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Cognitive Attributions and Traumatic Events

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Cognitive Attributions and Traumatic Events

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COGNITIVE ATTRIBUTIONS AND TRAUMATIC EXPERIENCES

A DISSERTATION

SUBMITTED TO THE FACULTY

OF

SCHOOL OF PROFESSIONAL PSYCHOLOGY

PACIFIC UNIVERSITY

HILLSBORO, OREGON

BY

OLIVIA MCELDERRY, M.S.

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

DOCTOR OF PSYCHOLOGY

JULY 24, 2009

APPROVED: Johan Rosqvist, Psy.D.

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The hypotheses that explanatory style moderates current PTSD, depression and alcohol consumption in students who have experienced potentially traumatic events, such as child physical abuse, child emotional abuse, and child sexual abuse, was examined. Participants were 144 clients (aged 18-61) receiving outpatient mental health services for addictions. It was found that the experience of generally traumatic events significantly predicted depressive symptoms. Clinical implications of these results are discussed and suggestions for future research are made.

Cognitive attributions and traumatic experiences substance abuse
Cognitive Attributions and Traumatic Experiences

Introduction

The experience of traumatic events can have negative consequences that last across a person’s lifespan. Psychological distress, poor interpersonal relationships, and poor coping skills are correlated with the experience of traumatic events (Browne & Finkelhor, 1986; Bunce, Larsen, & Peterson, 1995; Kendall-Tackett & Simon, 1988; Toth, Manly, & Cicchetti, 1992). During the past twenty years, researchers have begun to investigate correlates of resilience following the experience of a traumatic event, such as an optimistic explanatory style. If an optimistic explanatory style can be shown to moderate the relationship between traumatic events and symptomatology, then this may lend support for clinicians teaching clients skills in optimism to foster positive outcomes in their clients lives.

The present study will begin by testing the hypothesis that optimism moderates current distress in adults who are receiving addiction services and have experienced a traumatic event or events. More specifically, the study will utilize the theory of attributional style from the reformulation of the learned helplessness model. Participants’ attributional style will be categorized as either optimistic or pessimistic. Information will be gathered from an outpatient population receiving treatment for addictive behaviors through a community mental health agency. Furthermore, the types of traumatic events examined will be general traumatic events, childhood sexual abuse (CSA) and childhood physical abuse (CPA). Additionally, the specific types of symptomology which will be examined are depression, post-traumatic stress disorder (PSTD), and substance abuse.
The following topics will be addressed in a review of the related research: the definition of traumatic events, clinical symptomology following traumatic events, explanatory style, the relationship between explanatory style and clinical symptomology following traumatic events, and a rational for exploring an optimistic explanatory style as a moderating variable between traumatic events and current distress within an outpatient population receiving addiction services.

Impact of Traumatic Events

Posttraumatic Stress Disorder. Posttraumatic stress disorder (PTSD) is characterized by reexperiencing, avoidance, and hyperarousal symptoms following a traumatic event (APA; DSM-IV-TR, 2000). Traumatic events involve the experience of death or serious injury to self or others and the experience of helplessness during these events.

The estimated lifetime prevalence of PTSD among adult Americans is 8%, with women (10.4%) twice as likely as men (5%) to meet criteria for PTSD at some point in their lives (Browne & Finkelhor, 1986). The types of traumatic events most often associated with PTSD in men are rape, combat exposure, childhood neglect, and childhood physical abuse. For women, traumatic events most often associated with PTSD are rape, sexual molestation, physical attack, being threatened with a weapon, and childhood physical abuse. More than 10% of men and 6% of women report experiencing four or more types of traumatic events during their lifetimes (Weiss, Marmar, Schlenger, Fairbank, Jordan, Hough & Kulka, 1992).

Over 50% of sexual abuse survivors meet criteria for PTSD (Dominquez, Nelke, & Perry, 2002). Child sexual abuse (CSA) is defined as any unwanted sexual contact
(ranging from genital touching and fondling to penetration) during the period in which the survivor is considered a child by legal definition and the perpetrator is in a position of relative power (Violato & Genius, 1993). CSA has been reported to effect between 4% to 50% of children and adolescents, with an average prevalence of approximately 20%.

PTSD symptoms and sexualized behaviors are the two most frequently observed symptoms following CSA (Corwin, 1989; Jampole & Weber, 1987; Wolfe et al., 1989). Physical abuse is another type of traumatic event correlated with PTSD symptoms (Cicchetti & Toth, 1995; Deblinger, McLeer, Atkins, Ralph, & Foa, 1989; Feldman et al. 1995; Kendall-Tackett, Williams, & Finkelhor, 1993, Runyon & Kenny, 2002). Physical abuse is defined as any act resulting in non-accidental physical injury, including unreasonable punishment and intentional assault (U.S. Department of Health and Human Services, 2006). In 2000, 879,000 substantiated cases of child abuse and neglect were reported across the 50 states (U.S. Department of Health and Human Services [UDHHS], 2002). Of these cases, 19% were related to physical abuse. Children with histories of CPA report moderate to severe PTSD symptoms following abuse experiences (Briere & Elliott, 1994; Cicchetti & Toth, 1995; Deblinger, McLeer, Atkins, Ralph, & Foa, 1989; Feldman et al. 1995; Green, 1993; Kendall-Tackett, Williams, & Finkelhor, 1993, Runyon & Kenny, 2002). Additionally survivors of CPA have a greater likelihood than non-survivors of CPA of being diagnosed with PTSD (Brown & Anderson, 1991; Dunn & Dunn, 1994). One third of those who report CPA develop PTSD (Widom, 1999). In fact, in looking at the differing prevalence rates of PTSD across abuse history groups, children with physical abuse histories report greater rates of lifetime PTSD than children with sexual abuse histories (Danielson, Arellano, Kilpatrick, Saunders & Resnick, 2005).
Depression. Depression is also associated with the experience of traumatic events (Feldman et al. 1995; Green, 1993; Kendall-Tackett, Williams, & Finkelhor, 1993). Depression includes the following symptoms: depressed mood, diminished interest or pleasure in most activities, significant weight loss (when not dieting), weight gain, or a change in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or inappropriate guilt, impaired ability to concentrate or indecisiveness, and recurrent thoughts of death (APA; DSM-IV-TR, 2000).

The link between traumatic experiences and depression has been well documented in adults. Individuals who have experienced CSA are more likely to experience depression over their lifetime when compared to individuals who have not experienced CSA (Sedney & Brooks, 1984). In addition, suicide or suicidal thoughts following abuse occurs more frequently in children who have been sexually abused, when compared to a nonabused population (Bayatpour, Wells, & Holford, 1992; Chadny, Blum, & Resnick, 1997; Harrison, Edwall, Hoffman, & Worthen, 1990; Watts & Ellis, 1993).

Psychological maladjustment that follows CSA often continues into adulthood (Beitchman, 1992; Briere & Runtz, 1993). Adult adjustment problems associated with CSA include interpersonal problems, educational difficulties, self-destructive acts, somatic symptoms, loss of self-esteem, depression, and actual or attempted suicide (Browne & Finkelhor, 1986; Conte & Schuerman, 1987; Tong, Ostes, McDowell, 1987).

Individuals who report incidents of physical abuse are more likely to exhibit symptoms of depression than non-abused individuals (Brown & Keller, 1992; Finkelhor, 1984; Briere & Runtz, 1988). Anger, hostility, guilt, shame, and sadness are common
emotional reactions among survivors of CPA (Beitchman, Zucker, daCosta, Akman, & Cassavia, 1992). In addition, individuals who reported physical abuse exhibit lower self-esteem (Brown & Keller, 1992), a greater sense of powerlessness (Finkelhor, 1984), increased attempted suicide rates, and increased self injury (Briere & Runtz, 1988) when compared to individuals who did not report physical abuse.

Substance Abuse. Substance abuse is a maladaptive pattern of substance use leading to clinically significant impairment or distress (APA; DSM-IV-TR, 2000). One way in which people cope with traumatic experiences and the resulting symptomology is by consuming alcohol (Westermeyer, Wahmanholm, & Thuras, 2001). Substances, such as alcohol are often times used to lessen the experience of psychosocial distress (Westermeyer, Wahmanholm, & Thuras, 2001).

CSA is associated with chemical dependency (Bolger & Patterson, 2003; Luthar, Cicchetti, & Becker, 2000; Toth, Manly, & Cicchetti, 1992; Zeidner & Hammer, 1992; Silverman, Reinherz, & Giaconia, 1996). A series of epidemiological studies have demonstrated that the lifetime prevalence of alcohol dependence is significantly higher for persons with histories of CSA than for those who did not report CSA (Kendler et al., Molnar, Buska, & Kessler, 2001). Thirty-five percent of women with incestuous fathers report abusing drugs and alcohol (Herman, 1981). In addition, greater frequency of alcohol, drug use, and intoxication have been documented among sexual abuse survivors in comparison to non-abused individuals (Singer, Petchers, & Hussey, 1989). Similarly, 27% of CSA survivors report a history of alcoholism and 21% with a history of drug addiction (Briere, 1984). Furthermore, CSA has been correlated with significant
associations of earlier age of onset of alcohol disorders (Zlontick, Johnson, Stout, Zywiak, Johnson, & Schneider, 2006).

CPA survivors commonly use substances following abuse experiences to cope with the symptoms (Cohen & Densen-Gerber, 1982; Dunn & Dunn, 1994; Windle, Scheidt, & Miller, 1995; Schafer, Sobieraj, & Hollyfield 1998; Simpson & Miller, 2002; Dube et al., 2002, Nelson et al., 2002). Research suggests that CPA is related to psychiatric and social dysfunction in patients with alcohol disorders (Roy, 2001). Among chemically dependent male veterans, approximately one-third of them reported having been physically abused as children (Schafer, Sobieraj, & Hollyfield, 1998), whereas among male veterans in treatment for substance abuse, reports of at least one type of childhood abuse ranged between 34% and 77% (Dunn & Dunn, 1994; Triffleman, Marman, Delucchi, & Ronfeldt, 1995). Similarly, seventeen percent of female physical abuse survivors reported symptoms of alcohol abuse, when compared to 4% of non-abused individuals (Peters, 1984). In addition, 30.4% of patients who reported CPA also reported a substance-related disorder (Westermeyer, Wahmanholm, & Thuras, 2001).

Among substance abusers with a history of childhood abuse, comorbidity with other psychiatric disorders is common. Survivors of CPA have a greater likelihood of being diagnosed with other substance use disorders, and comorbid depression or PTSD when compared to non-abused populations (Brown & Anderson, 1991; Dunn & Dunn, 1994). Females in treatment for substance abuse who reported PTSD symptoms had more substance abuse problems than did those without a PTSD diagnosis (Simpson, 2000).
In summary, individuals that have experienced traumatic events, including CSA and CPA are at a greater risk for PTSD and depression than individuals who have not experienced a traumatic event (Bunce et al., 1995). In addition, sexual and physical abuse survivors are at a greater risk for engaging in substance abuse at some point in their lives when compared to non-abused individuals (Peters, 1984).

Explanatory Style and Traumatic Events

There are several factors that promote resilience among individuals who have survived a traumatic event. The way in which individuals explain why they experienced a traumatic event, called explanatory style, is one such factor.

*Explanatory Style.* Explanatory style mediates the relationship between traumatic events and resulting symptomology (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). Explanatory style is a person’s habitual way of making sense of events (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). Attributions are answers to the question, “why did an event occur?”

There are two types of explanatory style: optimistic and pessimistic. Optimistic explanatory style is a pattern of external, variable, and specific attributions for negative events (Peterson & Steen, 2002). Pessimistic explanatory style is a pattern of internal, stable, and global explanations for negative events (Peterson & Steen, 2002). Internal attributions are those that are specific to that person, whereas external attributions are specific to outside influences. For example, if Bob is physically abused by his father and attributes this experience to internal causes, he may think, “it is my fault that I was abused,” whereas if he attributes the abuse to external causes, he may think, “my father has an anger problem, and he took his anger out on me by hitting me.” People with stable
attributions for events consider aspects of events that are present over time. People with unstable attributions for events consider aspects of events that are transitory. For example, if Bob thinks that his abuse experience is due to stable causes, he may think, “I will always be abused by my father,” whereas if he thinks that the abuse he experienced is due to unstable causes, he may think, “although my father abused me, this does not mean that I will always be abused.” Lastly, people with global attributions understand experiences as indicative of the totality of one’s experiences, whereas people with specific attributions understand abuse as having limited implications for oneself. For example, if Bob makes global attributions of his abuse experience, he may think, “because I was abused, that means I am a bad person,” whereas if he believes that the abuse reflects specific causes, he may think, “even though I was abused, this does not mean that I am a bad person and this is just one part of my experience.”

Pessimistic explanatory style is thought to be a trait that endures throughout life span (Bruns & Seligman, 1989; Kamen, & Nolen-Hoeksema, 1988). The variability in symptoms reported by children survivors of neglect, sexual abuse, and physical abuse is often times related to the child’s perception of the traumatic event (Brown & Kolko, 1999; Feiring, Taska, & Lewis, 1998).

PTSD and explanatory style. Explanatory style is important because it has functional implications on how people explain and understand the world around them. Exposure to life-threatening or otherwise highly stressful events can result in psychological and emotional disturbances (Cohen, Mannarino, Berlliner & Deblinger, 2000). PTSD has served as a focal point for the analysis of sexual abuse trauma in part
because it is a well-developed and well-documented generalized theory of traumatic process.

Pessimistic explanatory style has various negative effects on general psychological and physiological functioning, such as PTSD symptoms (Peterson & Seligman, 1987; Seligman, 1987; Trunnell, 1986; Weary, Stanley, & Harvey, 1989). Sexually abused adults and children with a pessimistic attributional style report increased PTSD when compared to non-abused populations (Feiring, Taska, & Chen, 2002; Spaccarelli & Fuchs, 1997; Wolfe, Sas, & Wekerle, 1994). Internal attributions and shame associated with sexual abuse experiences in children account for a significant amount of the variance in PTSD symptoms, after controlling for previous levels of symptomology (Feiring, Taska, & Chen, 2002).

Abuse specific attributions (external, stable, and global) have been shown to be associated with abuse-specific fear (global fears), whereas internal attributions have been shown to be related to internalizing symptoms such as anxiety and PTSD (Brown & Kolko, 1999). Among physically abused children and their mothers, pessimistic attributional style predicated severity of symptoms beyond the contribution made by the severity of physical maltreatment (Brown & Kolko, 1999). One third of those who report CPA and neglect develop PTSD (Widom, 1999). Lastly, survivors of CPA and neglect have a greater likelihood than non-survivors of being diagnosed with PTSD (Brown & Anderson, 1991; Dunn & Dunn, 1994).

**Depression and explanatory style.** Pessimistic explanatory style is correlated with depression (Gladstone & Keslow, 1995; Joiner & Wagner, 1995; Sharpley & Yardley, 1999; Sweeney, Anderson, & Baily, 1986). Abuse specific attributions (external, stable,
and global) have been shown to be associated with abuse-specific fear (global fears), whereas internal attributions have been shown to be related to internalizing symptoms such as depression (Brown & Kolko, 1999). Moreover, people who have a pessimistic explanatory style for adverse events are at risk for becoming depressed when negative events occur (Abramson, Seligman, & Teasdale, 1978; Buchanan & Seligman, 1995; Peterson, Maier, Seligman, 1993; Seligman, 1992; Seligman, Abramson, Semmel, & von Baeyer, 1979). Pessimism is associated with hopelessness, which is also correlated with depressive symptoms (Voelz, Haefel, Joiner, Dineen-Wagner, 2003; Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). In meta-analytic reviews of the association between explanatory style and depression, pessimistic explanatory style was associated with increased levels of depressive symptoms among adults (Sweeney, Anderson, & Baily, 1986).

One type of attributional style that has been researched with survivors of abuse has been identified as a depressogenic attributional style (another way of describing pessimistic attributional style). Depressogenic attributional style (stable and global attributions for negative events) interacts with an enhancing attributional style (unstable, specific attributions for positive events) and later predicts changes in hopelessness among youth inpatients experiencing significant depressive symptomatology (Voelz, Haefel, Joiner, Dineen-Wagner, 2003). Enhancing optimistic attributional style tends to predict recovery from depressive symptoms in the presence of positive events (Feiring, Taska, & Chen, 2002).

In general, pessimistic attributional style has been shown to be related to depressive symptoms following abuse CSA (Noelen-Hoeksema, Girgus, & Seligman,
Both general attributional style and abuse-related attributions following CSA predict depressive and self-esteem problems (Mannarino & Cohen, 1996). Children who have experienced sexual abuse report significantly greater levels of trauma-related distress when compared to children who have not experienced sexual abuse (Runyon & Kenny, 2002).

Physically abused adults and children with a pessimistic attributional style report increased depressive symptoms when compared to a non-abused population (Feiring, Taska, & Chen, 2002; Spaccarelli & Fuchs, 1997; Wolfe, Sas, & Wekerle, 1994). Physically abused children report a more depressogenic style and more depressive symptoms than non-abused children (Cerezo & Frias, 1994). In addition, children who were physically abused were more prone to a negative explanatory style when compared to non-physically abused children (Runyon & Kenny, 2002).

**Substance abuse and explanatory style.** The majority of studies of explanatory style and substance abuse are based on the hypothesis that substance abusers have a maladaptive explanatory style characterized by ascribing external, unstable and specific attributions to situations of success; and internal, stable and global attributions to situations of failure (García, V. A., Torrecillas, L. F., de Arcos, A. F., & García, P. M., 2004). Attendees of Alcoholics Anonymous employ internal, stable, and global attributions to negative life experiences (Echeburúa & Elizondo, 1988). In addition, pessimism has been linked to high alcohol relapse rates and lack of significant differences in the effectiveness of various treatments (Miller, 1999).

Among a large community sample of women drinkers, CSA was correlated with increased intensity of alcohol-related problems when compared to women drinkers who
did not experience CSA (Brown, Longbaugh, Stout, & Wolfe, 1993). To date no studies have looked at explanatory style and its possible correlation to substance abuse following a traumatic event.

Among chemically dependent male veterans, approximately one-third of them reported having been physically abused as children (Schafer, Sobieraj, & Hollyfield, 1998). In addition, 30.4% of patients who reported CPA also reported a substance related disorder (Westermeyer, Wahmanholm, & Thuras, 2001).

In summary, an optimistic explanatory style is positively correlated with less clinical symptomology following the experience of a traumatic event. Optimism has been linked to decreases in depressive symptoms and PTSD symptom following a traumatic event. To date no research has been conducted that identifies substance use in conjunction with trauma, explanatory style, and resulting symptomology.

**Rationale for current study.** The aim of this study is to investigate the relationship between attributional style and the resulting psychological symptomology, including depression, PTSD symptoms, and substance use, following traumatic experiences within participants receiving addiction services. Hypothesis 1: If participants are pessimistic, and have been exposed to potentially traumatic event or events, they will have more depression, PTSD symptoms, and alcohol abuse when compared to optimistic participants who have been exposed to potentially traumatic events. More specifically, if participants indicate on the Attributional Style Questionnaire (ASQ; Peterson, Semmel, von-Baeyer, Abramson, Metalsky, & Seligman, 1982) a pessimistic attributional style, and report on the Childhood Trauma Questionnaire (CTQ; Beirnstein & Fink, 1997) and or the Life Events Checklist (LEC; Johnson & McCutcheon, 1980) the experience of a
traumatic event or events, it is hypothesized they will report on the Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977), the PTSD Checklist-Civilian Version (PCL-C; Westhers, Huska & Keane, 1991), and/or the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monterio, 1982) the experience of either depressive, PTSD, and/or substance abuse symptoms. Hypothesis 2: If optimistic participants endorse exposure to potentially traumatic events, they will have less depression, PTSD symptoms, and alcohol abuse when compared to pessimistic participants exposed to potentially traumatic events. More specifically, if participants indicate on the Attributional Style Questionnaire (ASQ; Peterson, Semmel, von-Baeyer, Abramson, Metalsky, & Seligman, 1982) an optimistic attributional style, and report on the Childhood Trauma Questionnaire (CTQ; Beirnstein & Fink, 1997) and or the Life Events Checklist (LEC; Johnson & McCutcheon, 1980) the experience of a traumatic event or events, then it is hypothesized they will report decreased amounts of depressive, PTSD symptoms, and or substance abuse when compared to pessimistic participants on the Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977), the PTSD Checklist-Civilian Version (PCL-C; Westhers, Huska & Keane, 1991), and or the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monterio, 1982). Therefore, it is hypothesized that an optimistic explanatory style will moderate current distress among participants exposed to potentially traumatic events.
Method

Participants

The sample consisted of 144 adults (73 male and 71 female) receiving outpatient addiction services through a community mental health agency. Participants ranged in age from 18 year to 61 (mean age 32). The sample was 84.5% Caucasian, 4.7% Hispanic, 4.1 Multi-Ethnic, 2.7% Asian, 1.4% African American and 1.4% Native American.

Sampling Procedures

Through the completion of a power analysis, it has been determined that 130 participants are needed to gather sufficient data to examine the proposed hypotheses (Cohen, 1988). Participants were recruited for the proposed study based upon their enrollment within a community mental health agency for addiction services. The principal investigator attended weekly assessment clinic groups to invite clients to be part of the current study. Study participation was required by any of the participants. To ensure maximal participation, an incentive of a bag of treats was offered to each participant directly following study participation. Questionnaires were administered in group therapy rooms at a community mental health agency. Measures took about 30-35 minutes to complete.

Measures

The six measures included in this study are: the Attributional Style Questionnaire (ASQ; Peterson, Semmel, von-Baeyer, Abramson, Metalsky, & Seligman, 1982), the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monterio, 1982), the Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977), the Childhood Trauma Questionnaire (CTQ; Beirmstein & Fink, 1997), the Life
Events Checklist (LEC; Johnson & McCutcheon, 1980), and the PTSD Checklist-Civilian Version (PCL-C; Westhers, Huska & Keane, 1991). The order of administration of measures was counterbalanced.

**Attributional Style.** The Attributional Style Questionnaire (ASQ; Peterson, Semmel, von-Baeyer, Abramson, Metalsky, & Seligman, 1982) is a self-report instrument in which scores for explanatory style for bad events and for good events using internal versus external, stable versus unstable and global versus specific causes for those events are yielded. In the ASQ, 12 hypothetical events, half good and half bad, are presented. An example of a good event is “you get a raise” and an example of a bad event is “you go out on a date and it goes badly.” Each question allows the participant to interpret the event and its probable cause along a 7-point continuum for each of the three causal dimensions, 1) whether the outcome was due to something about them or something about other people or circumstances (locus), 2) whether this cause again will be present (stability), and 3) whether the cause influences just this situation or other areas of life (globality). The ASQ was normed on college students, clinically depressed individuals, and people undergoing various stressful events. The ASQ has internal consistency reliabilities of $r=.66$ for internality, $r=.85$ for stability, and $r=.88$ for globality (Peterson & Seligman, 1984).

**Current alcohol use.** The Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 1982) is a 10-item self-report measure, designed to identify persons with hazardous or harmful patterns of alcohol consumption. The AUDIT is made up three subscales (dependence symptoms, harmful alcohol use, and hazardous alcohol use). For example, a dependence question on the AUDIT is, “how
often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?” An example of a harmful use question on the AUDIT is, “how often do you have six or more drinks on one occasion?” Lastly, an example of a hazardous alcohol use question is, “have your or someone else been injured as a result of your drinking?” Participants are asked to respond with yes or no and frequency. The AUDIT was standardized on primary health care patients in six countries. The AUDIT demonstrates good test-retest reliability ($r=0.86$) ([Bohn, Babor, & Kranzler, 1995]).

**Current distress.** The Center of Epidemiologic Studies Depression Scale (CESD; Radloff, 1977) is a 20-item, self-report measure of current depressive symptoms in the general population. Each question in the CESD allows the participant to rate items on a 4-point Likert scale (*rarely, some or a little of the time, occasionally or a moderate amount of the time, and most or all of the time*). The CESD has been normed on a sample of adolescents and young adults (Radloff, 1991). In addition, internal consistency of the CESD is equal to coefficient alpha $r=0.85$. Constructive/convergent validity of self-reported stress was related to depressive symptoms on the CESD ($r=0.43$); as positive affect scores decreased, depressive symptom scores increased ($r=-0.63$) (Andresen, Malmgren, Carter, & Patrick, 1994).

The Childhood Trauma Questionnaire (CTQ; Beirnstein & Fink, 1997) is a 28-item self-report retrospective inventory of childhood or adolescent abuse and neglect. The examinee responds to 28 simple questions on a 5-point Likert scale ranging from *never true, to very often true*. In addition to a total score, the CTQ yields five subscales: emotional abuse, emotional neglect, physical abuse, physical neglect and sexual abuse.
The CTQ was normed on adult substance abusers, adolescent psychiatric inpatients, adult psychiatric patients, pain patients, college students, and HMO members. The CTQ was found to have acceptable validity and reliability (Bernstein & Fink, 1998). The physical abuse and sexual abuse scales that were used in this study showed good internal consistency. The median reliability coefficient for sexual abuse was .92 and .82 of physical abuse.

*Potentially traumatic events.* The Life Events Checklist (LEC; Johnson & McCutcheon, 1980) is a self-report inventory which screens for exposure to potentially traumatic events across the examinees’ lifespan. The examinee is asked to respond to 17 life event items that are ranked on a 5-point ordinal scale. Participants are presented with stressful events and asked to indicate if: (a) it happened to you personally, (b) you witnessed it happen to someone else, (c) you learned about it happening someone close to you, (d) you’re not sure if it fits, or (e) it doesn’t apply to you. This measure was normed on college undergraduate students and combat veterans. Internal consistency is .97 and test-retest reliability is .74 over a 1-month interval (Greene, Walker, Hickson, & Thompson, 1985).

The PTSD Checklist- Civilian Version (PCL-C; Westhers, Huska & Keane, 1991) is a self report measure of Posttraumatic Stress symptoms. There are 39 items that are measured on four dimensions: 1) re-experiencing and situational avoidance, 2) withdrawal and numbing, 3) arousal and lack of control, and 4) self persecution. Items are rated on a 5-point Likert scale and the response format varies sometimes using ‘not at all true’ to ‘extremely true,’ sometimes using ‘never true’ to ‘always true.’ This measure was normed using students from a university setting. The PCL-C has adequate reliability
and validity and good test-re-test reliability, r=0.84 (Inkelas, Loux, Bourque, Widawski, & Nguyen, 2000). Internal consistency for the revised scale is, alpha = 0.74 and corrected item-total correlations ranged from -0.03 to 0.43, with a mean of 0.27 (Inkelas, Loux, Bourque, Widawski, & Nguyen, 2000).

**Demographic information.** In addition to these six measures, participant completed a short demographic questionnaire developed by the principal investigator. The demographic questionnaire assessed gender, age, and ethnicity (see Appendix 1 for a copy of the measures).

**Results**

Prior to analysis, variables were examined to determine the accuracy of data entry, and the fit between variable distributions and assumptions for hierarchical multiple regression. All data were screened to eliminate values outside the range of possibilities. In addition, all data were entered twice in two separate data sets in SPSS, and then frequencies, values, and measures of central tendency were compared for each variable. This procedure verified that the data set used for analysis was clean. There was no missing data from the data set.

The assumptions of multicollinearity, outliers, linearity, homoscedasticity, normality, and independence of residuals of the multiple regression models were met. This was determined with SPSS FRQUENCIES and SPSS REGRESSION. Based on these analyses, a two logarithmic transformation was used to reduce extreme positive skewness on alcohol consumption (AUDIT) and PTSD symptoms. After transforming for extreme positive skewness, square root transformations were performed to further decrease positive skewness on AUDIT. Furthermore, a square root transformation was
made on experience of depressive symptoms (CESD) to reduce moderate positive skewness. Additionally, 2 logarithm transformations were performed on measures of child abuse (total score of child physical and sexual abuse) (CTQ) to reduce extreme positive skewness and then a final square root transformation to reduce moderate positive skewness. Lastly, neither a correlation matrix nor SPSS collinerairty diagnostics revealed multicollinearity.

Explanatory style was examined as a moderator for the relationship between exposure to traumatic events and current distress. It was predicted that an optimistic explanatory style would moderate the relationship between surviving a traumatic event and current distress. A series of multiple regression equations modeled after procedures for testing moderation described by Aiken and West (1991) were performed. The standardized independent variables were introduced into the equation in three successive steps (Aiken & West, 1991; Jaccard, Turrisi & Wan, 1990). First (1), depressive symptoms, PTSD symptoms and alcohol abuse were introduced to control their possible influence on potentially traumatic events. Next (2), depressive symptoms, PTSD symptoms, and alcohol abuse were introduced to control their possible influence on child abuse, followed by (3), the moderator variable (attributional style), and finally (4), the two-way interactions (depressive symptoms x attributional style, PTSD symptoms x attributional style, and alcohol abuse x attributional style).

In all, six hierarchical multiple regression analyses were carried out (six analyses for each dependent variable, separately for each moderator). To interpret the standardized variables a priori, unstandardized regression coefficients (B) (Aiken & West, 1991) are presented in Tables 1 to 6.
**Traumatic Events**

In the first regression analysis (see Table 1), the relationship between the experience of general traumatic events and depressive symptoms was examined. In the first step, the experience of general traumatic events was a significant predictor of depressive symptoms ($\beta=-.196$, $p=.019$), and accounted for 40% of the variance in depressive symptoms (adjusted $R^2=.040$). In the second step of the model, when explanatory style was added to the equation, the interaction between depressive symptoms and explanatory style was not a significant predictor of depressive symptoms ($\beta=-.265$, $p=.572$).

<table>
<thead>
<tr>
<th>Regression:</th>
<th>$b$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$R^2$ change</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.041</td>
<td>-.022</td>
<td>.040</td>
<td>.026</td>
<td>.057</td>
</tr>
<tr>
<td>(2) LEC</td>
<td>-.014</td>
<td>-.196</td>
<td>.026</td>
<td>.057</td>
<td>.791</td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.432</td>
<td>-.232</td>
<td>.042</td>
<td>.22</td>
<td>.572</td>
</tr>
<tr>
<td>(2) LEC</td>
<td>-.024</td>
<td>-.332</td>
<td></td>
<td>.543</td>
<td>.192</td>
</tr>
<tr>
<td>(3) ASQ x LEC</td>
<td>.007</td>
<td>.265</td>
<td></td>
<td>.572</td>
<td></td>
</tr>
</tbody>
</table>

Note: LEC= Life Events; ASQ= Attributional Style; Dependant variable; CESD= Depression

In the second regression analysis (see Table 2), the relationship between the experience of general traumatic events and PTSD symptoms was examined. In the first step of the model, the experience of general traumatic events was not a significant
predictor of PTSD symptoms ($\beta = -.076, p = .367$), therefore no further analyses were conducted on this variable.

Table 2
Generally Traumatic Events as a Moderator between Explanatory Style and PTSD

<table>
<thead>
<tr>
<th>Regression:</th>
<th>b</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$R_{\Delta}$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td>.007</td>
<td>-.008</td>
<td>.628</td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.002</td>
<td>-.021</td>
<td></td>
<td>.804</td>
<td></td>
</tr>
<tr>
<td>(2) LEC</td>
<td>.000</td>
<td>-.076</td>
<td></td>
<td>.367</td>
<td></td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td>.007</td>
<td>-.015</td>
<td>.888</td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.009</td>
<td>-.074</td>
<td></td>
<td>.848</td>
<td></td>
</tr>
<tr>
<td>(2) LEC</td>
<td>.000</td>
<td>-.111</td>
<td></td>
<td>.668</td>
<td></td>
</tr>
<tr>
<td>(3) ASQ x LEC</td>
<td>.000</td>
<td>.067</td>
<td></td>
<td>.888</td>
<td></td>
</tr>
</tbody>
</table>

Note: LEC= Life Events; ASQ= Attributional Style; Dependant variable; PTSD= PTSD Symptoms

In the third regression analysis (see Table 3), the relationship between the experience of general traumatic events and alcohol abuse was examined. In the first step of the model, the experience of general traumatic events was not a significant predictor of alcohol abuse ($\beta = -.077, p = .360$), therefore no further analyses of this variable were conducted.
Table 3
Generally Traumatic Events as a Moderator between Explanatory Style and Alcohol Abuse

<table>
<thead>
<tr>
<th>Regression:</th>
<th>b</th>
<th>β</th>
<th>R²</th>
<th>RA</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>.010</td>
<td>.045</td>
<td>.007</td>
<td>-.007</td>
<td>.594</td>
</tr>
<tr>
<td>(2) LEC</td>
<td>.000</td>
<td>-.077</td>
<td></td>
<td></td>
<td>.360</td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.062</td>
<td>-.275</td>
<td>.012</td>
<td>-.009</td>
<td>.397</td>
</tr>
<tr>
<td>(2) LEC</td>
<td>-.002</td>
<td>-.284</td>
<td></td>
<td></td>
<td>.271</td>
</tr>
<tr>
<td>(3) ASQ x LEC</td>
<td>.000</td>
<td>.404</td>
<td></td>
<td></td>
<td>.397</td>
</tr>
</tbody>
</table>

Note: LEC= Life Events; ASQ= Attributional Style; Dependant variable; AUDIT= Alcohol Abuse

Child Abuse

In the fourth regression analysis (see Table 4), the relationship between the experience of childhood abuse and depression was examined. In the first step of the model, the experience of childhood abuse was not a significant predictor of depression (β=−.090, p=.288), therefore no further analyses of this variable were conducted.
Table 4
Childhood Abuse as a Moderator between Explanatory Style and Depression

<table>
<thead>
<tr>
<th>Regression:</th>
<th>b</th>
<th>β</th>
<th>R²</th>
<th>RA</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.103</td>
<td>-.055</td>
<td>.502</td>
<td>.502</td>
<td></td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>.653</td>
<td>.090</td>
<td>.517</td>
<td>.517</td>
<td></td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>.200</td>
<td>.107</td>
<td>.404</td>
<td>.404</td>
<td></td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>3.666</td>
<td>.508</td>
<td>.055</td>
<td>.055</td>
<td></td>
</tr>
<tr>
<td>(3) ASQ x CTQ</td>
<td>-2.046</td>
<td>-.490</td>
<td>.095</td>
<td>.095</td>
<td></td>
</tr>
</tbody>
</table>

Note: CTQ= Childhood Abuse; ASQ= Attributional Style; Dependant variable; CESD=Depression

In the fifth regression analysis (see Table 5), the relationship between the experiences of child abuse and PTSD symptoms was examined. In the first step of the model, the experience of childhood abuse was not a significant predictor of PTSD symptoms ($\beta=-.062, p=.465$), therefore no further analyses of this variable were conducted.
Table 5
Childhood Abuse as a Moderator between Explanatory Style and PTSD

<table>
<thead>
<tr>
<th>Regression:</th>
<th>b</th>
<th>β</th>
<th>R²</th>
<th>RA</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>-.004</td>
<td>-.038</td>
<td></td>
<td></td>
<td>.657</td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>.028</td>
<td>.062</td>
<td></td>
<td></td>
<td>.465</td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>.013</td>
<td>.115</td>
<td>.222</td>
<td>.001</td>
<td>.117</td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>.203</td>
<td>.455</td>
<td></td>
<td></td>
<td>.086</td>
</tr>
<tr>
<td>(3) ASQ x CTQ</td>
<td>-.119</td>
<td>-.461</td>
<td></td>
<td></td>
<td>.117</td>
</tr>
</tbody>
</table>

Note: CTQ= Childhood Abuse; ASQ= Attributional Style; Dependant variable; PTSD=PTSD Civilian Version

In the sixth regression analysis (see Table 11), the relationship between the experience of childhood abuse and alcohol abuse was examined. In the first step, the experience of childhood abuse was not a significant predictor of alcohol abuse (β=-.055, p=.521), therefore not further analyses were conducted with this variable.

Table 6
Childhood Abuse as a Moderator between Explanatory Style and Alcohol Abuse

<table>
<thead>
<tr>
<th>Regression:</th>
<th>b</th>
<th>β</th>
<th>R²</th>
<th>RA</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>.007</td>
<td>.030</td>
<td></td>
<td></td>
<td>.736</td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>.048</td>
<td>.055</td>
<td></td>
<td></td>
<td>.728</td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) ASQ</td>
<td>.008</td>
<td>.037</td>
<td>.004</td>
<td>-.017</td>
<td>.938</td>
</tr>
<tr>
<td>(2) CTQ</td>
<td>.065</td>
<td>.074</td>
<td></td>
<td></td>
<td>.775</td>
</tr>
<tr>
<td>(3) ASQ x CTQ</td>
<td>-.012</td>
<td>-.023</td>
<td></td>
<td></td>
<td>.780</td>
</tr>
</tbody>
</table>

Note: CTQ= Childhood Abuse; ASQ= Attributional Style; Dependant variable; AUDIT= Alcohol Abuse
Discussion

Representativeness of the Current Sample to the General Population

In the current study, percentages of respondents reporting traumatic experiences were comparable to other studies (Kessler et al, 1995; US Census Bureau, 2003; US Department of Health and Human Services, 2004). Approximately 56% of the current sample reported that they have experienced a generally traumatic event. This is consistent with results from the National Comorbidity Study, a national epidemiologic study in which between 50-60% of participants endorsed traumatic experiences (US Department of Human Services, 2004).

In the current sample, participants reported lower levels of CPA and higher levels of CSA in comparison to what has been found in other studies. In the current study, 1% of participants reported experiencing CPA while 24% reported experiencing CSA. This is less than the amount of CPA and more CSA than that reported by the U.S. Department of Health and Human Services, in which 22% of people have experienced CPA and 8% have experienced CSA (U.S. Department of Health and Human Services, 2006). However, higher frequencies of CSA have been reported among other samples, which suggests that differences in prevalence rates of abuse in the current study could be within the normal range when compared to similar studies (Medrano, Zule, Hatch, & Desmond, 1999).

Higher levels of CSA among the current sample may due to the assessment measure used to determine this data. In the current study, abuse was assessed using a standardized measure which contained behaviorally specific questions of abuse experiences. The U.S. Census Bureau abuse reports were gathered via the use of state
reporting agencies, in which each state utilized different methods to substantiate abuse reports (U.S. Census Bureau, 2003; U.S. Department of Health and Human Services, 2006). Differences in reporting styles may have yielded higher levels of CSA than that of the U.S. Census Bureau. Moreover, people are more likely to endorse behaviorally objective questions instead of potentially stigmatizing questions which use the word abuse (Bernstein & Fink, 1998).

In summary, although the rates of CSA found in the current study were overall higher than those found among U.S. Census data, other studies have also found increased rates when compared to Census reports. Also, assessment techniques and differences in population demographic information when compared to the U.S. Census data may have resulted in the discrepancies regarding prevalence rates.

In the current sample, participants reported extremely high levels of alcohol use (94%, M=17, SD=8). According to the U.S. Department of Health and Human Services, 20.2% of adult Americans abused alcohol during 2004 and 5.6% were identified as heavy users, consuming more than 5 drinks daily (U.S. Department of Health and Human Services, 2004). Furthermore, the measure used to determine alcohol abuse was able to determine “medium” alcohol use from “high” and “extreme” alcohol use (Babor, Higgins-Biddle, Saunders & Monterio 2001). In the current sample, 52% of participants engaged in medium use (score of 8-15), 40.1% engaged in high use (scores of 16-20) and 25.6% engaged in extreme use. According to Barbor, Higgins-Biddle, Saunders & Monterio (2001) “scores between 8 and 15 are most appropriate for simple advice focused on the reduction of hazardous drinking. Scores between 16 and 19 suggest brief counseling and continued monitoring. AUDIT scores of 20 or above clearly warrant
Cognitive Attributions and Traumatic Experiences

further diagnostic evaluation for alcohol dependence.” This breakdown in scores suggests that the sample populations “extreme” scores on the AUDIT are slightly elevated in comparison to the U.S. Department of Health and Human Services averages. Additionally, all participants in the current study were enrolled in a substance abuse program. This means that all participants in the current study had been evaluated by an outpatient mental health agency and determined to need drug and alcohol treatment. Therefore, the likelihood of the experience of alcohol use was increased due to the nature of the participants.

Additionally, in the current sample, 72% (M=24, SD=9) of participants endorsed depressive symptoms, in comparison to the national average of 14.8% (U.S. Department of Health and Human Services, 2004). Furthermore, the rate of alcohol use among adults who had experienced a past year depressive symptoms was 57.4% (U.S. Department of Health and Human Services, 2004). In the current study, depressive symptoms were assessed using a standardized measure which contained behaviorally specific questions of depressive experiences. The U.S. Census Bureau depression reports were gathered via the use of state reporting agencies, in which each state utilized different methods to substantiate depressive symptoms (U.S. Census Bureau, 2004; U.S. Department of Health and Human Services, 2004). Differences in reporting styles may have yielded higher levels of depressive symptoms than that of the U.S. Census Bureau.

Summary of Findings

The experience of generally traumatic events did not significantly predicted PTSD symptoms, neither did explanatory style moderate the relationship between PTSD symptoms and generally traumatic events. In past research, there were significant
associations between pessimistic attributions for hypothetical negative events and PTSD symptoms among combat veterans (McCormick, Taber, & Kruedelbach, 1989) and internalized attributions have been related to internalizing symptoms, such as anxiety (Brown & Kolko, 1999). It is possible that in the current study, explanatory style did not moderate the relationship between generally traumatic events and PTSD symptoms because respondents may have answered questions on the ASQ in a socially desirable manner. Socially desirable responding is typically described as the tendency to give positive self descriptions (Paulhus, 2002). This is problematic due to the response style making it difficult to determine underlying psychological constructs (Paulhus, 2002).

The experience of generally traumatic events was a significant predictor of depressive symptoms and accounted for 40% of the variance in scores. Furthermore, attributional style was not a significant predictor of depressive symptoms, and it did not moderate the relationship between generally traumatic events and depressive symptoms. This finding does not support past research, which indicates that people who have a pessimistic explanatory style for adverse events are at risk for becoming depressed when negative events occur (Abramson, Seligman, & Teasdale, 1978; Buchanan & Seligman, 1995; Peterson, Maier, Seligman, 1993; Seligman, 1992; Seligman, Abramson, Semmel, & von Baeyer, 1979). Pessimism is associated with hopelessness, which is also correlated with depressive symptoms (Voelz, Haeffel, Joiner, Deneen-Wagner, 2003; Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). Additionally, these findings are not consistent with previous findings, in which optimism was a protective factor following a potentially traumatic event, such as missile attacks (Zeidner & Hammer, 1992). A possible explanation for the discrepancy between current and past
The experience of generally traumatic events did not significantly predict alcohol abuse. Additionally, attributional style did not moderate the relationship between generally traumatic events and alcohol abuse. Again, this could be due to the ASQ not moderating any of the variables in the current study. Additionally, although there was a significant amount of both alcohol abuse and the experience of generally traumatic events, there was not enough predictive power to significantly predict the existence of a relationship between these variables. Lastly, the experience of CPA and CSA was not a significant predictor of alcohol abuse. Again, this may be due to not enough participants in the current research endorsing CPA, hence resulting in insufficient power to examine this variable (Cohen, 1988).

The experience of CPA and CSA did not significantly predict depressive symptoms, PTSD symptoms and or alcohol abuse. In the current sample, 1% reported experiencing CPA and 24% reported CSA. This may have been due to not enough participants in the current sample indicating the experience of CPA, hence not providing enough data to examine this variable (Cohen, 1988). This is problematic due to there not being enough participants for the researcher to adequately examine the variable (Cohen, 1988). Furthermore, in past research, there have been significant associations between pessimistic attributions for hypothetical negative events, depressive symptoms, and PTSD symptoms among CSA survivors (Deblinger et al., 1989; Wenninger & Ethers, 1998) and CPA survivors (McLeer et al., 1988). Although optimism has been shown to be a protective factor for individuals who have experienced the adversity of CPA and
Cognitive Attributions and Traumatic Experiences

CSA (Feiring, Taska, & Chen, 2002; Spaccarelli & Fuchs, 1997; Wolfe, Sas, & Wekerle, 1994), this was not the case in the current research. Again, this may be because most participants in the current study did not endorse clinically significant levels of either CPA or CSA (1% indicated physical abuse and 24% indicated sexual abuse). Thus, there was insufficient power to examine this variable (Cohen, 1988).

Limitations

There are several limitations in the current study. The first limitation of the current study involves the use of retrospective methodology. The retrospective self-report measures were used to assess the experience of potentially traumatic events (Life Events Checklist) and child abuse (Childhood Trauma Questionnaire). This may be problematic due to people failing to remember specific events from the past or remembering things in an incorrect manner. This may have reduced the validity of the data. Additionally, self-report data can be challenging because no collateral information can be gathered to determine truthfulness of self-report measures.

Another limitation to the current study is the lack of CPA reported by participants. One possible explanation for this difference is that participants may have attempted to answer the questionnaires in a socially desirable manner. Participants filled out questionnaires while sitting next to group members. They may have felt self-conscious and may not have answered questions honestly due to these conditions. In addition, when participants did endorse potentially traumatic events and child abuse, there was no way to determine if these events were considered traumatic to the participants. Because of these factors, participants may have endorsed lower levels of distress and or the experience of CPA. However, steps were taken to protect confidentiality such as keeping the data and
the informed consent in separate locked locations. The data did not include any identifying information. Given these steps, of which all participants were aware, socially desirable responses may have been reduced.

Future Directions for Research

Future researchers may want to focus on differences in how individual who abuse substances cope with generally traumatic events and childhood abuse in comparison to other populations. The current sample endorsed the experience of generally traumatic events and childhood sexual abuse, yet may have used different means of coping with these experiences to decrease distress. Through learning how explanatory style develops in individuals and the way in which optimism may moderate the relationship between potentially traumatic events, child abuse, and symptomology, clinicians may be able to better serve this population in a therapeutic manner.

Also, one of the major limitations of the current study is that we do not know if the experience of a potentially traumatic events and child physical and or sexual abuse was considered traumatic to the participants. Therefore, in the future, researches may want to conduct informational interviewing using an empirically supported structured interviewing tool to accurately identify if experiences were in fact traumatic for the participants.

In addition, in assessing the experience of CSA, factors such as duration, severity, relationship to the perpetrator, and age of the abuse were not assessed. All of these factors have been proven in past research to be key elements in determining resulting symptomology following CSA and CPA (Deblinger et al., 1989). Therefore, in the
future, assessing for these factors may be helpful in determining the specific differences among participants who had experienced CSA.

**Conclusion**

In conclusion, it was found that the experience of generally traumatic events predicted depressive symptoms. This has important implications for clinicians because it suggests that treatments should include skills training on how to cope with negative life events, which may facilitate lower levels of distress. Furthermore it was found that explanatory style did not moderate the relationship between depressive symptoms, PTSD symptoms, or alcohol abuse among individuals who had experienced potentially traumatic events. Lastly, explanatory style was not found to moderate the relationship between depressive symptoms, PTSD symptoms, and or alcohol abuse in individuals who had experienced CPA or CSA, which may have been due to insufficient power to detect significant correlations were such relationships existed (Cohen, 1988).
Appendix 1

Demographic Questionnaire

Please complete the following questionnaire:

What is your gender?
☐ Male      ☐ Female

What is your age? __________

Please indicate your race/ethnicity (check all that apply).
☐ Asian      ☐ African-American      ☐ Caucasian
☐ Hispanic   ☐ Multi-Ethnic/Other   ☐ Native American
AUDIT
1. How often do you have a drink containing alcohol?
   - Never
   - Monthly or less
   - 2-4 times a month
   - 2-3 times a week
   - 4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   - 1 or 2
   - 3 or 4
   - 5 or 6
   - 7 to 9
   - 10 or more
3. How often do you have six or more drinks on one occasion?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
4. How often during the last year have you found it difficult to get the thought of alcohol out of your mind?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
5. How often during the last year have you found that you were not able to stop drinking once you had started?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
6. How often during the last year have you been unable to remember what happened the night before you had been drinking?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
7. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
8. How often during the last year have you had a feeling of guilt or remorse after drinking?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily
9. Have you or someone else been injured as a result of your drinking?
   - No
   - Yes, but not in the last year
   - Yes, during the last year
10. Has a relative, friend, doctor or any other health worker been concerned about your drinking or suggested you cut down?
    - No
    - Yes, but not in the last year
    - Yes, during the last year

The AUDIT questionnaire was developed by the World Health Organization (1993)
Center for Epidemiologic Studies Depression Scale (CES-D)
Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the past week: (circle one number on each line)
Rarely or Some or a Occasionally or All of none of little of a moderate the time During the past week... the time the time amount of time
(less than 1 day) (1-2 days) (3-4 days) (5-7 days)
1. I was bothered by things that usually don’t bother me........................................0 1 2 3
2. I did not feel like eating; my appetite was poor..................................................0 1 2 3
3. I felt that I could not shake off the blues even with help from my family..............0 1 2 3
4. I felt that I was just as good as other people.........................................................0 1 2 3
5. I had trouble keeping my mind on what I was doing........................................0 1 2 3
6. I felt depressed......................................................................................................0 1 2 3
7. I felt that everything I did was an effort..............................................................0 1 2 3
8. I felt hopeful about the future.............................................................................0 1 2 3
9. I thought my life had been a failure....................................................................0 1 2 3
10. I felt fearful.........................................................................................................0 1 2 3
11. My sleep was restless.......................................................................................0 1 2 3
12. I was happy.......................................................................................................0 1 2 3
13. I talked less than usual....................................................................................0 1 2 3
14. I felt lonely.......................................................................................................0 1 2 3
15. People were unfriendly....................................................................................0 1 2 3
16. I enjoyed life.....................................................................................................0 1 2 3
17. I had crying spells............................................................................................0 1 2 3
18. I felt sad.........................................................................................................0 1 2 3
19. I felt that people disliked me...........................................................................0 1 2 3
20. I could not "get going"....................................................................................0 1 2 3

References
CTQ

<table>
<thead>
<tr>
<th></th>
<th>Never True</th>
<th>Rarely True</th>
<th>Sometimes True</th>
<th>Often True</th>
<th>Very Often True</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I was growing up...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I didn’t have enough to eat.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>2. I knew that there was someone to take care of me and protect me.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>3. People in my family called me things like “stupid,” “lazy,” or “ugly.”</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>4. My parents were too drunk or high to take care of the family.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>5. There was someone in my family who helped me feel that I was important or special.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>6. I had to wear dirty clothes.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>7. I felt loved.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>8. I thought that my parents wished I had never been born.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>10. There was nothing I would change about my family.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>11. People in my family hit me so hard that it left me with bruises or marks.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>12. I was punished with a belt, a board, a cord, or some other hard object.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>13. People in my family looked out for each other.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>14. People in my family said hurtful or insulting things to me.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>15. I believe that I was physically abused.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>16. I had the perfect childhood.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>18. I felt that someone in my family hated me.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>19. People in my family felt close to each other.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>20. Someone tried to touch me in a sexual way, or tried to make me touch them.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
<tr>
<td>21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.</td>
<td>NT</td>
<td>RT</td>
<td>ST</td>
<td>OT</td>
<td>VT</td>
</tr>
</tbody>
</table>
22. I had the best family in the world.
   NT   RT   ST   OT   VT
23. Someone tried to make me do sexual things or watch sexual things.
   NT   RT   ST   OT   VT
24. Someone molested me.
   NT   RT   ST   OT   VT
25. I believe that I was emotionally abused.
   NT   RT   ST   OT   VT
26. There was someone to take me to the doctor if I needed it.
   NT   RT   ST   OT   VT
27. I believe that I was sexually abused.
   NT   RT   ST   OT   VT
28. My family was a source of strength and support.
   NT   RT   ST   OT   VT
### PTSD CheckList – Civilian Version (PCL-C)

<table>
<thead>
<tr>
<th>No.</th>
<th>Response</th>
<th>Not at all (1)</th>
<th>A little bit (2)</th>
<th>Moderately (3)</th>
<th>Quite a bit (4)</th>
<th>Extremely (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.</td>
<td>Repeated, disturbing dreams of a stressful experience from the past?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4.</td>
<td>Feeling very upset when something reminded you of a stressful experience from the past?</td>
<td></td>
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</tr>
<tr>
<td>5.</td>
<td>Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?</td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?</td>
<td></td>
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<tr>
<td>7.</td>
<td>Avoid activities or situations because they remind you of a stressful experience from the past?</td>
<td></td>
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<tr>
<td>8.</td>
<td>Trouble remembering important parts of a stressful experience from the past?</td>
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</tr>
<tr>
<td>9.</td>
<td>Loss of interest in things that you used to enjoy?</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>10.</td>
<td>Feeling distant or cut off from other people?</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>11.</td>
<td>Feeling emotionally numb or being unable to have loving feelings for those close to you?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12.</td>
<td>Feeling as if your future will somehow be cut short?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13.</td>
<td>Trouble falling or staying asleep?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14.</td>
<td>Feeling irritable or having angry outbursts?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15.</td>
<td>Having difficulty concentrating?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>16.</td>
<td>Being “super alert” or watchful on guard?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>17.</td>
<td>Feeling jumpy or easily startled?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
PCL-M for DSM-IV (11/1/94) Weathers, Litz, Huska, & Keane National Center for PTSD - Behavioral Science Division
**LEC**

**Instructions:** Listed below are a number of difficult or stressful things that sometimes happen to people. Be sure to consider your ENTIRE LIFE (growing up as well as adulthood) as you go through the list of events. Please circle the answer that is most true for you.

<table>
<thead>
<tr>
<th>Happened to me</th>
<th>Witnessed it</th>
<th>Learned about it</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Natural Disaster (for example, flood, hurricane, tornado, earthquake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>2. Fire or explosion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>3. Transportation Accident (e.g., car, boat, train, plane)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>4. Serious accident at work, home, or during recreational activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>5. Exposure to toxic substance (e.g., dangerous chemicals, radiation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>6. Physical assault (e.g., being attacked, hit slapped, kicked, beaten up)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>7. Assault with a weapon (e.g., being shot, stabbed, threatened with a knife, gun, bomb)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>8. Sexual assault (e.g., rape, attempted rape, made to perform any type of sexual act through force or threat of harm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>9. Other unwanted or uncomfortable sexual experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>10. Combat or exposure to a war-zone (in the military or as a civilian)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>11. Captivity (e.g., being kidnapped, abducted, held hostage, prisoner of war)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>12. Life threatening illness or injury</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>13. Severe human Suffering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>14. Sudden, violent death (e.g., homicide, suicide)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>15. Sudden, unexpected death of someone close to you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>16. Serious injury, harm, or death you caused to someone else</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
<tr>
<td>17. Any other very stressful event or experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happened</td>
<td>Witnessed</td>
<td>Learned</td>
<td>Not Sure</td>
</tr>
</tbody>
</table>
References


