CRITICAL INCIDENT, ADULT ATTACHMENT STYLE, AND POSTTRAUMATIC STRESS DISORDER: A COMPARISON OF THREE GROUPS OF SECURITY WORKERS

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In this paper the authors render the results of research investigating adult attachment and posttraumatic stress disorder (PTSD) in a sample of Belgian security workers. The sample contained 3 subsamples: 68 individuals who had directly experienced a critical incident, 67 individuals who indirectly went through a critical incident, and 77 individuals who had not experienced a critical incident in the last six months. The analysis of the research results shows that the secure attachment style and the three PTSD trauma symptom clusters in DSM-IV - intrusion, avoidance/numbing, and hyperarousal - discriminate between the three

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Security workers commonly experience stress inherent to their profession. They often work under difficult conditions and are exposed to danger and episodes of violence, such as intimidation, threats, and shootings. Security workers are at high risk of experiencing disabling occupational stress reactions and, at the extreme, of being diagnosed with Posttraumatic Stress Disorders (PTSD; Borritz et al., 2006; Clair, 2006; Schaufeli & Peeters, 2000). The first objective of our study was to examine the relationship between attachment style and PTSD in a sample of security workers who experienced critical incidents (active or passive) and a sample of security workers who did not. The second objective was to investigate the explanatory contribution of the three PTSD subscales in the group of insecure/secure-attached security workers. First of all, three concepts have to be properly defined: critical incident, PTSD, and adult attachment.

Critical incident is used in literature when referring to traumatic events that involve the potential for severe injury, death, and/or devastation (Clair, 2006). The most widely accepted definition of a critical incident is, “An incident that causes a person to have unusually strong emotional reactions that have the potential to interfere with his or her ability to function either at the scene or later” (Clair, 2006; Garrison, 1991, p. 45). This definition is broad and presents a challenge concerning the demarcation of the description of “an incident”. For that reason, we prefer the categorical definition of Carlier and Gersons (1994). They separated critical incidents into two categories. The first category includes incidents in which the individual is an active participant such as shootings, hostage situations, and riots. The second category includes incidents when the individual is not present for the actual event but arrives to encounter the aftermath of the event (Clair). Security workers often experience both types of critical incidents throughout their careers (Carlier, Lamberts, & Gersons, 1997; Clair).

Secondly, we have to define PTSD in relation to direct or indirect exposure to a critical incident. According to the Diagnostic and Statistical Manual for Mental Disorders (DSM IV-TR; American Psychiatric Association, 2000), there are three sets of symptom clusters related to PTSD. The first symptom cluster, re-experiencing the event, may occur in several ways. The individual may have recurring thoughts and nightmares about the event, may feel as though the event is recurring, and/or may experience psychological and/or physical reactions
to stimuli associated with the event. The second cluster, avoidance of stimuli associated with the event and numbing of general responsiveness occurs when the individual avoids thoughts and feelings associated with the event as well as avoiding other stimuli such as people, places, and activities associated with the event. The avoidance cluster is also characterized by difficulty remembering important aspects of the event, diminished enjoyment in pleasurable activities, a sense of foreshortened future, feelings of detachment, and a restricted range of affect. The last symptom cluster, increased arousal, is indicated by difficulty falling – or staying – asleep, anger and irritability, hypervigilance, difficulty concentrating, and an exaggerated startle response (APA, 2000; Clair, 2006).

When a person experiences a traumatic event, it is common and natural for him/her to experience some of these symptoms in the immediate aftermath. When these symptoms persist after two weeks, a diagnosis of Acute Stress Disorder (ASD) may be appropriate. When the duration of the symptoms persists for more than one month, a diagnosis of PTSD may be warranted (DSM IV-TR, APA, 2000). Some research suggests that the more critical incidents to which an individual is exposed, the more intense PTSD symptoms he/she is likely to experience. However, not everyone who experiences numerous critical incidents develops intense PTSD symptoms, indicating that other variables may influence this relationship (Clair).

Adult attachment is examined in relation to critical incidents and PTSD. Adults have four attachment styles: secure, anxious-preoccupied, dismissive avoidant, and fearful avoidant (Bartholomew & Horowitz, 1991; Daniel, 2006; Feeny & Noller, 2004; Pietromonaco & Barrett, 1997; Scharfe & Bartholomew, 1994). Securely attached adults tend to have positive views of themselves and their partners. Securely attached people feel comfortable both with intimacy and with independence. Compared to securely attached adults, people who are anxious or preoccupied with attachment tend to have less positive views about themselves. They often doubt their worth as a partner and blame themselves for their partners’ lack of responsiveness. Adults who are dismissive-avoidant attached view themselves as self-sufficient and invulnerable to feelings associated with being closely attached to others. They often deny needing close relationships. People with a dismissive-avoidant attachment tend to deal with rejection by distancing themselves from the sources of rejection (i.e., their intimate/romantic partners). People with the fearful-avoidant attachment style have mixed feelings about close relationships. While they desire to have emotionally close relationships, they tend to feel uncomfortable with emotional closeness. These mixed feelings are combined with negative views about themselves and their partners (Bartholomew & Horowitz; Daniel; Feeny & Noller; Pietromonaco & Barrett; Scharfe & Bartholomew).
CRITICAL INCIDENTS, ATTACHMENT STYLE, AND PTSD

In the last decade, research on job-related stress and PTSD has been concentrated on certain professions such as police officers, war veterans (Clair, 2006; Dieperink, Leskela, Thuras, & Engdahl, 2001; Liberman et al., 2002; Solomon, Ginzburg, Mikulincer, Neria, & Ohry, 1998), fire-fighters, rescue workers (Morren et al., 2005; Slottje et al., 2006) emergency services personnel (Borritz et al., 2006), and correctional and penitentiary workers (Moon & Maxwell, 2004). Research findings and theoretical reflections have brought together the themes of attachment disorganization and vulnerability to trauma-related disorders (Liotti, 2004). In the past few years, the role of the attachment style as a stress-moderating resource has been discussed. Dieperink, Leskela, Thuras, and Engdahl investigated adult attachment style and PTSD symptomatology in 107 former prisoners of war. Those with secure attachment styles scored significantly lower on measures of PTSD than did those with insecure styles, and attachment style was a stronger predictor of PTSD symptom intensity than was trauma severity. Zakin, Solomon, and Neria (2003) found that the attachment style had a direct main effect and was inversely related to PTSD and psychiatric symptomatology in a group of war veterans. Declercq and Willemsen (2006) found that fearful-avoidant and anxious-preoccupied attached individuals reported more stress than did securely attached and insecurely attached individuals of the dismissive type. The adult attachment styles appeared to differentiate between individuals who do or do not develop posttraumatic stress syndrome after being confronted with a critical incident. Those findings fit with research among police officers. Researchers pointed out that the exposure to routine work stressors predicted general psychological distress, as well as posttraumatic stress symptoms. Multivariate analyses found that these effects were independent of, and larger than, the effects of cumulative critical incident exposure. Routine occupational stress exposure appears to be a significant risk factor for psychological distress among police officers, and a surprisingly strong predictor of posttraumatic stress symptoms (Liberman et al., 2002; Mikulincer & Shaver, 2007).

Two questions were examined in this study. Firstly, do the adult attachment styles differ significantly among three groups of security workers (active victims, passive/indirect victims, and nonvictims) of job-related critical incidents in the last six months? Secondly, do PTSD subscales differentiate between secure and insecure attached groups?

METHOD

PARTICIPANTS

The participants in the study were 212 male adults working for a security
company in Belgium. The sample contained three subsamples: 68 individuals who had directly experienced a critical incident in the past six months, 67 individuals who had indirectly experienced a critical incident, and 77 individuals who had not experienced a critical incident. The mean age of the participants was 42 years and 2 months ($SD = 12.90$). Fifty-three percent were married, 18% single, 9% divorced, 16% were not married but were living in a stable relationship with a partner, and 4% did not provide marital status. The three groups were comparable on three variables: age, time in service, and marital status. All participants volunteered to participate in the study.

The categorical definition of a critical incident (Carlier & Gersons, 1994) was used to divide the security workers into three categories. Thirty-two percent ($n = 68$) of the respondents experienced violent incidents as an active participant in the event such as shootings (active victims). Thirty-two percent ($n = 67$) experienced depressing incidents in which the individual was not present during the actual event but arrived to encounter the aftermath of the event (passive victims). Finally, 36% ($n = 77$) of the respondents had not been exposed to a critical incident in their work (nonvictims).

**Measures**

The Davidson Trauma Scale (DTS; Davidson et al., 1997) provides a brief and accurate measure of PTSD symptoms. It is a 17-item self-report scale in which each item corresponds to a DSM-IV™ symptom of PTSD and in which each symptom is rated in terms of frequency and severity. The DTS norms provide three subscale scores reflecting the three trauma symptom clusters in DSM-IV: intrusion, avoidance/numbing and hyperarousal. Participants are asked to indicate how often they have experienced each symptom ranging from 0 (*not at all*) to 4 (*every day*). A summed score for the frequency of all of the symptoms was utilized as a measure of PTSD (Davidson, 2004; Davidson et al., 1997), and the instrument is designed to cover all types of trauma including accidents, combat, sexual or criminal assault, natural disaster, torture, burns, loss of property, near-death experiences, and bereavement. In our study, the scale demonstrated good test-retest reliability ($r = 0.86$) and internal consistency ($r = 0.99$). Good convergent and divergent validity was obtained. We could, therefore, conclude that the DTS appears to be a scale which is particularly suited to assessing symptom severity and treatment outcome and also in screening for the likely diagnosis of PTSD.

The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) is a single-item measure made up of four short paragraphs, each describing a prototypical attachment pattern as it applies in close adult peer relationships. Participants are asked to rate their degree of correspondence to each prototype on a 7-point scale. These ratings (or scores) provide a profile of an individual’s
attachment feelings and behavior. The RQ can be worded either in terms of general orientations to close relationships, orientations to romantic relationships, or orientations to a specific relationship (or some combination of the above). The RQ was designed to obtain continuous ratings of each of the four attachment patterns, which we considered to be the ideal use of the measure. However, if necessary, the RQ can also be used to categorize participants into their best fitting attachment patterns (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994a, 1994b).

**Statistical Analysis**

The one-way ANOVA procedure was used to compare whether the adult attachment style on the one hand and PTSD on the other hand differ significantly among active victims, passive victims, and nonvictims of one or more critical incident(s) in the past six months. Secondly, the group of 212 security workers was divided into two groups: secure and insecure. A linear regression analysis was used to estimate the unique contribution of PTSD in forecasting the dependent variable (insecure attached = 0; secure attached = 1).

**RESULTS**

This study was designed to differentiate between active victims, passive victims, and nonvictims of critical incidents. Nonvictims differ significantly in their secure adult attachment style. Active and passive victims of critical incidents were less securely attached to other adults than were nonvictims (Secure adult attachment on a 7-point scale: active victim $M = 4.25$; passive victim $M = 4.25$; nonvictim $M = 5.18$; $F = 8.50$, $p < 0.001$). The anxious-preoccupied, dismissive avoidant, and fearful-avoidant attachment styles did not differentiate between the three groups. In the next step a one-way ANOVA was used to examine whether the three subscales: intrusion, avoidance, and hyperarousal of the Davidson Trauma Scale differ between active, passive, and nonvictims. There were no significant differences between active and passive victims on the three subscales. Nonvictims differ significantly from active and passive victims on the three subscales (Intrusion: active victim $M = 10.03$; passive victim $M = 9.29$; nonvictim $M = 7.54$; $F = 9.32$, $p < 0.001$; Avoidance: active victim $M = 14.82$; passive victim $M = 14.89$; nonvictim $M = 12.09$; $F = 8.39$, $p < 0.001$; Hyperarousal: active victim $M = 13.90$; passive victim $M = 12.96$; nonvictim $M = 10.52$; $F = 12.48$, $p < 0.001$). Furthermore, the three PTSD subscales were introduced in a logistic regression model. We investigated their contribution independently of one another to the forecasting of insecure adult attachment. We tested our hypothesis that the PTSD subscales, intrusion, avoidance, and hyperarousal contributed significantly to the explanation of insecure adult
attachment. The model classified correctly 76% of the 212 respondents as either insecure or secure attached. A Cox & Snell $R^2$ of .12 showed that the global model explained 12% of the variance in the dependent variable. One variable offered an unique and significant contribution to the prediction of insecure attachment. Avoidance ($\beta = -.061$) was negatively related to the dependent variable in the logistic regression model ($0 = \text{insecure}; 1 = \text{secure}$).

**DISCUSSION**

In the last two decades, researchers have begun to find evidence that police officers and correctional officers could develop short-term crisis reactions or PTSD after a period of time. In this study, we examined adult attachment style and PTSD after being exposed to a critical incident. We stressed the importance of defining the meaning of a critical incident. The categorizing method used by Carlier and Gerson (1994) was used to divide security workers into three subgroups of active, passive, and nonvictims. In line with the findings of other researchers, we found that active and passive victims of critical incidents were less securely attached to other adults than were nonvictims. The anxious-preoccupied, dismissive avoidant, and fearful avoidant attachment styles did not differentiate between active, passive, and nonvictims. In a next step, nonvictims differ significantly from active and passive victims on the PTSD symptom subscales intrusion, avoidance, and hyperarousal. Multivariate analysis showed that the PTSD symptom avoidance behavior was significantly related to insecure adult attachment and explained 12% of the variance in the dependent variable. This result highlighted the fact that insecure adult attachment among security workers was most strongly associated with PTSD avoidant symptoms rather than with intrusive or hyperarousal symptoms. This finding corresponds with the findings of other researchers (Allen, Coyne, & Huntoon, 1998; Stovall-McClough & Cloitre, 2006).

In our research, the categorical definition of Carlier and Gerson could not be confirmed. There was no difference between active and passive victims of a critical incident with regard to attachment quality and the PTSD symptoms developed. Active and passive victims of a critical incident are equally plagued by recurrent nightmares, flashbacks during which they graphically re-experience the trauma, and they characteristically have high anxiety levels. Our findings correspond with those of other researchers (Declercq & Willemsen, 2006; Shapinsky, Rapport, Henderson, & Axelrod, 2005).

**RESEARCH PERSPECTIVES AND THE LIMITATIONS OF THIS RESEARCH**

It is important to mention that the development of PTSD is the result of complex mechanisms and context. Psychology, sociology, biology, neurochemistry, and
neuroanatomy all contribute to a core of symptoms and mechanisms. Because of this, the symptomatology of patients suffering from PTSD is also very complex (e.g., affective deregulation, dissociation and somatization, alterations in self-perception, altered relationships with others, altered systems of meanings; Sack, 2004). Individuals suffering from PTSD display biochemical changes in the body and brain. Biological changes observed include increased corticotrophin-releasing factor concentrations, catecholamine depletion within the central nervous system, and reduced hippocampal volume. Over the last 10 years, observers of biological changes have also found that urinary and plasma cortisol levels are considerably lower in PTSD patients than in non-PTSD trauma survivors or normal controls. Furthermore, it has been found that the circadian pattern of cortisol release from the adrenal glands registers a greater dynamic range in PTSD than in patients with major depression or in normal controls (Yehuda, 2001). Adami, Konig, Vetter, Hausmann, and Conca (2006) found preliminary evidence that the amygdala-hippocampal region is functionally and morphologically involved in the aetiology of PTSD. In the last two decades, (since the inclusion of PTSD in the DSM-III), it has been demonstrated in a number of studies that pharmacological and several cognitive-behavioral therapy programs are effective in the treatment of (chronic) PTSD. Eye movement desensitization and reprocessing and trauma-focused cognitive-behavioral therapy are both widely used and are effective in the treatment of PTSD (Seidler & Wagner, 2006). Selective serotonin reuptake inhibitors are considered efficient first-line medication treatment (Robert, Hamner, Ulmer, Lorberbaum, and Durkalski, 2006). Finally, there is no evidence-based research concerning the relationship between debriefing and PTSD among security workers. For other groups (e.g., police officers, firefighters) controlled and correlational studies have failed to demonstrate therapeutic effects of stress debriefings and in some studies iatrogenic effects have been reported (Bootzin & Bailey, 2005). For further research, it is important to use matched research groups and to choose cross-sectional designs. Future research must be more falsificatory oriented, and we recommend the use of interviews as well (e.g., Adult Attachment Interview and Adult Personality Functioning Assessment interview) Additionally, further research into psychotherapeutic, biological, and pharmacological treatment is necessary to study the changeability of adult attachment style and PTSD.

REFERENCES

PTSD AND ADULT ATTACHMENT STYLE


