specific predictions about what variables—which may vary in magnitude—are associated with reports of differential guilt magnitude.

The tendency to treat guilt as a "pure" emotion, like fear or sorrow, may have interfered with our ability to develop a complete understanding of what guilt "is." For example, the common phrase, "I *feel* guilty," amalgamates or fuses the cognitive and affective components of guilt into a blended, undifferentiated holistic experience. We could just as appropriately say, "I *think* guilty"; however, the phrase, "*experience* guilt" is probably more technically correct than either "feel guilty" or "think guilty." Guilt occurs when something "bad" happens and a person perceives himself as playing some role in the outcome (see Baumeister *et al.,* 1994). When people think that they "should have" done something differently and feel badly about the outcome, they experience guilt. People *know* when they experience guilt, but they may not know how to differentiate the components

that comprise guilt because the components are fused. In addition, although the hypothesized components of guilt are conceptually distinct, they are frequently interwoven or confounded in word usage. For example, the term *blame* connotes wrongdoing as well as causal responsibility (see Kubany & Manke, 1995). Strong associated feelings may further impair the individual's ability to think clearly about guilt. The present conceptualization of guilt attempts to clarify our understanding of guilt by separating the intellectual components of guilt from its affective element and also by teasing apart the intellectual or cognitive aspects of guilt. This effort may set the stage for systematic laboratory and field experiments that shed further light on this elusive construct and lead to further refinements in the multidimensional model.

In light of the strong relationships obtained between trauma-related guilt and psychopathology, it is rather surprising that trauma-related guilt has not received more systematic examination from trauma researchers. Kubany, Abueg, Kilauano, Manke, and Kaplan (1995) cited four possible reasons for this lack of attention. First, as a diagnostic feature of PTSD, guilt was relegated to "associated feature" status in DSM-III-R, thereby drawing attention away from its potential importance. Second, guilt has only been thought to be important as a feature of PTSD when it is related to concerns about survival (e.g., American Psychiatric Association, 1994); this focus may have been overly narrow and caused researchers and clinicians to overlook other important sources of trauma-related guilt (Kubany, 1994; Kubany & Manke, 1995). Third, many health professionals believe that "behavioral" self-blame or guilt is adaptive in spite of a preponderance of recent evidence that any kind of self-blame is maladaptive (e.g., Frazier & Schauben, 1994). Fourth, there is no guilt measure in widespread clinical use—thus decreasing chances that trauma-related guilt will be detected as an important clinical problem. The results of the present research suggest that trauma-related guilt and guilt-related cognitions are important clinical problems that warrant increased future attention from trauma researchers and clinicians who work with trauma survivors.

Finally, the present study represents the first attempt to examine the relationship between guilt and psychopathology across trauma populations with a singular methodology. Indeed, in spite of the recent proliferation of literature on psychological trauma, virtually no research has been reported involving the systematic examination of similarities and differences in ways survivors of different kinds of traumatic events are impacted by trauma. Such research is needed and may help us to delineate mechanisms responsible for the long-lasting psychological effects of traumatic events.

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