

2006

# Causal attributions and posttraumatic stress disorder: The relationships among dispositional attributional style, trauma-specific attributions, and PTSD

Sarah Reiland

Follow this and additional works at: <http://commons.emich.edu/theses>



Part of the [Psychology Commons](#)

---

## Recommended Citation

Reiland, Sarah, "Causal attributions and posttraumatic stress disorder: The relationships among dispositional attributional style, trauma-specific attributions, and PTSD" (2006). *Master's Theses and Doctoral Dissertations*. 48.  
<http://commons.emich.edu/theses/48>

This Open Access Thesis is brought to you for free and open access by the Master's Theses, and Doctoral Dissertations, and Graduate Capstone Projects at DigitalCommons@EMU. It has been accepted for inclusion in Master's Theses and Doctoral Dissertations by an authorized administrator of DigitalCommons@EMU. For more information, please contact [lib-ir@emich.edu](mailto:lib-ir@emich.edu).

CAUSAL ATTRIBUTIONS AND POSTTRAUMATIC STRESS DISORDER:  
THE RELATIONSHIPS AMONG DISPOSITIONAL ATTRIBUTIONAL STYLE,  
TRAUMA-SPECIFIC ATTRIBUTIONS, AND PTSD

Sarah Reiland

Thesis

Submitted to the Department of Psychology

Eastern Michigan University

in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

in

Clinical Psychology

December 15, 2006

CAUSAL ATTRIBUTIONS AND POSTTRAUMATIC STRESS DISORDER:  
THE RELATIONSHIPS AMONG DISPOSITIONAL ATTRIBUTIONAL STYLE,  
TRAUMA-SPECIFIC ATTRIBUTIONS, AND PTSD

Sarah Reiland

Thesis

Submitted to the Department of Psychology

Eastern Michigan University

in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

in

Clinical Psychology

Approved:

---

Dean Lauterbach, Ph.D., Thesis  
Committee Chair

---

Ellen Koch, Ph.D.

---

Norman Gordon, Ph.D.

---

John Knapp, Ph.D., Chair of the  
Department of Psychology

---

Deb deLaski-Smith, Ph.D.,  
Interim Dean of the Graduate School

## ABSTRACT

The learned helplessness model (Seligman, 1975) and its various revisions suggest that both dispositional attributional style and event-specific attributions may influence people's responses to events. Attribution theory has been applied to the search for risk and resiliency factors in trauma survivors, but few studies have compared dispositional attributional style with trauma-specific attributions in relation to posttraumatic stress symptoms. In addition, studies of attributions and PTSD fail to take into account the importance to the individual of the events about which attributions are made. The importance of the situation is a key component of the hopelessness model. Attributions for causes of events that are highly important to the individual and whose outcomes are perceived to be highly negative are predicted to be more significant in influencing a person's response than attributions for events that are considered to be less important and whose outcomes are perceived to be less negative (Abramson, Metalsky, & Alloy, 1989). This study compared dispositional attributional style for relatively commonplace events, attributional style for hypothetical traumatic events, and attributions for experienced traumatic events in order to determine the relationship between attributions and PTSD symptoms. Results indicated that attributions for experienced traumas were most predictive of PTSD symptoms, and the globality dimension of all attribution categories was consistently predictive of PTSD, even after controlling for depression. This study provides support for theory linking attributions with PTSD symptoms.

### Acknowledgments

I would like to thank Dr. Dean Lauterbach for his mentoring and direction that proved invaluable to this project. I also thank my committee members, Dr. Norman Gordon and Dr. Ellen Koch. I appreciate their expertise, time, and effort that were invested in this project. I also want to thank Dr. Chris Peterson at the University of Michigan for sending me a copy of his instrument to use in my study.

## TABLE OF CONTENTS

	Page
APPROVAL.....	2
ABSTRACT.....	3
ACKNOWLEDGMENTS.....	3
TABLE OF CONTENTS.....	5
LIST OF TABLES.....	8
SECTIONS	
I.    Introduction.....	9
II.   Attributional Style and Learned Helplessness. ....	10
III.  Reformulated Learned Helplessness Model.....	11
IV.  Hopelessness Depression.....	15
V.    Attributional Style and PTSD.....	16
VI.  Dispositional Attributional Style and Event-Specific Attributions.....	22
VII.  Hypotheses.....	23
VIII. Method.....	25
A.    Participants.....	25
B.    Measures.....	25
i.    Demographics Questionnaire.....	25
ii.   Traumatic Events Questionnaire.....	26
iii.  Posttraumatic Stress Disorder Checklist-Civilian.....	27
iv.   Expanded Attributional Style Questionnaire.....	28
v.    Attributional Style Questionnaire – Trauma Version.....	29

vi.	Beck Depression Inventory-Second Edition.....	30
C.	Procedure.....	31
D.	Independent Variables.....	33
E.	Dependent Variable.....	34
F.	Data Analyses.....	34
IX.	Results.....	36
A.	Population Characteristics.....	36
B.	Prevalence of Traumatic Events.....	37
C.	Trauma Severity.....	37
D.	Attributions for Hypothetical Aversive Events, Hypothetical Traumatic Events, and Experienced Traumatic Events.....	39
E.	Depression Severity.....	40
F.	Relationships among Attributions and PTSD Symptoms (Hypothesis 1).....	40
G.	Relationship between PTSD Symptom Severity and Attributions after Controlling for Depression (Hypothesis 2).....	44
H.	Relationships among Attribution Components and PTSD (Hypothesis 3).....	44
I.	Relationship between PTSD Reexperiencing Symptoms and Attributions.....	45
J.	Relationship between PTSD Avoidance Symptoms and Attributions.....	47
K.	Relationship between PTSD Arousal Symptoms and Attributions.....	49
X.	Discussion.....	49
	REFERENCES.....	58

## APPENDICES

A.	Demographics Questionnaire.....	65
B.	Traumatic Events Questionnaire.....	67
C.	Posttraumatic Stress Disorder Checklist-Civilian.....	74
D.	Expanded Attributional Style Questionnaire.....	75
E.	Attributional Style Questionnaire-Trauma Version.....	88
F.	Beck Depression Inventory-Second Edition.....	97
G.	Informed Consent Form.....	98
H.	Informed Consent Script.....	100
I.	Human Rights Committee Approval.....	101

## List of Tables

	Page
Table 1 – Descriptive Statistics for Sample.....	37
Table 2 – Frequency of Worst Events Reported.....	38
Table 3 – Zero-Order Correlations Between Attribution Scales and PTSD Symptom Scales.....	41
Table 4 – Partial Correlations Between Attribution Scales and PTSD Symptom Scales.....	42
Table 5 – Standard and Hierarchical Multiple Regression of Attributions on PTSD Symptoms.....	45
Table 6 – Standard and Hierarchical Multiple Regression of Attributions on PTSD Reexperiencing Symptoms.....	47
Table 7 – Standard and Hierarchical Multiple Regression of Attributions on PTSD Avoidance Symptoms.....	49
Table 8 – Standard and Hierarchical Multiple Regression of Attributions on PTSD Arousal Symptoms.....	50

Causal Attributions and Posttraumatic Stress Disorder:  
The Relationships among Dispositional Attributional Style,  
Trauma-Specific Attributions and PTSD

Introduction

There is considerable variability in the human response to trauma. While some individuals experience few posttraumatic stress symptoms and little distress following a potentially traumatic event, others develop numerous debilitating symptoms. The National Comorbidity Study, based on interviews with a representative national sample of 8,098 individuals between the ages of 15 and 54, found that 60.7 percent of men and 51.2 percent of women have experienced at least one traumatic event in their lifetime. However, the estimated lifetime prevalence of posttraumatic stress disorder (PTSD) is only 10.4 percent among women and 5.0 percent among men (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Because relatively few people who experience a traumatic event will subsequently develop PTSD, researchers are currently studying vulnerability and resiliency factors to better understand why some individuals develop more symptoms than others following a traumatic event.

Cognitive variables have frequently been proposed to explain individual differences in how people perceive and respond to similar events. Both dispositional attributional style and specific causal attributions for particular traumatic events are cognitive variables that may play a part in influencing responses to trauma. Consistent with a diathesis-stress model of psychopathology, traumatic events themselves are not sufficient to produce a specific response but depend also upon variables within the individual. In the sections that follow, this paper will explore the history of the measurement of attributional style; explain the relationships among dispositional attributional style, event-specific attributions, and PTSD; and discuss the most

recent iteration of the hopelessness model of depression as it may apply to PTSD. After a review of the literature, this paper will describe a study that explored the relationships between attributions for different types of events and PTSD symptoms.

#### Attributional Style and Learned Helplessness

Dispositional attributional style refers to how people tend to explain the causes of events involving themselves (Peterson, 1991) and is defined specifically by Metalsky and Abramson (1981) as “a tendency to make particular kinds of causal inferences, rather than others, across different situations and across time” (p. 38). Trauma-specific attributions, on the other hand, refer to the causes people ascribe to specific traumatic events that they have experienced themselves (Gray, Pumphrey, & Lombardo, 2002). The study of the relationship between how people interpret events and how they subsequently respond has evolved from animal studies of inescapable shock in the 1960s to more recent attribution theories involving people’s self-reported causal inferences about specific hypothetical or real-life events.

Modern attribution theories are based on early studies of learned helplessness in dogs exposed to inescapable and unavoidable electric shocks. Overmier and Seligman (1967) found that these dogs later failed to learn to escape shock in different situations where escape was possible, leading these researchers to propose the learned helplessness hypothesis. The learned helplessness hypothesis suggested that when animals are exposed to uncontrollable events, they learn that their behaviors do not influence the outcome. Because they have learned that their responses are independent of the outcome, they do not try to escape or avoid the situation (Maier & Seligman, 1976).

The early learned helplessness model proposed that uncontrollability results in motivational, cognitive, and emotional effects in both animals and people. Studies of animals and

humans suggested that, when subjects were exposed to uncontrollable negative events, they lacked motivation to try to avoid or escape similar events in the future, they developed a cognitive set that interfered with their ability to perceive contingent relationships between their behaviors and outcomes, and they expressed greater emotional sequelae than in response to controllable events (Maier & Seligman, 1976). Learned helplessness theory suggested that it is not the aversive event that determines individuals' responses; rather, it is the *perception* of uncontrollability that predicts responses.

Seligman (1975) argued that traumatic events initially cause a heightened fear response that continues until the subjects determine whether or not they can control the event. If the subjects learn that the trauma can be controlled, the fear response dissipates, whereas if they learn that the trauma cannot be controlled, fear is replaced with depression. Perceived controllability is the cognitive appraisal of the cause of an event. This appraisal involves an assessment of whether the outcome can be altered by a specific response or whether it is independent of the subject's response. It is the perception of non-contingency between responses and outcome and not the "objective reality" of such non-contingency that leads to fear and ultimately depression. Learned helplessness theories precipitated perhaps the first formal studies that examined the relationship between subjects' causal attributions and subsequent responses.

#### Reformulated Learned Helplessness Model

The initial learned helplessness model advanced by Seligman did not explain all of the results found in laboratory experiments, however. When applied to people, results were sometimes conflictual. For example, sometimes learned helplessness was long-lasting and pervasive across a variety of situations, but sometimes it was transient and restricted to a particular condition (Peterson, 1991). Even when people attributed an uncontrollable cause to the

situation, their emotional responses varied. The learned helplessness model did not specify when and where a person who expects outcomes to be uncontrollable will exhibit symptoms of helplessness (Jackson & Larrance, 1979). In addition, whereas the learned helplessness model predicted that depressed people were more likely to inaccurately assess the degree of control they have over particular negative situations, studies showed that depressed people were actually more accurate assessors of personal control than people who were not depressed (Alloy & Abramson, 1982). Perception of controllability could not, therefore, differentiate people who experienced helplessness responses from those people who did not or predict when or if the responses would generalize to other situations.

In response to the weaknesses of the original learned helplessness model, researchers proposed the reformulated model of learned helplessness to explain individual differences in the response to uncontrollability (Abramson, Seligman, & Teasdale, 1978). Abramson et al. proposed three dimensions of explanatory style: locus, stability, and globality. The locus dimension stemmed from Rotter's (1966) research on how the behavioral effects of reinforcement depend partly on whether people perceive the reward as contingent on their own behavior (internal locus) or independent of it (external locus). This dimension refers to people's tendencies to perceive that causes are either internal (personal characteristics) or external (environmental factors). The stability dimension was originally proposed by Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum in 1971 to explain achievement motivation. In the context of the reformulated learned helplessness model, stable attributions refer to the perception that events are caused by fixed and constant factors, whereas unstable attributions refer to causes that are perceived to be fluctuating and variable. Finally, global attributions lead individuals to generalize perceptions of behavior-outcome contingency to many other facets of their lives,

whereas specific attributions are circumscribed to a particular situation. For example, students who attribute their failure on an exam to their general academic ineptitude would be inferring internal, stable, and global attributions to the cause of the failed exam, whereas students who attributed their failure to a hostile test environment would be inferring external, unstable, and specific attributions for the cause of the failure. Explanatory *style* refers to an individual's tendency to explain causes consistently across the different dimensions; specific attributions are made in response to a particular event.

At least three questions were raised by the advent of the reformulated model of learned helplessness: (1) do people make spontaneous attributions (Wortman & Dintzer, 1978); (2) do learned helplessness responses generalize to situations other than the original uncontrollable event (Alloy, Peterson, Abramson, & Seligman, 1984); and (3) do people have a consistent explanatory style across time (Peterson, 1991)? In a review of the attribution literature, Weiner (1986) found ample evidence that people do indeed make spontaneous attributions about the causes of their successes and failures. These spontaneous causal attributions were more likely to occur when the outcomes of events were negative and unexpected (Wong & Weiner, 1981). Preliminary data also provided support for the notion that learned helplessness responses generalize to situations other than the original uncontrollable situation. Specifically, researchers found that people who exhibited a style of attributing negative events to global factors showed helplessness deficits in new situations that were either similar or dissimilar to the original situation in which they were helpless. Conversely, people who tended to attribute the cause of negative events to specific factors only exhibited helplessness responses in situations that were similar to the original situation (Alloy et al., 1984). Finally, a content analysis of people's writings over time found that explanatory style for negative events, but not positive events, was

stable throughout adult life (Burns & Seligman, 1989). Moreover, there is evidence of stability of attributional style for both positive and negative events over a three-year window of time (Tiggemann, Winefield, Winefield, & Goldney, 1991). Research on the reformulated model of learned helplessness suggests that it is an improvement over the earlier learned helplessness model.

The reformulated model of learned helplessness proposed dimensions other than controllability to explain individual differences in responses to similar events and thereby suggested other factors that may differentiate depressed and non-depressed people. This model suggests that people who characteristically make internal, stable, and global explanations for negative events will be at elevated risk for depression when confronted with a negative event (Abramson et al., 1978). In other words, people are more likely to become depressed if they blame themselves for negative events and believe that these causal traits will endure in time and affect many areas of their lives.

While the reformulated learned helplessness model received considerable support, it has been noted that the model was silent on people's perceptions of the *consequences* of negative events and for not clearly delineating the diathesis-stress component of depression (Abramson, Metalsky, & Alloy, 1989). This model focused exclusively on perceived causes of events and did not examine the expectations people had about the probable consequences of these events or the perceived importance of the events. Common sense dictates that perceptions of uncontrollability over events believed to be trivial (e.g., no personal consequences) should not lead to depression. However, the reformulated learned helplessness model did not distinguish between trivial and non-trivial events.

### Hopelessness Depression

The hopelessness depression model incorporated many components of the original reformulated model of learned helplessness while addressing important model limitations (Abramson et al., 1989). This model addresses inferences about the *consequences of a negative event* and *perceived self-characteristics* following negative outcomes in addition to the traditional focus on causal attributions as important determinants of peoples' responses to negative events. Hopelessness depression is characterized by negative expectations about the occurrence of desired outcomes and expectations of helplessness about altering the likelihood of their occurrences (Abramson et al., 1989). Researchers found that negative attributional style, characterized by the tendency to attribute negative events to internal, stable, and global causes, is a diathesis for enduring depressive reactions and lowered self-esteem following negative life events (Metalsky, Halberstadt, & Abramson, 1987). This model extended the focus from examining causal attributions to include attention to how individuals perceive the consequences of these negative events. Events that are perceived to be more important and whose outcomes are perceived to be more negative carry a greater risk of engendering distress than do events that are perceived to be less important and whose outcomes are not perceived as negatively.

The helplessness model, in its original and reformulated versions, explains reactions to uncontrollable events, but as the first learned helplessness studies suggested, perceived controllability is a key element in understanding responses to events. Bernard Weiner's (1979; 1985) attributional model replaces the globality dimension of the reformulated learned helplessness model with a controllability dimension. Some causal attributions involve controllable factors. Attributing one's successes or failures, for example, to *effort* is to recognize

that the cause is controllable in the future, whereas attributing performance to *ability* is to infer an uncontrollable cause.

All of these attribution theories posit that cognitive explanations for negative events influence a person's reaction to stressful circumstances. Cognitive variables, therefore, such as dispositional attributional style and event-specific attributions, may contribute to individual differences that place some people at a greater risk of developing negative symptoms, such as PTSD, after experiencing a trauma.

#### Attributional Style and PTSD

Attributional style of trauma victims has been studied to determine whether the type of attributions made for either hypothetical or actual events affects PTSD symptom severity. While the severity and duration of a person's exposure to a traumatic event are arguably the most influential factors affecting the likelihood of developing PTSD, there are still individual differences in how people respond to events. For example, the National Comorbidity Study found that 65 percent of men and 45.9 percent of women who reported that rape was their most upsetting trauma developed PTSD (Kessler et al., 1995). Conversely, this means that 35 percent of men and over 54 percent of women who reported that a rape was their most upsetting trauma did *not* develop PTSD. Similarly, 38.8 percent of people who reported combat exposure to be their most distressing trauma met the criteria for PTSD while the other 61 percent did not. Considering that not everyone exposed to a particular traumatic event will subsequently develop PTSD, cognitive variables, such as attributions, may play a role in influencing people's susceptibility to PTSD.

Attribution theories have traditionally been applied to depression, but attributional style for negative events can easily be understood in its application to PTSD. The DSM-IV requires

intense fear, *helplessness*, or horror in response to an event in order to meet the criteria for having experienced an event traumatic enough to elicit PTSD (APA, 1994). In a longitudinal study of 138 victims of violent crime, researchers found that intense levels of fear, helplessness, and horror at the time of the trauma strongly predicted the emergence of PTSD (Brewin, Andrews, & Rose, 2000). Helplessness is similarly related to attributional style, with perceived controllability significantly influencing the response to negative events. The “helplessness” criterion in the diagnosis of PTSD, therefore, suggests that attributions for the traumatic event should be related to a person’s subsequent response. Consistent with this prediction, Brewin et al. (2000) found that 61 percent of the crime victims who met the criteria for PTSD reported feeling intensely helpless, while only 30 percent of those without PTSD reported these feelings.

Other symptoms of PTSD may also be related to either attributional style or specific attributions. A person making stable and global attributions for a traumatic event may experience symptoms of avoidance and hypervigilance because of the fear of continuing danger (Gray et al., 2003). Mikulincer and Solomon (1988) suggest that attributing a traumatic event to uncontrollable causes leads to reduced involvement with the external world, which is strikingly similar to PTSD symptoms of diminished interest or participation in significant activities and feelings of detachment from others (APA, 1994). Specifically, the attribution of bad events to uncontrollable, external, and stable causes may be a risk factor for PTSD (Mikulincer & Solomon, 1988).

The relationship between attributions and PTSD has been studied in two ways: (1) dispositional attributional style, which is measured by soliciting attributions made by trauma survivors for a variety of hypothetical negative events; and (2) trauma-specific attributions, which are measured by soliciting attributions pertaining to a specific traumatic event. The

attributional style questionnaire (ASQ: Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982), or a version of the original ASQ, is often used to measure dispositional attributional style. The ASQ presents six hypothetical positive events and six hypothetical negative events. The respondents are asked to generate a cause for each event and then rate the cause on a 7-point Likert scale according to the internality, stability, and globality dimensions of attribution theory. More recently, the EASQ (Peterson & Villanova, 1988) was developed to improve on the psychometrics of the ASQ. The EASQ is similar to the ASQ but contains 24 hypothetical negative events and no positive events. Trauma-specific attributions are measured by asking people about the cause of a specific traumatic experience that has occurred in their lives. This cause is also rated on internality, stability, and globality.

The relationship between dispositional attributional style and posttraumatic stress disorder is unclear. Some researchers have found a relationship between depressogenic inferential style (more internal, stable, and global attributions for negative events) and PTSD. In a study of veterans who were receiving treatment for alcohol dependence and gambling addictions, McCormick, Taber, and Krueger (1989) found that patients who had PTSD were more likely to explain causes for negative events in ways that were more internal, stable, and global than patients without PTSD. Several other studies, however, have not found a relationship between depressogenic attributional style and PTSD. In a study of college students who survived the Northridge earthquake in California in 1994, students who tended to attribute negative events to internal, global, and stable causes were more likely to experience emotional distress but were not more likely to be diagnosed with PTSD than those students without this depressogenic attributional style (Greening, Stoppelbein, & Docter, 2002). Similarly, findings from the Temple-Wisconsin Cognitive Vulnerability to Depression Project suggested that a negative attributional

style characterized by more internal, stable, and global attributions for negative events was a cognitive risk factor for depression but not PTSD (Alloy, Abramson, Hogan, Whitehouse, Rose, Robinson, Kim, & Lapkin, 2000).

Other studies have found support for the relationship between specific dimensions of attributional style and PTSD. Runyon and Kenny (2002) found that, among children who had been sexually abused, those with PTSD were more likely to make internal attributions for negative events than those sexually abused children without PTSD. Wenninger and Ehlers (1998) found that adult survivors of childhood sexual abuse were more likely to make internal, stable, and global attributions for negative events than those who were not abused, but only the globality dimension was significantly related to the severity of PTSD symptoms among abuse survivors. Some studies suggest that veterans with PTSD tend to make more stable attributions for negative events than those without PTSD (Ginzburg, Solomon, Dekel, & Neria, 2003; Mikulincer & Solomon, 1989), but others have not found this relationship (Mikulincer & Solomon, 1988; Wenninger, 1998).

Studies that have included the controllability dimension of attributional style have consistently found that trauma survivors with PTSD tend to attribute negative events to uncontrollable causes (e.g., physical *ability* to fend off an attacker), whereas trauma survivors without PTSD are not as likely to show this tendency (Ginzburg et al., 2003; Kushner, Riggs, Foa, & Miller, 1992; Mikulincer & Solomon, 1988; 1989).

Research on attributional style for positive events suggests that only the internality-externality dimension differs among trauma survivors with and without PTSD. Ginzburg et al. (2003) reported that veterans with PTSD were more likely to attribute success to external factors. Similarly, Mikulincer and Solomon (1988), using a sample of Israeli soldiers with and without

PTSD, found that veterans with PTSD made more external attributions for positive events. Because attributional style for positive events does not carry obvious implications for understanding how people tend to respond to traumatic events, many PTSD researchers only focus on attributional style for negative events (e.g., Gray et al., 2003; Wenninger & Ehlers, 1998).

The relationship between trauma-specific attributions and PTSD has rarely been explored in relation to the three dimensions postulated by the reformulated learned helplessness theory. One notable exception is a study of college students by Gray et al. (2003). They found that individuals who made internal, stable, and global attributions about the traumas they had experienced were more likely to develop PTSD symptoms. However, after controlling for depression, only the stability dimension of attributional style remained a significant predictor of PTSD. A study of crime victims (Falsetti & Resick 1995) found that internal, stable, and uncontrollable attributions for previous victimization significantly predicted PTSD severity.

While few studies have explored trauma-specific attributions and PTSD, researchers have previously noted that attributions do relate to more general emotional disturbances among trauma survivors. Janoff-Bulman and Wortman (1976) analyzed the explanations given by 29 individuals who had been paralyzed in serious accidents for the events surrounding their accidents. They found that individuals who blamed others (i.e., made external attributions) had higher levels of distress than those individuals who blamed themselves for the accident (i.e., made internal attributions). On the other hand, several studies of rape victims suggested that individuals who blamed themselves were significantly more depressed (Arata & Burkhart, 1996; Frazier, 1990; Frazier & Schauben, 1994; Hill & Zautra, 1989) and had more PTSD symptoms (Arata & Burkhart, 1996).

A few studies have assessed both dispositional attributional style and trauma-specific attributions to compare the relative contribution of each to PTSD symptoms. Sexually abused children who displayed a dispositional attributional style characterized by more internal, stable, and global inferences for negative events tended to experience more symptoms of depression, and those children who attributed the abuse to internal and stable causes were more likely to experience PTSD symptoms (Feiring, Taska, & Chen, 2002). In addition, this study found that trauma-specific attributions did not always reflect a child's dispositional attributional style. Knowing a child's general attributional style does not necessarily imply that the child will respond to an actual event in a manner consistent with his or her responses to hypothetical events. These results are consistent with other studies that suggest that attributions for hypothetical events are weakly related or unrelated to causal attributions for experienced negative events (Cutrona, Russell, & Jones, 1985; Miller, Klee, & Norman, 1982). Not all researchers agree that there is a weak or nonexistent relationship between attributions for hypothetical events and real events, however. Peterson, Bettler, and Seligman (1985) reported moderate convergence between general attributional style and attributions for actual events, and Zautra, Guenther, and Chartier (1985) found attributions for real events to be similar to ratings of hypothetical events in a study of young adults.

Gray et al.'s (2003) study of attributions and PTSD in college students found that both dispositional attributional style and trauma-specific attributions predicted PTSD symptoms. Whereas dispositional attributional style accounted for 23 percent of the variance in PTSD symptoms, trauma-specific attributions accounted for 45 percent of the variance.

### Dispositional Attributional Style and Event-Specific Attributions

The research discussed thus far suggests that there are important distinctions between dispositional attributional style and trauma-specific attributions. The measurement of dispositional attributional style differs from trauma-specific attributions in several ways. First, dispositional attributional style measures a general pattern for perceiving events, while trauma-specific attributions reflect perceived causes for one particular event. Thus, the nature of the construct assessed is accordingly different. Second, dispositional attributional style is measured by peoples' responses to hypothetical events, while trauma-specific attributions pertain to real events. Third, dispositional attributional style for negative events is examined by presenting rather common aversive events, such as receiving a negative job performance evaluation, while trauma-specific attributions relate to much more potentially distressing life events, such as rape or combat exposure. While both dispositional attributional style and trauma-specific attributions involve individuals' causal inferences, they may not contribute equally to the development of PTSD.

The state of the literature suggests that there are many unanswered questions about the relationship between attributions and PTSD. Results are inconsistent about the relationship between dispositional attributional style and PTSD. The few studies that report the relationship between trauma-specific attributions and PTSD are more consistent, but, with the exception of the study by Gray et al. (2003), fail to report on all three attribution dimensions. Furthermore, the relationship between general attributional style and causal inferences about actual events appears to be weak at best. A question to consider is whether the relationship between PTSD and attributions for hypothetical traumatic events is different from the relationship between PTSD and attributions for hypothetical aversive (i.e., non-traumatic) events described by the ASQ.

Several researchers argue that the relationship between attributional style and people's responses to negative events cannot adequately be studied without addressing the perceived importance of the negative event to individuals (Peterson, 1991; Vasquez, Jimenez, Saura, & Avia, 2000). The hopelessness model of depression directs researchers to pay attention to the perceived negative consequences of events in exploring the diathesis-stress component of depression (Abramson et al., 1989). Attributions for events that are considered to be highly important to the individual and whose outcomes are perceived to be highly negative may be more significant in influencing a person's response than attributions for events that are considered to be less important and whose outcomes are perceived to be less negative. It is possible that the aversive events described in the attributional style questionnaire are not as important, nor the consequences as negative, as situations involving traumatic events.

The current study examined attributions for three situations: experienced traumas, hypothetical traumas, and hypothetical aversive events. Attributions for hypothetical traumas constitute an addition to previous research that compares only hypothetical aversive events and experienced trauma. By adding a measure of hypothetical trauma, this study examined whether attributions for hypothetical trauma predict PTSD better than attributions for hypothetical aversive events.

### Hypotheses

The current investigation had several aims. First, it was designed to assess whether attributions, either general or trauma-specific, are related to PTSD symptoms in a sample of individuals exposed to a variety of types of trauma. Second, it was designed to assess whether trauma-specific attributions more strongly predict PTSD symptoms than dispositional attributional style, as suggested by Gray et al. (2003). A third aim of the current study was to

examine whether attributions for hypothetical *traumatic* events are related to PTSD symptoms. Attributions were summed to form a vulnerability index, which is the sum of internality, globality, and stability scores (i.e., higher scores represent more internal, global, and stable attributions). There were three vulnerability indices: attributions for experienced trauma, attributions for hypothetical traumatic events, and attributions for hypothetical nontraumatic aversive events (hereafter to be referred to as “aversive events”).

Based on existing literature, the following hypotheses were made:

1. In light of the literature suggesting that the importance and perceived negativity of the consequences of events influence individuals' responses, attributions for causes of experienced traumatic events were predicted to correlate most highly with PTSD symptom severity, followed by correlations with hypothetical *traumatic* events and hypothetical *aversive* events. These categories correspond with a gradient of importance and negativity.
2. Attributions (trauma-specific, hypothetical traumatic, and hypothetical aversive) were hypothesized to predict PTSD symptom severity after controlling for depression.
3. The attribution dimensions of stability, globality, and internality were expected to predict PTSD symptom severity. The literature is not clear on which dimensions are expected to predict PTSD best, as few studies have examined all three dimensions separately.

## Method

### *Participants*

This project was reviewed and approved by the departmental human subjects use committee. Eligible participants were students 18 years of age or older at Eastern Michigan University. The participants received extra credit in one of their psychology classes upon completion of the study questionnaires. Approximately 200 participants were recruited. The sample size for this study was based on Gray et al.'s initial sample size of 190 (although the majority of their analyses were conducted with only 72 participants). This was a sufficient sample size for two reasons. First, the current study used a measure of trait or dispositional attributional style that is substantially superior to the ASQ, which has been used in previous research. Second, an important element of "power" is related to the strength of the manipulation (or extent of group differences). In the current study, it was expressly hypothesized that the impact of attributions made for traumatic events (both hypothetical and experienced) will be substantially larger than trait.

### *Measures*

The Questionnaire battery comprised six measures. These instruments assessed participant characteristics, life experiences, responses to life experiences, attributional style, and depression (Appendices A-F). Each of the measures is described briefly.

*Demographic Questionnaire.* The demographic questionnaire was developed for the purposes of this study; it assessed age, sex, marital status, class status, racial background, approximate income of childhood family, living situation, employment status, and therapy history.

*Traumatic Events Questionnaire (TEQ)*. The TEQ (Vrana & Lauterbach, 1994) assessed exposure to traumatic events that have the potential to elicit symptoms of posttraumatic stress. The items address the following types of trauma: (1) serious industrial, farm, or automobile accidents and /or large fires or explosions; (2) sexual assault or rape; (3) natural disasters; (4) violent crimes; (5) abusive relationships in adulthood; (6) physical or sexual abuse in childhood; (7) witnessing a serious injury or violent death; (8) being in a dangerous situation; and (9) receiving news of the unexpected death of a loved one. The instrument also includes two residual categories that allow respondents to describe any traumatic events they have experienced that do not fit into one of the listed categories or events that they do not feel comfortable identifying.

The TEQ assesses the type, number, and impact of trauma. Respondents are asked to indicate whether they have experienced the event described in the particular item; they move on to the next item if they report that they did not experience the event. For each event that they report experiencing, respondents record the number of times it happened and how old they were at the time of the event. Respondents also rate the severity of the event along the following four dimensions: (a) severity of injuries, (b) degree to which they felt that their lives were endangered, (c) how traumatic the event was for them at the time, and (d) how traumatic the event is for them currently. The items assessing severity are summed to form an index of trauma intensity. Each of the severity ratings are made on a seven-point Likert scale anchored by “*not at all*” and “*severely/extremely*.” Persons endorsing more than one event are asked to indicate which was the most traumatic. Participants who report experiencing no traumatic events are asked to briefly describe the worst event to happen to them. If this event fit into one of the trauma categories on the instrument, the worst event was moved to the appropriate category; otherwise, this worst event was listed in the “other” category.

The temporal stability of the TEQ appears to be high over a two-week test-retest interval (Lauterbach & Vrana, 1993). The TEQ reliably assessed the number of events ( $r = .91$ ) and the occurrence of events experienced by the respondents (range of  $r = .72$  for dangerous situations to  $r = 1.0$  for child abuse).

*Posttraumatic Stress Disorder Checklist – Civilian (PCL-C)*. The PCL-C (Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item measure of posttraumatic stress disorder symptoms corresponding to DSM-IV diagnostic criteria for PTSD. For each symptom, respondents rate how much the symptom disturbed them during the past month on a five-point Likert-type scale that ranged from “*not at all*” (1) to “*extremely*” (5). Scores on the items are summed to yield a total score that ranges from 17 to 85, with higher scores suggesting more severe symptomology.

The PCL-C contains three subscales that reflect the symptom categories of PTSD identified in the DSM-IV: reexperiencing, avoidance, and arousal. A diagnosis of PTSD is suggested if individuals endorse at least one reexperiencing symptom, three or more avoidance symptoms, and two or more arousal symptoms. Weathers et al. (1993) also suggest that total scores of 50 or more suggest a formal diagnosis of PTSD.

The PCL-C has good psychometric properties (Weathers et al., 1993). Scores are stable over a three-day test-retest interval ( $r = .96$ ). The PCL-C also has good internal consistency ( $\alpha = .97$ ). The convergent validity of the PCL-C with other PTSD measures is good. Weathers et al. (1993) reported that the PCL-C correlates  $r = .93$  with the Mississippi Scale for Combat-Related PTSD,  $r = .90$  with the Impact of Events Scale, and  $r = .77$  with the PTSD-Keane scale from the MMPI-II. In addition, the PCL-C appears to have adequate diagnostic utility as measured against the Structured Clinical Interview for the DSM-III-R; sensitivity = .82, specificity = .83, kappa = .64 (Weathers et al., 1993 unpublished manuscript).

*The Expanded Attributional Style Questionnaire (EASQ)*. The EASQ (Peterson & Villanova, 1988) assesses the nature of respondents' causal explanations for hypothetical aversive events by having respondents rate their explanations along three dimensions: internal-external, global-specific, and stable-unstable. Respondents are asked to imagine that each hypothetical event is true and to generate a likely cause for the event. Each cause is rated on a 7-point Likert scale according to whether it is more internal or external – “Is the cause of this due to something about you or something about other people or circumstances?”; whether it is more stable or unstable – “In the future, will this cause again be present?”; and whether it is more specific or global – “Is this cause something that affects just this type of situation, or does it also influence other areas of your life?” Higher ratings reflect more internal, stable, and global attributions. Thus, higher scores reflect what has traditionally been referred to as a depressive attributional style.

The EASQ can be scored in several different ways. Three subscale scores can be created by computing the mean value for the internality, stability, and globality items. It can also be scored by obtaining the mean of the three subscales together to obtain a measure of depressive attributional style (without breaking it down into each component of attributional style – i.e., internal, global, and stable).

The EASQ was developed to improve the modest reliability of the original ASQ (Peterson & Villanova, 1988). The internal consistency of each dimension of attributional style on the ASQ ranged from .4 to .7, which is low enough that researchers often combine scores from all three dimensions to improve reliability (Peterson & Seligman, 1984). The EASQ contains the original six aversive events on the ASQ, and the remaining 18 events were taken from a life events questionnaire designed for college students (developed by Marx, Garrity, &

Bowers, 1975). The EASQ has the same instructions and format as the ASQ but does not include any positive events.

Lengthening the ASQ improved the reliabilities of the three dimensions of attributional style. Internal consistencies were .66 for internality, .85 for stability, and .88 for globality – all higher than coefficient alphas for each dimension on the original ASQ (Peterson & Villanova, 1988).

The validity of the EASQ was examined by comparing ratings of explanations for actual aversive events to ratings for hypothetical aversive events. All three dimensions of attributional style for actual aversive events were significantly correlated with ratings of explanations for hypothetical aversive events ( $r = .32$  for internality,  $r = .18$  for stability, and  $r = .36$  for globality; Peterson & Villanova, 1988). Because of the greater reliability of the EASQ compared to the original ASQ, it is recommended that the EASQ be used as a better measure of explanatory style (Peterson & Villanova, 1988).

*The Attributional Style Questionnaire – Trauma Version (ASQ-T)*. The ASQ-T was developed for the purposes of this study. It was developed by changing the hypothetical aversive situations on the EASQ to the traumatic events on the TEQ and modifying the instructions on the EASQ to instruct participants who experienced one or more of the events to answer according to their actual thoughts and feelings about the event(s) they experienced. The situations described in the ASQ-T consist of traumatic events listed on the Traumatic Events Questionnaire (Vrana & Lauterbach, 1994). The situations include (1) serious accident or fire, (2) natural disaster, (3) violent crime, (4) child abuse, (5) unwanted sexual experience, (6) relational abuse, (7) witnessing a serious injury, (8) serious danger, and (9) other trauma (to be filled in by participant if applicable).

The format of the ASQ-T is very similar to that of the EASQ. Respondents are asked to generate a cause for the traumatic event and rate the cause on a 7-point Likert-type scale on the dimensions of internal-external, stable-unstable, and global-specific. The ASQ-T also asks about the importance of the event: “How traumatic is this situation to you?”

Unlike the EASQ, the instructions on the ASQ-T ask respondents to indicate whether the event described in each item actually occurred to them. If respondents indicate that they have experienced a particular event, they are instructed to answer each question about the event according to their actual attributions about their personal experience. At the end of the questionnaire, respondents who endorsed experiencing more than one event are asked to indicate which event was the most traumatic for them.

Items are scored in the same manner as the EASQ with the following exceptions. For each participant, answers to the items were separated according to whether the respondent endorsed having experienced the event. For analyses involving hypothetical traumatic events, only *unexperienced* traumas were included in the subscale scores. For the analysis involving actual traumatic events, only the item that the participants endorsed having experienced and said was *most* traumatic was included. In other words, if participants indicate having experienced more than one type of trauma, only the trauma they endorsed as most traumatic was retained for the analysis of actual trauma attributions. The first version of the ASQ-T was administered to two graduate students and a professor and was evaluated for comprehensiveness and readability. The wording of several items was changed to enhance clarity.

*The Beck Depression Inventory – Second Edition (BDI-II)*. The BDI –II (Beck, Steer, & Brown, 1996) assesses symptoms of depression. Each of the 21 items reflects one of the symptoms of depression, such as hopelessness, change in appetite, and so on. The items on the

BDI-II and its previous versions were derived from clinical observations of symptoms frequently observed in depressed individuals and infrequently observed in nondepressed individuals (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The items on the BDI-II are similar to the criteria for depression listed in the DSM-IV.

Each item contains answers that are scored from 0 to 3, with 0 representing absence of the symptom and 1 through 3 representing increasingly severe manifestations of the symptom. The item scores are summed to yield a total score that ranges from 0 to 63, with higher scores reflecting greater levels of depression. The Center for Cognitive Therapy has suggested that scores be interpreted in the following manner: none or minimal depression is less than 10; mild to moderate depression is 10 to 18; moderate to severe depression is 19-29; and severe depression is 30-63. The appropriateness of using these cut-off score ranges for the BDI-II depends on the nature of the sample and the purposes for which the instrument is being used. In the current study, the BDI-II was used as a continuous measure of depression severity, and cut-off scores were not utilized.

There have been numerous studies assessing the reliability and validity of the BDI-II and its previous versions. The BDI-II demonstrates high internal consistency, with alpha coefficients of .92 and .93 for psychiatric and non-psychiatric populations, respectively (Beck et al., 1996). Adequate content and factorial validity have been demonstrated, and diagnostic discrimination has been established (Dozois, Dobson, & Ahnberg, 1998). Overall, the BDI-II has been shown to have good reliability and validity as a measure of depressive symptom severity.

### *Procedure*

Recruitment took place during regularly scheduled class times. During recruitment, a brief summary of the research project was presented, which included the purpose of the study,

the amount of extra credit to be earned, the anticipated time commitment for participation, and the time and location of the study. The students were told that all responses are confidential and that they may discontinue participation at any time without penalty.

Data collection involved group administration of the questionnaire packet during the Winter and Spring academic terms of 2006. One hundred seventy-five participants were recruited midway through the Winter term and another 25 were recruited a third of the way through the Spring term. At the beginning of each session, the questionnaire packet was distributed, and the principal investigator explained the nature of the participation. Students were told that they were being asked to participate in one session during which they would complete a questionnaire packet assessing stressful life events, their responses to those events, and their beliefs regarding the causes of these events. The sessions took approximately 30 to 45 minutes. The participants were reminded that all responses are confidential and that they were free to discontinue at any time without penalty. They were asked to provide contact information if they would like to receive a summary of the findings when the study is complete.

After the general nature of the session was explained, the principal investigator orally summarized the informed consent form (Appendix G). Participants were asked to review and endorse the consent form, and, upon completion, were given a copy of the consent form to retain for their own records. The form included the name of the primary investigator, the name and contact information of the thesis advisor, and information about resources (i.e., counseling services) available to them if they wanted to discuss their response to their research participation. The participants completed a brief demographics questionnaire, a life events questionnaire (TEQ: Vrana & Lauterbach, 1994), a measure to assess the impact of traumatic life events (PCL-C: Weathers, Litz, Huska, & Keane, 1993), a depression inventory (BDI-II: Beck, Steer, & Brown,

1996), a measure of attributional style for common aversive events (EASQ: Peterson & Villanova, 1988), and a measure of attributions for traumatic events. Instructions for all instruments were orally explained to participants prior to completion, and participants were encouraged to ask for clarification of any instructions or items.

### *Independent Variables*

Causal attributions were measured for three types of events: attributions for hypothetical aversive (non-traumatic) events, attributions for hypothetical traumatic events, and attributions for traumas that participants have experienced. For each type of event, dimensions of internality-externality, stability-instability, and globality-specificity were examined.

Attributions for hypothetical and experienced events were based on responses on the EASQ and ASQ-T. Attributional style for hypothetical aversive events were obtained from the EASQ, and mean ratings of internality, stability, and globality summed were obtained to provide a measure of depressive attributional style or a *vulnerability index* (higher values indicating attributions that are more internal, stable, and global). The means for items comprising each of the three dimensions were also obtained separately to provide separate scores for each of the three dimensions. Attributional style for hypothetical traumatic events were obtained from the ASQ-T and calculated in the same manner as attributions obtained from the EASQ.

Attributions for experienced traumatic events were based on responses on the ASQ-T. The most traumatic event that each participant reported having experienced (indicated on both the TEQ and the ASQ-T) was selected as a measure of trauma-specific attributions. Like the other types of attributions, mean ratings of internality, stability, and globality were obtained both together and separately.

*Dependent Variable*

The dependent variable was participants' scores on the PCL-C.

*Data Analyses*

Data analysis procedures consisted of simple correlations, simultaneous (standard) multiple regression, and mixed design multiple regressions. To assess the first hypothesis, Pearson correlations were computed to assess the relationships between attributions for causality (vulnerability) and severity of PTSD symptoms. The magnitude of these relationships (correlations) were computed separately for experienced traumatic events, hypothetical traumatic events, and hypothetical aversive events.

Several multiple regression analyses were performed to assess hypotheses 1, 2, and 3. In the first analysis, which tested hypothesis #1, the vulnerability indices for the three categories of events (actual traumatic, hypothetical traumatic, and hypothetical aversive) were entered as three independent variables. The dependent variable was the total score on the PCL-C.

The second analysis, which tested hypothesis #2, was a mixed design multiple regression. BDI-II total scores were entered in the first block. In the second block, the vulnerability indices for the three categories of events (hypothetical aversive, hypothetical traumatic, and actual traumatic) were entered. This analysis assessed the relative impact of attributions on posttraumatic stress symptoms after controlling for symptoms of depression. The dependent variable was again the total score on the PCL-C.

The third and fourth regression analyses, relating to the third hypothesis, were exploratory analyses that examined the unique effect of each attribution dimension (internality, stability, globality) within each type of event scenario (hypothetical aversive, hypothetical traumatic, experienced traumatic) on PTSD total scores. The following nine independent

variables were included in these analyses: (1) ASQ internality score, (2) ASQ globality score, (3) ASQ stability score, (4) ASQ-T internality score, (5) ASQ-T globality score, (6) ASQ-T stability score, (7) score on the internality item for actual traumatic attributions, (8) score on the globality item for actual traumatic attributions, and (9) score on the stability item for actual traumatic attributions. The dependent variable was again the total score on the PCL-C.

The fourth analysis was a mixed design multiple regression. BDI-II total score was entered in the first block. The second block comprised the variables listed above as the independent variables in the third analysis. The dependent score was the total score on the PCL-C. After completion of the planned analyses, exploratory analyses were performed that examined the relationship between attributional style and PTSD symptom cluster scores. These analyses were conducted both with and without controlling for depression, and the strategy exactly parallels the strategy for examining the relationship between attributional style and PTSD total scores.

Prior to performing all analyses, the data were screened for adherence to the statistical assumptions required for multiple regression (Tabachnick & Fidell, 2001). The data were screened for missing values, outliers, normality, linearity, homoscedasticity, and multicollinearity.

After ensuring that data have been entered correctly by inspecting the descriptive statistics for each variable, the data were screened for missing values. Cases that were missing more than five percent of their values were deleted (4 cases). If cases were missing fewer than five percent of their values, one of several steps was taken. If the missing value was not required for the major analysis of the study, the case was dropped from the descriptive statistics but was included in the major analyses (correlations and multiple regression). For ASQ and ASQ-T

scores, missing values were ignored because mean scores were used. Cases that were missing one or more values on the items assessing attributions for actual traumatic events were dropped from all analyses (1 case). Missing values (less than 5 percent) on the BDI-II or PCL-C did not matter, because mean scores were used.

After the data were screened for missing values, scores on each independent variable were graphed on a scatterplot individually and in combination with the dependent variable to check for univariate outliers, normality, linearity, and homoscedasticity. Data were screened for multivariate outliers by calculating Mahalanobis distances, and none were found. Preliminary screening showed no significant departures from normality, linearity, and homoscedasticity.

The data were screened for multicollinearity by calculating the tolerance (1 – squared multiple correlation) of each combination of independent variables. The screening revealed no multicollinearity concerns.

## Results

### *Population Characteristics*

The final sample consisted of 195 college students enrolled in psychology courses at Eastern Michigan University during spring or summer terms of 2006. All volunteered to participate in this study for extra credit. Participants ranged in age from 18 to 42 years ( $M = 20.8$ ,  $SD = 3.8$ ). About 66 percent ( $n = 128$ ) were women and 34 percent ( $n = 67$ ) were men. The majority of the respondents identified themselves as European American (73.8%,  $n = 144$ ). Thirty-three (16.9%) identified themselves as African American, 9 (4.6%) as Hispanic, 5 (2.6%) as Asian, and 2 (1%) as Native American. Additionally, one participant identified as Pacific Islander and one as Arab American. Table 1 lists additional demographic features of this sample.

Originally 200 students participated, but five participants were excluded for the following reasons: one did not list any trauma/worst event, two did not complete the PCL-C, and two obviously did not answer the questions seriously (e.g., recorded the same answer regardless of the question). Of the 195 retained subjects, 175 completed all measures. Eight individuals did not answer questions about hypothetical traumas on the ASQ-T, eight did not complete the ASQ-T at all, two did not complete the EASQ, one did not complete the BDI-II, and one did not complete the ASQ-T or BDI-II. The number of participants included in each analysis, therefore, range from 175 to 195.

#### *Prevalence of Traumatic Events*

Participants reported a high level of trauma exposure. The reported number of traumas experienced by individual participants ranged from 1 to 9 events with a mean of 2.4 ( $SD = 1.6$ ). When the TEQ was administered, participants were instructed to write in a “worst event” if they had not experienced a trauma previously listed, so all participants reported at least one aversive event. About two thirds (64.6%) reported experiencing one or two events, 24.6% reported experiencing 3-4 events, and 10.8% reported experiencing 5 to 9 different events. The number of different events was computed by dichotomizing each event into presence or absence and summing the number of traumas classified as “present” for each individual. The most commonly reported worst events were serious accidents (21.5%), child abuse (12.3%), and being in serious danger (12.3%). Table 2 lists traumas according to their prevalence as reported worst events in this sample.

#### *Trauma Severity*

Participants also reported a relatively high level of PTSD symptomology for a non-clinical population. Using the recommended PCL-C cut-off score of 50 (Weathers et al., 1993),

Table 1

*Descriptive Statistics for Sample*

	Percent	<i>n</i>
<u>Class Standing</u>		
Freshman	32.3	63
Sophomores	27.2	53
Juniors	23.1	45
Seniors	15.9	31
Second Degree	1.5	3
<u>Race</u>		
European American	73.8	144
African American	16.9	33
Hispanic	4.6	9
Asian	2.6	5
Native American	1.0	2
Pacific Islander	0.5	1
Arab American	0.5	1
<u>Sex</u>		
Female	65.6	128
Male	34.4	67
<u>Number of Past Therapy Sessions</u>		
None	63.1	123
One to Five	18.5	36
Six to Ten	5.6	11
Eleven to Twenty	5.6	11
More than Twenty	7.2	14

Table 2

*Frequency of Worst Events Reported*

	Percent	<i>n</i>
<u>Worst Trauma</u>		
Serious accident or fire	21.5	42
Child abuse	12.3	24
Life endangered	12.3	24
Received news of injury or death to someone close	9.7	19
Witnessed serious injury or death	9.2	18
Other trauma	9.2	18
Natural disaster	7.7	15
Rape	6.2	12
Victim of serious crime	5.6	11
Abusive relationship	5.1	10
Can't say	1.0	2

12.3% ( $n = 24$ ) of the sample fell in the PTSD-probable range. The scores ranged from 17 to 75 out of a possible 17 to 85 ( $M = 32.4$ ,  $SD = 13.3$ ). Approximately one third of the sample obtained scores between 17 and 23, one third between 24 and 34, and one third between 35 and 75.

*Attributions for Hypothetical Aversive Events, Hypothetical Traumatic Events, and Experienced Traumatic Events*

Average attribution ratings differed depending on the type of situation described in the measure. For hypothetical aversive events on the EASQ, the average total score was 4.2 ( $SD = 0.7$ ), with an average internality score of 4.6 out of 7 ( $SD = 0.7$ ), stability score of 4.1 ( $SD =$

0.9), and globality score of 3.9 ( $SD = 1.1$ ). These averages indicate that participants rated events as having causes that were more internal than external, more stable than unstable, and more global than specific. For hypothetical traumatic events on the ASQ-T, the average total score was 3.0 ( $SD = 0.9$ ), with an average internality score of 2.6 ( $SD = 0.9$ ), stability score of 2.9 ( $SD = 1.2$ ), and globality score of 3.6 ( $SD = 1.4$ ). In contrast to average attributions for hypothetical aversive events, participants rated hypothetical traumatic events as having causes that were more external than internal and more unstable than stable. Globality ratings tended to be a bit more global than specific, which was similar to average globality scores for hypothetical aversive events. For experienced traumatic events on the ASQ-T, the average total score was 3.0 ( $SD = 1.4$ ), with an average internality score of 2.7 ( $SD = 1.9$ ), stability score of 3.0 ( $SD = 1.8$ ), and globality score of 3.4 ( $SD = 2.0$ ). For experienced traumas, causes were rated as being more external than internal, unstable than stable, and specific rather than global.

#### *Depression Severity*

Participants in this sample generally reported low levels of depressive symptoms. Out of a potential score of 63, the mean score was 11.5 ( $SD = 9.6$ ). Scores ranged from 0 to 44. The majority reported no depression, as evidenced by scoring less than 10 on the measure (52.8%,  $n = 102$ ). A mild to moderate level of depression (scores of 10 to 18) was obtained by 27% ( $n = 52$ ), moderate to severe (scores of 19 to 29) by 13.5% ( $n = 26$ ), and severe (over 30) by only 6.7% ( $n = 13$ ).

#### *Relationships among Attributions and PTSD Symptoms (Hypothesis 1)*

It was predicted that attributions for cause of traumatic events that were *experienced* would correlate most highly with PTSD symptom severity, followed by correlations with *hypothetical traumatic events* and *hypothetical aversive events*. A series of bivariate correlations

was obtained for each category of attributions. Consistent with the first hypothesis, attributions for experienced traumas correlated most highly with PTSD symptom severity ( $r = .37, p < .01$ ). Each dimension of attributional style for experienced events was correlated significantly with PTSD symptom severity:  $r = .18$  ( $p < .01$ ) for internality,  $r = .19$  ( $p < .01$ ) for stability, and  $r = .39$  ( $p < .01$ ) for globality.

Attributions for hypothetical aversive events also correlated significantly with PTSD symptom severity ( $r = .21, p < .01$ ). Only two out of three dimensions of attributional style were significantly correlated with PTSD symptom severity: stability ( $r = .16, p < .05$ ) and globality ( $r = .29, p < .01$ ). Contrary to the first hypothesis, attributions for hypothetical traumatic events did not correlate significantly with PTSD symptom severity.

The bivariate correlations indicate that attributions that are more internal, stable, and global are associated with greater PTSD symptomology for experienced events, and more stable and global attributions for hypothetical aversive events are positively associated with PTSD symptom severity. However, there was no significant association between PTSD severity and attributions for hypothetical traumatic events. Table 3 lists all zero-order correlations, and Table 4 lists all partial correlations.

To examine the relationship between PTSD symptom severity and attributional style further, a simultaneous multiple regression was computed. The multiple regression equation with all three vulnerability indices (attribution categories) entered as independent variables and PTSD severity as a dependent variable was significant [ $F(3, 176) = 10.82, p < .01$ ]. Preliminary analyses revealed no violations of the assumptions of normality, linearity, or homoscedasticity of residuals. The hypothesis that attributional style would predict PTSD symptom severity was partially supported. As predicted, more internal, global, and stable scores for experienced events

Table 3

*Zero-order correlations between attribution scales and PTSD symptom scales*

<u>Attribution dimension</u>	<u>Zero-order correlation</u>			
	PTSD total	Reexperiencing	Avoidance	Arousal
Experienced Trauma				
Total	.37**	.30**	.38**	.29**
Internality	.19*	.13	.19**	.18*
Stability	.19**	.14	.20**	.17*
Globality	.39**	.36**	.40**	.27**
Hypothetical Trauma				
Total	.11	.12	.14	.04
Internality	.05	.08	.06	.00
Stability	.13	.12	.15*	.07
Globality	.08	.09	.10	.03
Hypothetical Aversive				
Total	.21**	.22**	.18*	.18*
Internality	.01	.04	-.03	.02
Stability	.16*	.15*	.15*	.12
Globality	.29**	.28**	.25**	.25**

Note: \*  $p < .05$ \*\*  $p < .01$

Table 4

*Partial correlations between attribution scales and PTSD symptom scales*

<u>Attribution dimension</u>	<u>Partial correlation</u>			
	PTSD total	Reexperiencing	Avoidance	Arousal
Experienced Trauma				
Total	.27**	.21**	.29**	.18*
Internality	.14	.08	.15*	.13
Stability	.15*	.09	.16*	.12
Globality	.27**	.26**	.29**	.12
Hypothetical Trauma				
Total	.02	.05	.05	-.07
Internality	.01	.05	.02	-.05
Stability	.03	.05	.06	-.04
Globality	.00	.03	.03	-.06
Hypothetical Aversive				
Total	.10	.13	.06	.06
Internality	-.02	.02	-.06	-.01
Stability	.03	.06	.03	-.01
Globality	.19*	.20**	.14	.14

Note: \*  $p < .05$ \*\*  $p < .01$

predicted variance in PTSD scores better than scores for hypothetical aversive events ( $B = 0.38$ ,  $p < .01$  for experienced traumas and  $B = 0.18$ ,  $p < .05$  for hypothetical aversive events). Contrary to predictions but consistent with the correlations previously presented, hypothetical trauma attributions did not significantly predict PTSD symptom severity. The first panel of Table 5 includes regression results for total PTSD scores.

*Relationship between PTSD Symptom Severity and Attributions after Controlling for Depression (Hypothesis 2)*

It was predicted that attributional style would predict PTSD symptom severity after controlling for depression. A hierarchical multiple regression was computed with depression scores entered in the first block and the three global vulnerability indices entered in the second block. The R for the regression was significantly different from zero [ $F(4,175) = 27.94$ ,  $p < .01$ ] (Table 5, panel b). Two variables, depression and attributions for experienced events, significantly predicted PTSD scores ( $B = 0.51$ ,  $p < .01$  for depression,  $B = 0.28$ ,  $p < .01$  for experienced trauma attributions). Although attributions for hypothetical aversive events had predicted PTSD severity in the previous analysis, this relationship became nonsignificant ( $p = .07$ ) when controlled for depression severity. This analysis showed that attributions for experienced traumas significantly predicted PTSD symptom severity even after controlling for depression.

*Relationships among Attribution Components and PTSD (Hypothesis 3)*

It was predicted that each attribution dimension of internality, stability, and globality would predict PTSD symptom severity. To test this hypothesis, a simultaneous multiple regression was computed in which the 9 categories of attributions were used to predict PTSD severity; see panel c, Table 5. The R for the regression was significantly different from zero

[ $F(9,176) = 5.41, p < .01$ ]. The results indicate that only the globality dimension of each type of attribution was a significant predictor of PTSD symptom severity ( $B = 0.35$  for experienced,  $B = -0.23$  for hypothetical traumas, and  $B = 0.27$  for hypothetical aversive events,  $p < .05$  for all analyses).

The next analysis examined the relationship between each of the 9 categories of attributions and PTSD symptom severity after controlling for depression. The R for the regression was also significant ( $F(10,175) = 12.45, p < .01$ ); see panel d, Table 5. The globality dimension for each category of attributions remained significant even when controlling for depression ( $B = 0.24$  for experienced,  $B = -0.18$  for hypothetical traumas, and  $B = 0.23$  for hypothetical aversive events,  $p < .05$  for all analyses).

#### *Relationship between PTSD Reexperiencing Symptoms and Attributions*

A series of exploratory analyses was conducted to determine whether attributional style was predictive of PTSD symptom cluster scores. Simultaneous multiple regressions were computed in which the vulnerability indices and 9 categories of attributions were used to predict PTSD symptom severity in each cluster. In addition, hierarchical multiple regressions were used to control for depression in each symptom cluster. The regression model predicting reexperiencing symptom severity using the three vulnerability indices was significant [ $F(3,176) = 7.5, p < .01$ ] (see panel a, Table 6). The vulnerability indices for experienced traumas and hypothetical aversive events were significant predictors of reexperiencing symptoms ( $B = 0.31, p < .01$  and  $B = 0.17, p < .05$ , respectively). After controlling for depression (see panel b, Table 6), only experienced trauma attributions ( $B = 0.23, p < .01$ ) and depression ( $B = .37, p < .01$ ) significantly predicted reexperiencing symptoms.

Table 5

*Standard and hierarchical multiple regression of attributions on PTSD symptoms*

Attribution dimension	F	R-squared	Adj. R-sq	R	B
<u>a. Vulnerability Index (V.I.)</u>	10.82**	.16	.14	.40	
Experienced Traumas					0.38**
Hypothetical Traumas					-0.18
Hypothetical Aversive Events					0.18*
<u>b. V.I. controlled for depression</u>	27.94**	.40	.38	.63	
Depression					0.51**
Experienced Traumas					0.28**
Hypothetical Traumas					-0.13
Hypothetical Aversive Events					-0.08
<u>c. Attribution Components (A.C.)</u>	5.41**	.23	.18	.48	
Experienced Internality					0.11
Experienced Stability					0.06
Experienced Globality					0.35**
Hyp. Trauma Internality					0.03
Hyp. Trauma Stability					0.07
Hyp. Trauma Globality					-0.23*
Hyp. Aversive Internality					0.00
Hyp. Aversive Stability					-0.08
Hyp. Aversive Globality					0.27**
<u>d. A. C. controlled for depression</u>	12.45**	0.43	0.40	0.66	
Depression					0.49**
Experienced Internality					0.09
Experienced Stability					0.06
Experienced Globality					0.24**
Hyp. Trauma Internality					0.02
Hyp. Trauma Stability					0.01
Hyp. Trauma Globality					-0.18*
Hyp. Aversive Internality					-0.09
Hyp. Aversive Stability					-0.04
Hyp. Aversive Globality					0.23**

Note: \*  $p < .05$ \*\*  $p < .01$

The simultaneous multiple regression model that included all nine categories of attributions was significant [ $F(9,176) = 4.62, p < .01$ ] (see panel c, Table 6). Only the globality dimension of each type of attribution was a significant predictor of reexperiencing symptom severity ( $B = 0.37$  for experienced,  $B = -0.23$  for hypothetical traumas, and  $B = 0.27$  for hypothetical aversive events,  $p < .05$  for all analyses).

The regression equation that included the nine categories of attributions after controlling for depression was also significant [ $F(10,175) = 6.88, p < .01$ ] (see panel d, Table 6). Depression was a significant predictor of reexperiencing symptoms ( $B = 0.33, p < .01$ ), as were the three global dimensions ( $B = 0.30$  for experienced,  $B = -0.19$  for hypothetical traumatic, and  $B = 0.23$  for hypothetical aversive events,  $p < .05$  for all analyses).

#### *Relationship between PTSD Avoidance Symptoms and Attributions*

The regression model predicting avoidance symptoms using the three vulnerability indices was significant [ $F(3,176) = 10.46, p < .01$ ] (see panel a, Table 7). Only the vulnerability index for experienced traumas was a significant predictor in this model ( $B = 0.38, p < .01$ ). After controlling for depression (see panel b, Table 7), the vulnerability index for experienced traumas ( $B = 0.28, p < .01$ ) and depression ( $B = 0.48, p < .01$ ) were significant predictors of avoidance symptoms.

The regression model that included all 9 categories of attributions was also significant [ $F(9,176) = 5.08, p < .01$ ] (see panel c, Table 7). Only the globality dimensions of each attribution category were significant predictors of avoidance symptoms ( $B = 0.33$  for experienced,  $B = -0.19$  for hypothetical trauma, and  $B = 0.19$  for hypothetical aversive events,  $p < .05$  for all analyses).

The model that included the 9 categories of attributions after controlling for depression was significant [ $F(10,175) = 10.35, p < .01$ ] (see panel d, Table 7). Depression was a significant

Table 6

*Standard and hierarchical multiple regression of attributions on PTSD reexperiencing symptoms*

Attribution dimension	F	R-squared	Adj. R-sq	R	B
<u>a. Vulnerability Index (V.I.)</u>	7.55**	.12	.10	.34	
Experienced Traumas					0.31**
Hypothetical Traumas					-0.09
Hypothetical Aversive Events					0.17*
<u>b. V.I. controlled for depression</u>	13.30**	.24	.22	.49	
Depression					0.37**
Experienced Traumas					0.23**
Hypothetical Traumas					-0.09
Hypothetical Aversive Events					0.10
<u>c. Attribution Components (A.C.)</u>	4.62**	.20	.16	.45	
Experienced Internality					0.04
Experienced Stability					0.02
Experienced Globality					0.37**
Hyp. Trauma Internality					0.06
Hyp. Trauma Stability					0.07
Hyp. Trauma Globality					-0.23*
Hyp. Aversive Internality					-0.05
Hyp. Aversive Stability					-0.03
Hyp. Aversive Globality					0.27**
<u>d. A. C. controlled for depression</u>	6.90**	.29	.25	.54	
Depression					0.33**
Experienced Internality					0.02
Experienced Stability					0.01
Experienced Globality					0.30**
Hyp. Trauma Internality					0.06
Hyp. Trauma Stability					0.03
Hyp. Trauma Globality					-0.19*
Hyp. Aversive Internality					-0.02
Hyp. Aversive Stability					-0.09
Hyp. Aversive Globality					0.23**

Note: \*  $p < .05$

\*\*  $p < .01$

predictor of avoidance symptoms ( $B = 0.45, p < .01$ ), but only the globality rating for experienced traumas remained a significant predictor of avoidance symptoms after controlling for depression ( $B = 0.23, p < .01$ ).

#### *Relationship between PTSD Arousal Symptoms and Attributions*

The regression model predicting arousal symptom severity using the three vulnerability indices was significant [ $F(3,176) = 7.21, p < .01$ ] (see panel a, Table 8). The vulnerability indices for experienced traumas, hypothetical traumas, and hypothetical aversive events were all significant predictors of arousal symptoms ( $B = 0.32, B = 0.17, B = 0.17$ , respectively,  $p < .05$  in all analyses). After controlling for depression (see panel b, Table 8), the vulnerability indices for experienced traumas and hypothetical traumas remained significant ( $B = 0.22, p < .01$  and  $B = -0.18, p < .05$ , respectively). Depression was also a significant predictor of arousal symptoms ( $B = 0.52, p < .01$ ).

The regression model that included all 9 categories of attributions was significant [ $F(9,176) = 3.21, p < .01$ ] (see panel c, table 8). Only the globality dimension of each type of attribution was a significant predictor of arousal symptom severity ( $B = 0.22$  for experienced,  $B = -0.20$  for hypothetical traumatic, and  $B = 0.28$  for hypothetical aversive,  $p < .05$  in all analyses). After controlling for depression (see panel d, Table 8), only the globality dimension for hypothetical aversive events remained a significant predictor of arousal ( $B = 0.23, p < .01$ ). Depression was a significant predictor of arousal symptoms ( $B = 0.52, p < .01$ ).

#### Discussion

Responses to trauma vary among individuals, and cognitive factors may influence risk and resiliency in trauma-exposed persons. In the last three decades, attributional style has been found to influence responses to aversive events and relate to learned helplessness (e.g., Maier &

Table 7

*Standard and hierarchical multiple regression of attributions on PTSD avoidance symptoms*

Attribution dimension	F	R-squared	Adj. R-sq	R	B
<u>a. Vulnerability Index (V.I.)</u>	10.46**	.15	.14	.39	
Experienced Traumas					0.38**
Hypothetical Traumas					-0.09
Hypothetical Aversive Events					0.14
<u>b. V.I. controlled for depression</u>	23.85**	.36	.34	.60	
Depression					0.48**
Experienced Traumas					0.28**
Hypothetical Traumas					-0.10
Hypothetical Aversive Events					0.06
<u>c. Attribution Components (A.C.)</u>	4.62**	.20	.16	.45	
Experienced Internality					0.04
Experienced Stability					0.02
Experienced Globality					0.37**
Hyp. Trauma Internality					0.06
Hyp. Trauma Stability					0.07
Hyp. Trauma Globality					-0.23*
Hyp. Aversive Internality					-0.05
Hyp. Aversive Stability					-0.03
Hyp. Aversive Globality					0.27**
<u>d. A. C. controlled for depression</u>	10.35**	.39	.35	.62	
Depression					0.45**
Experienced Internality					0.10
Experienced Stability					0.07
Experienced Globality					0.23**
Hyp. Trauma Internality					0.02
Hyp. Trauma Stability					0.02
Hyp. Trauma Globality					-0.14
Hyp. Aversive Internality					-0.09
Hyp. Aversive Stability					-0.01
Hyp. Aversive Globality					0.15

Note: \*  $p < .05$

\*\*  $p < .01$

Table 8

*Standard and hierarchical multiple regression of attributions on PTSD arousal symptoms*

Attribution dimension	F	R-squared	Adj. R-sq	R	B
<u>a. Vulnerability Index (V.I.)</u>	7.21**	.11	.10	.33	
Experienced Traumas					0.32**
Hypothetical Traumas					-0.17*
Hypothetical Aversive Events					0.17*
<u>b. V.I. controlled for depression</u>	24.22**	.36	.35	.60	
Depression					0.52**
Experienced Traumas					0.22**
Hypothetical Traumas					-0.18*
Hypothetical Aversive Events					0.08
<u>c. Attribution Components (A.C.)</u>	3.21**	.15	.10	.38	
Experienced Internality					0.13
Experienced Stability					0.08
Experienced Globality					0.22**
Hyp. Trauma Internality					-0.02
Hyp. Trauma Stability					0.02
Hyp. Trauma Globality					-0.20*
Hyp. Aversive Internality					-0.03
Hyp. Aversive Stability					-0.06
Hyp. Aversive Globality					0.28**
<u>d. A. C. controlled for depression</u>	10.33**	.39	.35	.62	
Depression					0.52**
Experienced Internality					0.11
Experienced Stability					0.07
Experienced Globality					0.10
Hyp. Trauma Internality					-0.03
Hyp. Trauma Stability					-0.05
Hyp. Trauma Globality					-0.14
Hyp. Aversive Internality					0.02
Hyp. Aversive Stability					-0.15
Hyp. Aversive Globality					0.23**

Note: \*  $p < .05$

\*\*  $p < .01$

Seligman, 1976; Peterson, 1991), depression (e.g., Abramson et al., 1989), and, most recently, PTSD (e.g., Gray et al., 2003; Mikulincer & Solomon, 1988). An attributional style characterized by more internal, stable, and global attributions for causes of aversive events has been theoretically and empirically linked to depression. However, the research on attributions and PTSD is less clear. The few studies that examined the relationship between separate components of attributional style and PTSD show mixed findings. Some found that only internal attributions predicted PTSD (e.g., Runyon & Kenny, 2002), whereas others found that both internal and stable attributions were predictive of PTSD (e.g., Feiring, Taska, & Chen, 2002). Other studies implicated global attributions (e.g., Wenninger & Ehlers, 1998) and stable attributions (e.g., Gray et al., 2003).

There are several significant limits to the research thus far on attributions and PTSD. Most studies fail to report on all three dimensions of attributional style. The majority of studies focus exclusively on attributional style for hypothetical aversive events and do not assess trauma-specific attributions. All previous studies linking attributional style to PTSD use a measure with rather low internal consistency for dimensions (.4 to .7; ASQ) rather than the modified instrument with improved internal consistency (.66 to .88; EASQ). Many studies do not control for depression, even though depression is empirically linked to both attributional style (Abramson et al., 1989) and PTSD (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Finally, previous studies have not accounted for the perceived importance of the negative event to individuals.

The current study addressed the limits of previous studies. A more reliable instrument was used to assess dispositional attributional style. Attributions for hypothetical aversive events, experienced traumas, and hypothetical traumatic events were each examined. The measure of

attributions for hypothetical traumatic events was added to address the possibility that the hypothetical events typically assessed on the EASQ are less meaningful than hypothetical traumatic events and consequently less likely to influence PTSD symptom severity. Additionally, the relationship between attributional style and PTSD symptom severity was examined after controlling for depression. Lastly, the sample size allowed for the separate examination of the components of attributional style.

The purposes of this study were three-fold. First, it assessed whether attributions were related to PTSD symptom severity in a sample of college students exposed to a variety of types of trauma. Second, it assessed whether trauma-specific attributions more strongly predicted PTSD symptoms than dispositional attributional style. Third, the study assessed whether attributions for hypothetical traumatic events predicted variance in PTSD symptom severity. It was hypothesized that attributions for causes of experienced traumas would predict PTSD symptoms best, followed by attributions for hypothetical traumas and hypothetical aversive events. These relationships were hypothesized to remain after controlling for depression. Finally, the individual dimensions of internality, stability, and globality each were expected to predict PTSD symptoms.

The hypothesis that attributions for traumatic events that were experienced would correlate most highly with PTSD symptom severity, followed by correlations with hypothetical traumatic events and hypothetical aversive events, was partially supported. As hypothesized, attributions for experienced traumas correlated most highly with PTSD symptom severity. Attributions for hypothetical aversive events were also significantly correlated with PTSD symptom severity. More internal, stable, and global attributions for experienced events and more stable and global attributions for hypothetical aversive events were positively associated with

PTSD symptom severity. Contrary to expectations, attributions for hypothetical traumatic events did not correlate significantly with PTSD symptoms.

The second hypothesis that attributions would predict PTSD symptoms after controlling for depression was partially supported. Only attributions for experienced traumas significantly predicted PTSD symptom severity after controlling for depression. When components of attributions were examined separately, only the globality dimension was a significant predictor of PTSD symptoms after controlling for depression.

When attributions were examined relative to each symptom cluster of PTSD, the globality dimension was the strongest predictor of each symptom cluster after controlling for depression (experienced, hypothetical traumatic, and hypothetical aversive globality scores for reexperiencing, experienced trauma globality scores for avoidance, and hypothetical aversive globality scores for arousal symptoms).

Most relationships were in the expected directions, with more internal, stable, and global attributions predicting higher PTSD scores, with the exception of the globality dimension of hypothetical trauma attributions. Unexpectedly, when global attributions for hypothetical traumas predicted PTSD symptoms, it was in the form of more specific attributions corresponding to greater PTSD symptomology. Similarly, hypothetical trauma attributions did not consistently predict PTSD symptoms. The reasons for these unexpected findings are not clear. The direction of these relationships differs from the direction of the relationship between PTSD and the globality dimension of experienced traumas and hypothetical aversive events. Perhaps imagining experiencing traumas involves a different thought process than recalling actual events or hypothetical aversive events that likely have occurred in one's life. When writing causes for hypothetical aversive events, many participants wrote about events that had

actually occurred to them (as evidenced by written-in comments, such as “this happened” or writing causes that appeared sufficiently detailed to have been a real experience). The types of situations depicted in the measure of hypothetical aversive event attributions are typical of the college student experience, such as breaking up with a romantic partner, getting a poor grade on an exam, being confronted with a conflict of values, and so on. Perhaps the types of situations on the ASQ-T were the only situations that participants actually had to imagine experiencing as opposed to recalling a specific experienced event. It is also possible that, when imagining experiencing a trauma, participants with a greater number of PTSD symptoms minimized the imagined impact of other traumas because the impact of the trauma they actually experienced was so much more salient to them.

Another unexpected finding was that internal and stable attributions did not consistently predict PTSD symptoms after controlling for depression. It appears that these dimensions are related more to depressive symptoms than PTSD symptoms. The lack of a relationship between the internality dimension of attributions and PTSD is not surprising when the mixed research findings to date are considered. Whereas theory on learned helplessness predicts that more external attributions should relate to PTSD (Mikulincer & Solomon, 1988), research findings tend to show that either more internal attributions predict PTSD (e.g., Feiring, Taska, & Chen, 2002; Runyon & Kenny, 2002) or that the internality dimension is unrelated to PTSD (e.g., Ginzburg, Solomon, Dekel, & Neria, 2003). Whereas theory suggests that stable attributions should relate to PTSD (Mikulincer & Solomon, 1988), the findings are also mixed. Some studies find that stable attributions do indeed predict PTSD (Ginzburg, Solomon, Dekel, & Neria, 2003), whereas other studies find no relationship (e.g., Mikulincer & Solomon, 1988; Wenninger, 1998). Unlike the majority of studies that examine the relationship between attributions and

PTSD, the current study controlled for depression, which is known to relate to both attributional style and PTSD. The stability and internality dimensions, therefore, may only relate to PTSD through their association with depression.

Despite some unexpected findings, this study provided support for theory linking attributions with PTSD symptoms. Individuals' attributions, especially more global attributions, predicted PTSD symptoms. The relationship was strongest for attributions about the event participants reported as their worst experience, which lends support to the notion that therapy with trauma survivors should assess for and modify attributions that may be negatively impacting clients' functioning.

There are several limitations to the current study that impact the generalizability and implications of results. Due to the cross-sectional nature of the study design, it is unknown whether PTSD *causes* certain attributions or whether attributional style constitutes a premorbid risk factor for developing PTSD following trauma exposure. The study is also limited by its reliance on a self-report measure of PTSD symptoms rather than a more extensive diagnostic tool that includes clinician ratings. Finally, although there are advantages to using a sample of college students given the diversity in trauma types, demographic variables, and severity of PTSD symptoms, the sample type also has some disadvantages. As this study is not drawn from a help-seeking population, only a minority of participants (12.3%) had PCL-C scores in the clinically significant range (i.e., 50+). Additionally, the overall level of distress in this population is generally lower than would be expected in a clinical population, regardless of a formal PTSD diagnosis.

Future research should continue to use some of the procedures outlined in this study. Researchers should use the EASQ to assess dispositional attributional style as it is a more

reliable measure than the original ASQ, should control for depression, and should examine the independent effects of each component of attributional style on PTSD. Future studies should also compare trauma-specific with hypothetical attributions to lend more support to the theory about the relationship between cognitive variables and PTSD.

To extend the implications of this study, future research should also address some of the limits of the current study. This study should be replicated with a help-seeking population. It is possible that some of the unexpected findings, such as the lack of association between hypothetical trauma attributions and PTSD, would change in a clinical population with a greater level of distress and perhaps a broader range of PTSD symptomology. Future research may also benefit from using a more structured assessment for PTSD. While difficult to conduct in terms of time and expense, a longitudinal study that can assess persons before and after trauma exposure would clarify the specific nature of the relationship between attributions and PTSD. Eventually research may focus on the impact of changing a person's attributions on PTSD symptoms and the efficacy and effectiveness of different approaches to changing attributions.

In conclusion, the literature suggests that there is a relationship between attributions and PTSD, and the current study supports this contention. This study suggests that attributions for experienced traumas are most predictive of PTSD and that more global attributions consistently predict more PTSD symptoms after controlling for depression. Future studies should examine these relationships in a clinical population so that eventually the results of these studies can be used to improve the therapeutic outcomes of traumatized clients. The study of the relationship between cognitive variables and PTSD is a promising line of research for increasing resilience and recovery among trauma survivors.

## References

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, *96*, 358-372.
- Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, *87*, 49-74.
- Alloy, L. B., & Abramson, L. Y. (1982). Learned helplessness, depression, and the illusion of control. *Journal of Personality and Social Psychology*, *42*, 1114-1126.
- Alloy, L. B., Abramson, L. Y., Hogan, M. E., Whitehouse, W. G., Rose, D. T., Robinson, M. S., et al. (2000). The Temple-Wisconsin Cognitive Vulnerability to Depression Project: Lifetime history of Axis I psychopathology in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology*, *109*, 403-418.
- Alloy, L. B., Peterson, C., Abramson, L. Y., & Seligman, M. E. (1984). Attributional style and the generality of learned helplessness. *Journal of Personality and Social Psychology*, *46*, 681-687.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed.). Washington, DC: Author.
- Arata, C. M., & Burkhart, B. R. (1996). Post-traumatic stress disorder among college student victims of acquaintance assault. *Journal of Psychology and Human Sexuality*, *8*, 79-92.
- Beck, A., Steer, R., & Brown, G. (1996). *The Beck depression inventory* (2<sup>nd</sup> ed.). San Antonio, TX: The Psychological Corporation
- Beck, A., Ward, C., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, *4*, 561-571.

- Brewin, C. R., Andrews, B., & Rose, S. (2000). Fear, helplessness, and horror in posttraumatic stress disorder: Investigating DSM-IV criterion A2 in victims of violent crime. *Journal of Traumatic Stress, 13*, 499-509.
- Bulman, R. J., & Wortman, C. B. (1977). Attributions of blame and coping in the "real world": Severe accident victims react to their lot. *Journal of Personality and Social Psychology, 35*, 351-353.
- Burns, M. O., & Seligman, M. E. (1989). Explanatory style across the life span: Evidence for stability over 52 years. *Journal of Personality and Social Psychology, 56*, 471-477.
- Cutrona, C. E., Russell, D., & Jones, R. D. (1984). Cross-situational consistency in causal attributions: Does attributional style exist? *Journal of Personality and Social Psychology, 47*, 1043-1058.
- Dozois, D., Dobson, K., & Ahnberg, J. (1998). A psychometric evaluation of the Beck Depression Inventory-II. *Psychological Assessment, 10*, 83-89.
- Falsetti, S. A., & Resick, P. A. (1995). Causal attributions, depression, and post-traumatic stress disorder in victims of crime. *Journal of Applied Social Psychology, 25*, 1027-1042.
- Feiring, C., Taska, L., & Chen, K. (2002). Trying to understand why horrible things happen: Attribution, shame, and symptom development following sexual abuse. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children, 7*, 26-41.
- Frazier, P. A. (1990). Victim attributions and post-rape trauma. *Journal of Personality and Social Psychology, 59*, 298-304.
- Frazier, P. A., & Schauben, L. J. (1994). Causal attributions and recovery from rape and other stressful life events. *Journal of Social and Clinical Psychology, 13*, 1-14.

- Ginzburg, K., Solomon, Z., Dekel, R., & Neria, Y. (2003). Battlefield functioning and chronic PTSD: Associations with perceived self-efficacy and causal attribution. *Personality & Individual Differences, 34*, 463-476.
- Gray, M. J., Pumphrey, J. E., & Lombardo, T. W. (2003). The relationship between dispositional pessimistic attributional style versus trauma-specific attributions and PTSD symptoms. *Journal of Anxiety Disorders, 17*, 289-303.
- Greening, L., Stoppelbein, L., & Docter, R. (2003). The mediating effects of attributional style and event-specific attributions on postdisaster adjustment. *Cognitive Therapy & Research, 26*, 261-274.
- Hill, J. L., & Zautra, A. J. (1989). Self-blame attributions and unique vulnerability as predictors of post-rape demoralization. *Journal of Social and Clinical Psychology, 8*, 368-375.
- Jackson, L. A., & Larrance, D. T. (1979). Is a "refinement" of attribution theory necessary to accommodate the learned helplessness reformulation? A critique of the reformulation of Abramson, Seligman, and Teasdale. *Journal of Abnormal Psychology, 88*, 681-682.
- Janoff-Bulman, R. (1979). Characterological versus behavioral self-blame: Inquiries into depression and rape. *Journal of Personality and Social Psychology, 37*, 1798-1809.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & et al. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*, 1048-1060.
- Kushner, M. G., Rigs, D. S., Foa, E. B., & Miller, S. M. (1992). Perceived controllability and the development of posttraumatic stress disorder (PTSD) in crime victims. *Behavioral Research and Therapy, 31*, 105-110.

- Lauterbach, D., & Vrana, S. (1993, October). *Validation of a measure of PTSD among college students*. Paper presented at the International Society for Traumatic Stress Studies, San Antonio, TX.
- Lightfoot, S., & Oliver, J. (1985). The Beck Inventory: Psychometric properties in university students. *Journal of Personality Assessment*, *49*, 434-436.
- Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: Theory and evidence. *Journal of Experimental Psychology: General*, *105*, 3-46.
- McCormick, R. A., Taber, J. I., & Kruegelbach, N. (1989). The relationship between attributional style and post-traumatic stress disorder in addicted patients. *Journal of Traumatic Stress*, *2*, 477-487.
- Metalksy, G. I., & Abramson, L. Y. (1981). Attributional style: Toward a framework for conceptualization and assessment. In P. Kendall & S. Hollon (Eds.), *Assessment strategies for cognitive-behavioral interventions* (p. 13-58). New York: Academic Press.
- Metalsky, G. I., Halberstadt, L. J., & Abramson, L. Y. (1987). Vulnerability to depressive mood reactions: Toward a more powerful test of the diathesis-stress and causal mediation components of the reformulated theory of depression. *Journal of Personality and Social Psychology*, *52*, 386-393.
- Mikulincer, M., & Solomon, Z. (1988). Attributional style and combat-related posttraumatic stress disorder. *Journal of Abnormal Psychology*, *97*, 308-313.
- Mikulincer, M., & Solomon, Z. (1989). Causal attribution, coping strategies, and combat-related post-traumatic stress disorder. *European Journal of Personality*, *3*, 269-284.

- Miller, I., Klee, S., & Norman, W. (1982). Depressed and nondepressed inpatients' cognitions of hypothetical events, experimental tasks, and stressful life events. *Journal of Abnormal Psychology, 91*, 78-81.
- Overmier, J. B., & Seligman, M. E. P. (1967). Effects of inescapable shock upon subsequent escape and avoidance learning. *Journal of Comparative and Physiological Psychology, 63*, 28-33.
- Peterson, C. (1991). The meaning and measurement of explanatory style. *Psychological Inquiry, 2*, 1-10.
- Peterson, C., Bettes, B., & Seligman, M. (1985). Depressive symptoms and unprompted causal attributions: Content analysis. *Behavioral Research and Therapy, 23*, 379-382.
- Peterson, C., Semmel, A., von Baeyer, C., Abramson, L. Y., Metalsky, G. I., & Seligman, M. E. P. (1982). The attributional style questionnaire. *Cognitive Therapy and Research, 6*, 287-299.
- Peterson, C., & Villanova, P. (1988). An expanded attributional style questionnaire. *Journal of Abnormal Psychology, 97*, 87-89.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied, 80*, 1-28.
- Runyon, M. K., & Kenny, M. C. (2002). Relationship of attributional style, depression, and posttrauma distress among children who suffered physical or sexual abuse. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children, 7*, 254-264.
- Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death*. San Francisco: Freeman.

- Tabachnick, B., & Fidell, L. (2001). *Using Multivariate Statistics*, 4<sup>th</sup> ed. Boston: Allyn & Bacon.
- Tiggemann, M., Winefield, A., Winefield, H. R., Goldney, R. D. (1991). The stability of attributional style and its relation to psychological distress. *British Journal of Clinical Psychology*, 30, 247-255.
- Vasquez, C., Jimenez, F., Saura, F., & Avia, M. (2001). The importance of "importance": a longitudinal confirmation of the attributional-stress model of depression measuring the importance of the attributions and the impact of the stressor. *Personality & Individual Differences*, 31, 205-213.
- Vrana, S., & Lauterbach, D. (1994). Prevalence of traumatic events and post-traumatic psychological symptoms in a nonclinical sample of college students. *Journal of Traumatic Stress*, 7, 289-302.
- Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. (1993). The PTSD Checklist: Description, use, and psychometric properties. Unpublished manuscript.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71, 3-25.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548-573.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
- Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. (1971). *Perceiving the causes of success and failure*. Morristown, NJ: General Learning Press.

- Wenninger, K., & Ehlers, A. (1998). Dysfunctional cognitions and adult psychological functioning in child sexual abuse survivors. *Journal of Traumatic Stress, 11*, 281-300.
- Wong, P. T., & Weiner, B. (1981). When people ask "why" questions, and the heuristics of attributional search. *Journal of Personality and Social Psychology, 40*, 650-663.
- Wortman, C. B., & Dintzer, L. (1978). Is an attributional analysis of the learned helplessness phenomenon viable?: A critique of Abramson-Seligman-Teasdale reformulation. *Journal of Abnormal Psychology, 87*, 75-80.
- Zautra, A. J., Guenther, R., & Chartier, G. (1985). Attributions for real and hypothetical events: Their relation to self-esteem and depression. *Journal of Abnormal Psychology, 94*, 530-540.

**Appendix A**

**Demographics Questionnaire**

Age: \_\_\_\_\_

Sex:  Female  Male

Some people identify themselves as belonging to one or more racial or ethnic groups. Please check the box(es) below which correspond to group(s) you belong to:

- White or Caucasian
- Black or African-American
- Hispanic or Latino
- Native American
- Alaskan Native
- Asian
- Pacific Islander

Do you consider yourself to be of any *other* race or ethnic group? Yes  No

If so, what is it? \_\_\_\_\_

Marital status: (Check one answer.)

- Married
- Single
- Divorced
- Remarried
- Widowed
- Separated
- Living with partner
- Same Sex \_\_\_\_ Other Sex \_\_\_\_

Living Arrangements: (Check one answer.)

- Family
- Alone
- One Roommate
- Two or Three Roommates
- Large Group (more than three roommates)

Annual household income of family of origin: (Check one answer.)

- ≥\$150,000
- \$100,000-\$149,999
- \$75,000-\$99,999
- \$50,000-\$74,999
- \$25,000-\$49,999
- \$10,000-\$24,999
- ≤\$9,999
- Don't know, or prefer not to say

How would you describe the **economic situation** of your family as you were growing up?  
(Check one answer.)

- We had barely enough to get by
- We had enough to get by, but no more
- We were solidly middle class
- We had plenty of “extras”
- We had plenty of “luxuries”
- Don’t know/unsure/prefer not to say

School Status: (Check one answer.)

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- Other \_\_\_\_\_

Number of Past Therapy Sessions (for any reason): (Check one answer.)

- 0
- 1-5
- 6-10
- 11-20
- > 20

Family History of Depression: (Check one answer.)

- One biological parent was diagnosed with depression by a mental health professional or physician. (Check this box if one parent was depressed, even if you do not know the history of the other parent.)
- Both biological parents were diagnosed with depression by a mental health professional or physician.
- One parent seemed to be depressed most of the time but was not diagnosed. (Check this box if one parent seemed depressed, even if you do not know the history of the other parent.)
- Both parents seemed to be depressed most of the time but were not diagnosed.
- Neither parent was depressed. (Check this box if one parent was not depressed and you do not know the history of the other parent.)
- Don’t know / Prefer not to say



No Yes 3. **Have you been a victim of a violent crime such as rape, robbery, or assault?**

- a. How many times? once  twice  three +
- b. How old were you at that time(s)? 1<sup>st</sup> \_\_\_\_\_ 2<sup>nd</sup> \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_
- c. Were you injured?  
 Not at all \_\_\_\_\_ Severely \_\_\_\_\_  
 1 2 3 4 5 6 7
- d. Did you feel your life was threatened?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- e. How traumatic **was** this for you at that time?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- f. How traumatic **is** this for you now?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- g. What was the crime? \_\_\_\_\_

No Yes 4. **As a child, were you the victim of either physical or sexual abuse?**

- a. How old were you when it began? \_\_\_\_\_
- b. How old were you when it ended? \_\_\_\_\_
- c. Were you injured?  
 Not at all \_\_\_\_\_ Severely \_\_\_\_\_  
 1 2 3 4 5 6 7
- d. Did you feel your life was threatened?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- e. How traumatic **was** this for you at that time?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- f. How traumatic **is** this for you now?  
 Not at all \_\_\_\_\_ Extremely \_\_\_\_\_  
 1 2 3 4 5 6 7
- g. Was the assailant male or female? Male  Female
- h. Check (Y) all categories that describe the experience . . .
  - physical abuse
  - there was sexual penetration of the mouth, anus or vagina
  - there was no sexual penetration, but the assailant attempted to force you to complete such an act
  - there was some other form of sexual contact e.g., touched your sexual organs, or forced to touch assailant's sexual organs
  - no sexual contact occurred, however, the assailant attempted to touch your sexual organs, or make you touch his/her sexual organs

No Yes 5. **As an adult, have you had any unwanted sexual experiences that involved**











**Appendix C****Posttraumatic Stress Disorder Checklist – Civilian**

**INSTRUCTIONS TO STUDENT:** Below is a list of problems and complaints that people sometimes have in response to stressful experiences. Please read each one carefully, and blacken the circle to indicate how much you have been bothered by that problem *in the last month*.

		Not at all	A little bit	Moderately	Quite a bit	Extremely
		1	2	3	4	5
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful experience?	1	2	3	4	5
2.	Repeated, disturbing <i>dreams</i> of a stressful experience?	1	2	3	4	5
3.	Suddenly <i>acting or feeling</i> as if a stressful experience <i>were happening again</i> (as if you were reliving it)?	1	2	3	4	5
4.	Feeling <i>very upset</i> when <i>something reminded you</i> of a stressful experience?	1	2	3	4	5
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, sweating) when <i>something reminded you</i> of a stressful experience?	1	2	3	4	5
6.	Avoiding <i>thinking about</i> or <i>talking about</i> a stressful experience or avoiding <i>having feelings</i> related to it?	1	2	3	4	5
7.	Avoiding <i>activities</i> or <i>situations</i> because <i>they reminded you</i> of a stressful experience?	1	2	3	4	5
8.	Trouble <i>remembering important parts</i> of a stressful experience?	1	2	3	4	5
9.	<i>Loss of interest</i> in activities that you used to enjoy?	1	2	3	4	5
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?	1	2	3	4	5
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?	1	2	3	4	5
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?	1	2	3	4	5
13.	Trouble <i>falling</i> or <i>staying asleep</i> ?	1	2	3	4	5
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?	1	2	3	4	5
15.	Having <i>difficulty concentrating</i> ?	1	2	3	4	5
16.	Being “ <i>super-alert</i> ” or watchful or on guard?	1	2	3	4	5
17.	Feeling <i>jumpy</i> or easily startled?	1	2	3	4	5

**Appendix D****Expanded Attributional Style Questionnaire****Interpretation of Events**

Please try to imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one – THE MAJOR CAUSE IF THIS EVENT HAPPENED TO YOU.

Please write the cause in the blank provided after each event. Next, we want you to answer three questions about the cause you provided. First, is the cause of this event something about you or something about other people or circumstances? Second, is the cause of this event something that will persist across time or something that will never again be present? Third, is the cause of this event something that affects all situations in your life or something that just affects this type of event?

To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
  2. Decide what you feel would be the one major cause of the situation if it happened to you.
  3. Write the cause in the blank provided.
  4. Answer three questions about the cause.
- 
1. You have been looking for a job unsuccessfully for some time.
    - A. Write down the one major cause:
    - B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others    1    2    3    4    5    6    7    totally due to me

C. In the future, will this cause again be present? (circle one number)

never present    1    2    3    4    5    6    7    always present

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation    1    2    3    4    5    6    7    all situations

---

2. A friend comes to you with a problem, and you don't try to help.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others    1    2    3    4    5    6    7    totally due to me

C. In the future, will this cause again be present? (circle one number)

never present    1    2    3    4    5    6    7    always present

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation    1    2    3    4    5    6    7    all situations

3. You give an important talk in front of a group, and the audience reacts negatively.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

---

4. You meet a friend who acts hostilely to you.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

5. You can't get all the work done that others expect of you.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

---

6. You go out on a date, and it goes badly.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

7. Your steady romantic relationship ends.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

8. You experience a major personal injury.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

9. You are found guilty of a minor violation of the law.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

10. You and your family have a serious argument.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

11. You are fired from your job.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

12. After your first term at school, you are on academic probation.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

13. Your best friend tells you that you are not to be trusted.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

14. You have a lot of trouble understanding what your new employer requires of you.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

15. You cannot sleep soundly.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

16. You experience sexual difficulties.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

17. You confront a serious conflict in your values.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

18. Your roommate tells you he/she is switching to a room down the hall.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

19. There are few recreational activities in which you are interested.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

20. Your Christmas vacation plans are cancelled.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

21. You have trouble with one of your instructors.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

22. You experience financial difficulties.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

23. Your attempt to capture the interest of a specific person of the opposite sex is a failure.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

24. You feel sick and tired all of the time.

A. Write down the one major cause:

B. Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

totally due to others	1	2	3	4	5	6	7	totally due to me
--------------------------	---	---	---	---	---	---	---	----------------------

C. In the future, will this cause again be present? (circle one number)

never present	1	2	3	4	5	6	7	always present
------------------	---	---	---	---	---	---	---	-------------------

D. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

just this situation	1	2	3	4	5	6	7	all situations
------------------------	---	---	---	---	---	---	---	-------------------

**Appendix E**

**Attributional Style Questionnaire – Trauma Version**

### INTERPRETATIONS OF TRAUMATIC EVENTS

Please try to imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one – THE MAJOR CAUSE IF THIS EVENT HAPPENED TO YOU.

Please write the cause in the blank provided after each event. Next, we want you to answer three questions about the cause you provided. First, is the cause of this event something about you or something about other people or circumstances. Second, is the cause of this event something that will persist across time or something that will never again be present? Third, is the cause of this event something that affects all situations in your life or something that just affects this type of event? Finally, you will be asked how traumatic the event would be to you.

To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the one major cause of the situation if it happened to you.
3. Write the cause in the blank provided.
4. Answer three questions about the cause.
5. Rate how traumatic the situation would be to you.

You will also be asked whether this situation has ever happened to you. If the event has actually happened to you, please answer all questions according to your reaction to the *actual* event in your life. If an event happened to you more than once, answer the questions based on the worst time.

Remember that there are no right or wrong answers. The important thing is to answer the questions in a way that corresponds to what you *would* feel if the situation actually were occurring in your life or what you *did* feel if the event actually happened to you.

1. Imagine that the following situation actually happens to you: **You are in a serious industrial, farm, or car accident, or a large fire or explosion.**

- a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

- b. Write down the one major cause of you being in the accident.

---

- c. Is it something about you or something about other people or circumstances that caused you to be in the accident? (Circle one number.)

Totally caused

Totally

by other people or circumstances      1      2      3      4      5      6      7      caused by me

d. Do you believe that the cause of you being in this accident will also cause you to be in another accident? (Circle one number.)

Will never again cause me to be in an accident      1      2      3      4      5      6      7      Will always cause me to be in accidents

e. Is the cause of you being in the accident something that causes problems just related to the accident, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the accident      1      2      3      4      5      6      7      Causes problems in all areas of my life

f. How traumatic is being in a serious accident to you? (Circle one number.)

Not at all traumatic      1      2      3      4      5      6      7      Extremely traumatic

2. Imagine that the following situation actually happens to you: **You are in a natural disaster, such as a tornado, hurricane, flood, or major earthquake.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

b. Write down the one major cause of you being in a natural disaster.

---

c. Is it something about you or something about other people or circumstances that caused you to be in a natural disaster? (Circle one number.)

Totally caused by other people or circumstances      1      2      3      4      5      6      7      Totally caused by me

d. Do you believe that the cause of you being in this natural disaster will also cause you to be in another natural disaster? (Circle one number.)

Will never again cause      1      2      3      4      5      6      7      Will always cause me to be

me to be in  
a natural disaster

in natural  
disasters

e. Is the cause of you being in a natural disaster something that causes problems just related to the disaster, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems  
just in the natural  
disaster

1    2    3    4    5    6    7

Causes problems  
in all areas of  
my life

f. How traumatic is being in a natural disaster to you? (Circle one number.)

Not at all  
traumatic

1    2    3    4    5    6    7

Extremely  
traumatic

3. Imagine that the following situation actually happens to you: **You are a victim of a violent crime such as rape, robbery, or assault.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

b. Write down the one major cause of you being a victim of a violent crime.

---

c. Is it something about you or something about other people or circumstances that caused you to be a victim of a violent crime? (Circle one number.)

Totally caused  
by other people  
or circumstances

1    2    3    4    5    6    7

Totally  
caused  
by me

d. Do you believe that the cause of you being a victim of this violent crime will also cause you to be a victim again? (Circle one number.)

Will never  
again cause  
me to be a  
victim

1    2    3    4    5    6    7

Will always  
cause me to be  
a victim

e. Is the cause of you being a victim of a violent crime something that causes problems just related to the crime, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems

Causes problems

just in the crime      1      2      3      4      5      6      7      in all areas of my life

f. How traumatic is being a victim of a violent crime to you? (Circle one number.)

Not at all                      1      2      3      4      5      6      7      Extremely traumatic

4. Imagine that the following situation actually happens to you: **As a child, you are the victim of either physical or sexual abuse.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

b. Write down the one major cause of you being a victim of abuse.

---

c. Is it something about you or something about other people or circumstances that caused you to be a victim of abuse? (Circle one number.)

Totally caused by other people or circumstances      1      2      3      4      5      6      7      Totally caused by me

d. Do you believe that the cause of you being a victim of this abuse will also cause you to be a victim again? (Circle one number.)

Will never again cause me to be a victim      1      2      3      4      5      6      7      Will always cause me to be a victim

e. Is the cause of you being a victim of abuse something that causes problems just related to the abuse, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the abuse      1      2      3      4      5      6      7      Causes problems in all areas of my life

f. How traumatic is being a victim of physical or sexual abuse to you? (Circle one number.)

Not at all traumatic                      1      2      3      4      5      6      7      Extremely traumatic

5. Imagine that the following situation actually happens to you: **As an adult, you have an unwanted sexual experience that involves threat or the use of force.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what was the event?

---

b. Write down the one major cause of you having an unwanted sexual experience.

---

c. Is it something about you or something about other people or circumstances that caused you to have an unwanted sexual experience? (Circle one number.)

Totally caused by other people or circumstances	1	2	3	4	5	6	7	Totally caused by me
---	---	---	---	---	---	---	---	----------------------------

d. Do you believe that the cause of you having this unwanted sexual experience will also cause you to have another one? (Circle one number.)

Will never again cause me to have an unwanted sexual experience	1	2	3	4	5	6	7	Will always cause me to have unwanted sexual experiences
---	---	---	---	---	---	---	---	--

e. Is the cause of you having an unwanted sexual experience something that causes problems just related to the experience, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the experience	1	2	3	4	5	6	7	Causes problems in all areas of my life
--	---	---	---	---	---	---	---	---

f. How traumatic is having an unwanted sexual experience to you? (Circle one number.)

Not at all traumatic	1	2	3	4	5	6	7	Extremely traumatic
-------------------------	---	---	---	---	---	---	---	------------------------

6. Imagine that the following situation actually happens to you: **As an adult, you are in a relationship in which you are abused either physically or in another way.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, what was the event?

---

b. Write down the one major cause of you being abused in a relationship.

---

c. Is it something about you or something about other people or circumstances that caused you to be abused in a relationship? (Circle one number.)

Totally caused by other people or circumstances	1	2	3	4	5	6	7	Totally caused by me
---	---	---	---	---	---	---	---	----------------------------

d. Do you believe that the cause of you being a victim of abuse in this relationship will also cause you to be abused again? (Circle one number.)

Will never again cause me to be abused in a relationship	1	2	3	4	5	6	7	Will always cause me to be abused in a relationship
--	---	---	---	---	---	---	---	--

e. Is the cause of you being abused in a relationship something that causes problems just related to the relationship, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the relationship	1	2	3	4	5	6	7	Causes problems in all areas of my life
--	---	---	---	---	---	---	---	---

f. How traumatic is being abused in a relationship to you? (Circle one number.)

Not at all traumatic	1	2	3	4	5	6	7	Extremely traumatic
-------------------------	---	---	---	---	---	---	---	------------------------

7. Imagine that the following situation actually happens to you. **You witness someone who is mutilated, seriously injured, or violently killed (e.g., car accident, industrial accident, fire, explosion, etc.).**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

b. Write down the one major cause of you witnessing someone who is injured or killed.

---

c. Is it something about you or something about other people or circumstances that caused you to witness someone who is injured or killed? (Circle one number.)

Totally caused by other people or circumstances	1	2	3	4	5	6	7	Totally caused by me
---	---	---	---	---	---	---	---	----------------------------

d. Do you believe that the cause of you witnessing this event will also cause you to witness another one? (Circle one number.)

Will never again cause me to witness another event	1	2	3	4	5	6	7	Will always cause me to witness these events
---	---	---	---	---	---	---	---	---

e. Is the cause of you witnessing someone being injured or killed something that causes problems just related to that event, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the event	1	2	3	4	5	6	7	Causes problems in all areas of my life
--------------------------------------	---	---	---	---	---	---	---	---

f. How traumatic is witnessing someone who is injured or killed to you? (Circle one number.)

Not at all traumatic	1	2	3	4	5	6	7	Extremely traumatic
-------------------------	---	---	---	---	---	---	---	------------------------

8. Imagine that the following situation actually happens to you: **You are in serious danger of losing your life or of being seriously injured.**

a. Did this event actually happen to you? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, what was the event?

---

b. Write down the one major cause of you being in serious danger.

---

c. Is it something about you or something about other people or circumstances that caused you to be in serious danger? (Circle one number.)

Totally caused by other people	1	2	3	4	5	6	7	Totally caused
-----------------------------------	---	---	---	---	---	---	---	-------------------

or circumstances

by me

d. Do you believe that the cause of you being in this serious danger will also cause you to be in serious danger again? (Circle one number.)

Will never again cause me to be in serious danger	1	2	3	4	5	6	7	Will always cause me to be in serious danger
--	---	---	---	---	---	---	---	---

e. Is the cause of you being in serious danger something that causes problems just related to the event, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the event	1	2	3	4	5	6	7	Causes problems in all areas of my life
--------------------------------------	---	---	---	---	---	---	---	---

f. How traumatic is being in serious danger to you? (Circle one number.)

Not at all traumatic	1	2	3	4	5	6	7	Extremely traumatic
-------------------------	---	---	---	---	---	---	---	------------------------

9. If you did not experience any of the events described in items 1 through 8 OR if you experienced an event that was more traumatic than the events listed, what was the most traumatic thing to happen to you? (Write N/A and skip the rest of this item and go to item 10 if one of the events listed in items 1 through 8 was the most traumatic event you experienced.)

---

Answer these questions based on the trauma you wrote in the line above.

a. Write down the one major cause of you experiencing the trauma.

---

b. Is it something about you or something about other people or circumstances that caused you to experience the trauma? (Circle one number.)

Totally caused by other people or circumstances	1	2	3	4	5	6	7	Totally caused by me
---	---	---	---	---	---	---	---	----------------------------

c. Do you believe that the cause of you experiencing this trauma will also cause you to experience another one? (Circle one number.)

Will never again cause	1	2	3	4	5	6	7	Will always cause me to
---------------------------	---	---	---	---	---	---	---	----------------------------

me to experience  
the trauma

experience the  
trauma

d. Is the cause of you experiencing the trauma something that causes problems just related to the trauma, or does it also cause problems in other areas of your life? (Circle one number.)

Causes problems just in the trauma    1    2    3    4    5    6    7    Causes problems in all areas of my life

e. How traumatic was the event for you? (Circle one number.)

Not at all traumatic    1    2    3    4    5    6    7    Extremely traumatic

10. If you experienced more than one of the events listed in items 1 through 9, which was the **MOST** traumatic thing to have happened to you? Fill in the number of the item (e.g., #2 for natural disaster). \_\_\_\_\_

11. Did you answer "Yes" (to having experienced the event) to more than one item while thinking about the same event? YES \_\_\_\_\_ NO \_\_\_\_\_

If yes, which items refer to the same event? \_\_\_\_\_

**Appendix F**

**Beck Depression Inventory – II (copyrighted)**

## Appendix G

### **Informed Consent Form**

#### INFORMED CONSENT FOR PARTICIPATION IN RESEARCH

#### **Causal Attributions & PTSD**

Sarah Reiland, Principal Investigator  
Dean Lauterbach, Ph.D – Co-investigator

*Department of Psychology  
Eastern Michigan University*

1. **Purpose Of The Study And How Long It Will Last:** The purpose of the study is to investigate the relationship between trauma exposure and thoughts. This study will ask you to complete six questionnaires: a background questionnaire, a life events questionnaire, a measure of your response to traumatic life events, a mood questionnaire, and two questionnaires about your thoughts about common life events and traumatic life events.
2. **Participation Withdrawal Or Refusal To Participate:** Taking part in this study is completely voluntary. You have the right to discontinue at any time without penalty.
3. **Expected Risks Of The Study:** There are no known risks to participation. Some questions ask about traumatic events you have experienced, and it is possible that these questions may elicit an emotional reaction from you.
4. **Expected Benefits Of The Study:** Your participation will help our understanding of trauma and its effects. This information will help the future treatment of trauma-exposed individuals.
5. **Use Of The Results:** Your responses are private and will remain confidential. Information you provide as a result of participation will be entered into a statistical software package for analysis. The information will be coded by a unique research identification number, and your name will be immediately disassociated from your responses. Any identifying information will be destroyed as soon as data collection is complete. The research may be published in psychological journals and presented at conferences. All data used will be de-identified to protect your identity. You also have the right to request a summary of the results of this study. If you would like a summary of this study's results, please provide contact information below.
6. **Contacts:** If you have any questions or concerns regarding the study, please feel free to contact the investigators (Sarah Reiland at [sreiland@emich.edu](mailto:sreiland@emich.edu); Dr. Lauterbach at [dlauterba@emich.edu](mailto:dlauterba@emich.edu) or 487-0785). You can also contact the Psychology Department Research Review Committee Chair, Karen Saules, at [ksaules@emich.edu](mailto:ksaules@emich.edu) or (734) 487-4987.

7. **Research Participants' Rights:** I have read or have read to me all of the above. Any questions I have regarding this study have been answered by Sarah Reiland or one of her assistants. I have been told of the risks or discomforts and possible benefits of the study. I understand that my participation is voluntary and that some of the questions asked will be in reference to a traumatic experience I have had in my life. I understand that I do not have to take part in this study and that my refusal will involve no penalty or loss of rights to which I am entitled. I may withdraw at any time. I also understand that the results of this study may be published, but my individual records will not be revealed unless required by law. I understand that steps have been taken to assure confidentiality of my responses.

In the event that I experience emotional reactions that are difficult for me to manage, I understand that the investigator or her assistants may contact a clinical supervisor for consultation and that a referral to a mental health agency, or notification of my condition to the staff at EMU Psychology Clinic, may be made. I also understand that I should notify the investigator or her assistants if I am having significant emotional distress in response to participation in the study. I understand that I can also receive free psychological counseling at Snow Health Center (734-487-1118) if I am a student or low-cost therapy at the EMU Psychology Clinic (734-487-4987).

I understand my rights as a research participant, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.

Print Name

---

Signature

Date

---

---

Signature of Witness

Date

---

---

Signature of Principal Investigator

Date

---

---

**Appendix H**

**Informed Consent Script**

My name is Sarah Reiland, and I am the principal investigator for a study looking at exposure to traumatic events and your thoughts about these events. There are six questionnaires that you will complete as part of the study. Three are very short, and three are of moderate length. It will probably take 30 to 60 minutes to complete all questionnaires. Before you complete the questionnaires, there is an informed consent form for you to read and sign. I am passing out two copies: one is for you to sign and turn in to me, and the other is for you to keep for your records. As you are reading this form, I will explain its contents.

Some questions inquire about traumatic events you may have experienced, which may cause you discomfort. You have the right to discontinue the study anytime without penalty. All your responses are confidential. Your identifying information will be destroyed after we collect the questionnaires. Your participation in the study will contribute to our understanding of the effects of traumatic experiences. If you are interested in a copy of the results, write your contact information on the informed consent form, and it will be provided to you.

Thank you.