

POLICE OFFICERS' COGNITIVE APPRAISALS FOR TRAUMATIC EVENTS: IMPLICATIONS FOR TREATMENT AND TRAINING

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Police officers often experience traumatic events with far greater frequency than the average citizen yet little is known about how they process these events or how this relates to recovery. This study presents the development and initial validation of a cognitive appraisal instrument designed to capture to police officers' experiences of trauma. Results indicated that officers' cognitive appraisals (particularly their perceptions of how the event overlapped with or impacted their personal lives) were more predictive of their response to trauma than years of experience or the severity of the event. The implications of these results for the treatment and training of officers are discussed.

Key words: police officers, traumatic events, cognitive appraisals, police trauma

POLICE OFFICERS' COGNITIVE APPRAISALS FOR TRAUMATIC EVENTS: IMPLICATIONS FOR TREATMENT AND TRAINING

Policing often is cited as one of the most stressful occupations (Anshel, 2000; Carlier, Lamberts, & Gersons, 1997). A unique source of stress for this population is the constant risk of exposure to traumatic events, a burden that far exceeds that of the average citizen. Although he or she may not encounter such events on a daily basis, a police officer always faces the threats of violent, dangerous, tragic, and unpredictable situations,

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any one of which can leave emotional and psychological scars. Their professional status as peacekeepers and rescuers exposes them to repeated instances of primary and secondary victimization, any one of which can disrupt an officer's functioning and interfere with safe and adequate job performance (Abdollahi, 2002; Carlier et al., 1997; Evans & Coman, 1993; MacLeod & Paton, 1999; Martelli, Waters, & Martelli, 1989; Robinson, Sigman, & Wilson, 1997; Violanti, 1996a; Violanti & Aron, 1994; Violanti & Gehrke, 2004; Wilson, Poole, & Trew, 1997).

The range of problems officers experience from exposure to such traumatic events is concerning for a number of reasons. First, as noted above, policing is a highly stressful occupation, and the constant stress of the job may interfere with an officer's ability to cope with the traumatic event. Alternatively, the process of healing may consume finite stores of mental and emotional energy, leaving fewer resources available for adequate and safe job performance. Third, unlike many other trauma victims, officers often are unable to avoid future situations similar to the traumatic event. In this sense, they are vulnerable to re-victimization, adding to difficulty in recovery. Secondary reactions may be delayed months or even years in an officer who initially may appear to be functioning adequately, often precipitated by new stressors that accumulate on an already overloaded system (Anshel, 2000; Reiser & Geiger, 1984; Violanti, 1996b). Fourth, although officers often report that the daily hassles of police work (e.g., organizational structure, shift work, lack of support) contribute more to the *chronic* stress they experience than does the danger associated with the job (Patterson, 2002), the impact of traumatic events can be much more *acutely* debilitating. That is, due to the infrequency of such events relative to daily hassles, their impact on officers can be much more unexpected and difficult to handle. And finally, all of this must be understood in the context of self-reported symptoms. People in general and officers in particular are prone to underestimate the magnitude of their distress, particularly when it might affect their ability to perform their job duties. As such, the rates of posttraumatic distress seen in this population may represent only 'the tip of the iceberg' of affected officers.

Severity of the Event

Surveys and assessments of police officers indicate that certain events may have a greater impact on an officer's ability to cope than others do. For instance, those who had been involved in shooting incidents (Martin, McKean, & Veltkamp, 1986) and who have had encounters with death (Robinson et al., 1997) exhibited more symptoms of post-traumatic stress disorder (PTSD) than those who had not been involved in such incidents. Officers whose partners were involved in shooting incidents were four times as likely to develop symptoms of PTSD, and those who responded to serious traffic accidents were more than five times as likely to develop such symptoms (Violanti & Gehrke, 2004). Although officers involved in shooting incidents have reported that the days immediately following the shooting were the most difficult (Loo, 1986), approximately 35% of those involved in shooting incidents retire from the force or are reassigned to non-patrol activity within a year (Violanti, 1996b), and 70% involved in an on-the-job killing leave the force within seven years (Williams, 1987).

Despite these broad findings, Carlier and colleagues (1997, p. 30) noted that the same “traumatic event successfully managed by one person can utterly destabilize” another, and they encouraged a classification of stressful or traumatic events based on the subjective experience of the individual rather than the event itself. In other words, there is no universal response to any specific event. Rather, a host of factors interact to determine the ways in which officers react to and cope with the events they experience. Chief among these is the ways in which individuals process and attach meaning to their experiences.

Cognitive Appraisals

This notion that the same horrific event can elicit quite different (and, in fact, opposite) reactions from those who experience it was best captured in Lazarus and Folkman's (1984) transactional model of stress. Cognitive appraisals refer to the ways in which individuals construe stressful or traumatic events in terms of their personal significance and meaning. They include an assessment of a situation with respect to a person's well-being (primary appraisals) as well as his or her ability to cope with the situation (secondary appraisals). These appraisals can be influenced by stable personality characteristics (e.g., optimism versus pessimism, ego strength), learned behavior patterns (e.g., coping style), and more situation-specific cues (e.g., controllability, perceived supports) (Lazarus, 1999; Lazarus & Folkman, 1984). The present study focused on the influence of primary (rather than secondary) appraisals in dealing with trauma.

Harm or loss.

Harm or loss appraisals reflect the amount or significance of damage sustained in a trauma (Lazarus, 1999; Lazarus & Folkman, 1984). For an officer, this may include physical injury (e.g., from being attacked), psychological pain (e.g., from losing a fellow officer or failing to save a child), or both. Although interpreting an event as a loss may seem to have its advantage in allowing officers to put the event behind them rather quickly, these types of appraisals are more likely to lead to passive forms of coping (e.g., avoidance, fatalism, wishful thinking) rather than the more sophisticated cognitive processing that often is crucial in dealing with trauma (Anshel, 2000; Taylor & Aspinwall, 1996).

Threat.

Threat appraisals, which refer to some anticipated harm or loss, reflect the often uncertain and unpredictable nature of policing. The uncertainty of many situations necessitates a cautious and skeptical approach, and the increase in arousal that results from such attributions can help to mobilize an officer for action (Lazarus, 1999; Lazarus & Folkman, 1984). However, an increase in arousal that is too great may distract the officer, and the resources needed to regulate emotional levels may actually hinder information processing and the ability to act (Taylor, & Aspinwall, 1996). Carlier, Lamberts, and Gersons (2000) found that officers with self-reported symptoms of PTSD were more likely to make attributions of a traumatic event reflecting vulnerability or threat than were those without such symptoms.

Challenge.

Challenge appraisals represent an opportunity to overcome obstacles, to experience mastery, or to gain or grow from a stressful event, such as how to analyze a homicide case, how to approach an armed felon, or how to negotiate a high-speed chase. Like threat appraisals, challenge appraisals can mobilize an individual's coping resources. However, without the overwhelming fear and anxiety typically associated with threat appraisals (Lazarus, 1999; Lazarus & Folkman, 1984), challenge appraisals allow an officer to maintain confidence and proper levels of arousal or alertness. They also can facilitate attention to threatening information, thereby facilitating problem-solving and the selection of more effective coping strategies (Anshel, 2000; Peacock, Wong, & Reker, 1993; Taylor & Aspinwall, 1996). A survey of Swedish officers revealed that officers who interpreted disturbing or traumatic events as opportunities for growth rather than as threatening or harmful experienced less overall distress as a result (Larsson, Kempe, & Starrin, 1988).

Perceived control.

Perceived control has to do with one's assessment of his or her ability to influence the environment in order to bring about desired outcomes, and it has long been known to have a powerful influence on people's ability to cope successfully (Bandura, 1977; Cohen & Edwards, 1989; Taylor, 1995; Taylor & Aspinwall, 1996; Taylor, Helgeson, Reed, & Skokan, 1991). Police work is in many ways a paradox of control. Placed in a role of considerable authority and control over others, police officers also encounter numerous events that are beyond their control – from the unpredictability of a roadside arrest to the unyielding nature of departmental policies. As a result, officers often experience considerable dissonance as they attempt to make sense out of stressful events that seem to be beyond their control (Violanti, 1996a). In general, the more uncontrollable or unpredictable an event is perceived, the greater the risk of developing posttraumatic symptoms (Carlier et al., 2000). Numerous studies have indicated that officers who maintain an internal locus of control and who appraise events as being within their ability to control exhibit less psychological distress than do those who maintain an external locus of control (Cooper, Kirkcaldy, & Brown, 1994; Fusilier, Ganster, & Mayes, 1987; Kirkcaldy, Cooper, Furnham, & Brown, 1993; Lester, Leitner, & Posner, 1985).

Self-efficacy versus self-blame.

Self-efficacy, a positive role appraisal, refers to a person's impression that he or she can perform a specific task or can achieve a certain goal; this typically derives from an assessment of past performance. Individuals high in self-efficacy typically respond better to trauma than do those who blame themselves for negative events (Anshel, 2000; Taylor & Aspinwall, 1996). Such individuals tend to appraise events as situations they can handle with relative ease, and they are more likely to take an active and healthy approach toward resolving them, resulting in less anxiety and distress.

Policing is a field that requires complex, delicate, and often immediate decision-making that can have dire and far-reaching consequences (Toch, 2002). As such, officers may attribute meaning to an event based on how well they were able to manage a difficult situation. An officer who reflects positively on his or her handling of a situation most likely

will believe that he or she can manage future situations appropriately and will experience less distress over traumatic events than one who is completely overwhelmed and immobilized with self-doubt and anxiety. Alternatively, police officers faced with repeated traumas may start to blame themselves for the negative outcomes and, consequently, may begin to doubt their adequacy as protectors of the public (Toch, 2002). Such attributions of self-blame in response to negative events can hinder adjustment, as they can lead to a perception of hopelessness and futility (Abramson, Seligman, & Teasdale, 1978).

THE PRESENT STUDY

Given the frequency of their exposure to traumatic events, we know that officers constitute an at-risk group with respect to posttraumatic illnesses. Yet, little is known about the ways in which officers appraise and attribute meaning to traumatic events they encounter on the job (but see also Carlier et al., 2000; Larsson et al., 1988; Patterson, 1999). The present study sought to assess how police officers appraise the traumatic events they experience on the job and to explore the relationship between these primary cognitive appraisals and officers' self-reported outcomes following such an event. The study employed a quantitative survey method to obtain data regarding officers' primary cognitive appraisals and self-reported negative outcomes in relation to their most traumatic on-the-job events. It presents the development and initial validation of a new measure of cognitive appraisals specific to police officers.

It was expected that: (a) the severity of the event would relate to a more negative outcome but that (b) officers' appraisals would have a more powerful effect (than severity) on outcome. Further, it was expected that (c) primary cognitive appraisals reflecting personal challenge, perceived control, and self-efficacy would relate to a more positive outcome, whereas those reflecting harm or loss, threat, anxiety, self-doubt, and (most especially) personalized experiences would relate to a more negative outcome.

METHOD

Procedure

Commanders from 11 Texas police agencies were contacted and asked for their permission to administer a series of questionnaires to their officers. These agencies ranged in size from 66 to 3,500 sworn officers and represented 5,319 sworn officers. Two were considered small agencies (50-100 officers), six were medium-sized agencies (101-300 officers), two were large agencies (301-1000 officers), and one was metropolitan (1000+ officers). The researcher contacted the administrators of these 11 agencies to explain the nature and purpose of the study and to obtain approval to solicit their officers. Once approval was obtained, the researcher contacted a liaison officer from each agency and asked him or her to brief the officers regarding the nature and purpose of the study prior to data collection. The researcher provided each liaison a brief synopsis of how to describe the study to the officers.

Data collection was carried out on-site at the different police agencies during officer roll calls at each shift change (i.e., dayshift, evening shift, and overnight shift). The principal investigator administered and collected all data at all sites, once per shift. Following a brief description of the study, the principal investigator reviewed the informed consent with the participants. After completing a brief demographic questionnaire, officers completed the Cognitive Appraisals Questionnaire regarding the most traumatic event they have experienced over their entire careers. Completion of the measures took approximately 20 to 30 minutes. Officers who were unable to complete the instruments at the time of data collection returned them at a later time to the liaison in a sealed envelope, who forwarded them to the principal investigator within three weeks.

Participants

Three hundred thirteen officers from 11 Texas police agencies (municipal and sheriff's offices) participated in the study. The sample was made up of 285 (91.1%) male and 26 (8.3%) female officers and had a mean age of 39.5 years ($SD = 8.3$). The majority of the sample was Caucasian ($n = 260$, 83.1%) but also included officers representing Hispanic ($n = 25$, 8.0%), African American ($n = 16$, 5.1%), Native American ($n = 5$, 1.6%), and Asian/Pacific Islander ($n = 2$, 0.6%) ethnicity [1]. The sample was fairly well-educated, with 4.5% ($n = 14$) receiving some graduate training, 27.2% ($n = 85$) holding a four-year degree, 12.5% ($n = 39$) holding a two-year degree, and 43.8% ($n = 137$) having some college education; 11.2% ($n = 35$) reported having a high school degree or equivalency. The majority ($n = 241$, 77.0%) of the sample was married or cohabitating with a partner; 16.6% ($n = 52$) was divorced or separated, 5.1% ($n = 16$) was single, and 0.3% ($n = 1$) was widowed. These officers had an average of 15 years ($SD = 7.7$) of law enforcement experience, ranging from one year to 37 years. The majority ($n = 245$, 78.3%) was of entry-level rank (i.e., officer, deputy, or detective) and primarily in either a patrol ($n = 189$, 60.4%) or an investigative ($n = 104$, 33.2%) position. More than one quarter ($n = 82$, 26.2%) reported prior military experience, averaging 7.0 years, and 7.3% ($n = 23$) reported an average of five years of firefighter or emergency medical service experience. Sample demographics are summarized in Table 1

Measures

Cognitive Appraisals Questionnaire. The Cognitive Appraisals Questionnaire (CAQ) was constructed for the purpose of this study. First, officers were asked to describe what they consider to be the most traumatic event they have experienced over their entire careers. They answered specific questions about the event, including: (a) years of police experience at the time of the event; (b) number of traumatic experiences prior to the event; (c) total number of traumatic events over their entire careers; (d) the perceived controllability of the event; and (e) the negative impact the experience had on their overall well-being (e.g., sleep disturbances, anxiety) in the months that followed. Responses to these latter two questions were rated on five-point Likert-type scales.

Next, officers were asked to indicate their agreement (currently, looking back on the event) with each of 38 statements on the CAQ on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). These items were derived via rational selection of themes

Table 1: Sample Demographic Characteristics and Policing Experience

Demographic	M (SD) / %
Age	M = 39.5 (SD = 8.3)
Gender	
Male	91.1%
Female	8.3%
Ethnicity	
Caucasian	83.1%
Hispanic	8.0%
African-American	5.1%
Native American	1.6%
Asian/Pacific Islander	0.6%
Marital status	
Single	5.1%
Married/co-habiting	77.0%
Divorced/separated	16.6%
Widowed	0.3%
Education	
High school/GED	11.2%
Some college	43.8%
2-year degree	12.5%
4-year degree	27.2%
Graduate school	4.5%
Years of policing experience	M = 15.0 (SD = 7.7)

from the literature (see Introduction). The original 48-item instrument was pilot tested on a convenience sample of 90 officers recruited specifically for this purpose from four local agencies, and it was refined via item analysis to retain those items with factor loadings $> .33$ and no cross-loadings (i.e., factor loadings $> .33$ on two or more factors). Ten items were deleted from the original instrument due to poor comprehensibility reported by respondents or factor loadings $< .33$. The next portion of the CAQ included two open-ended questions about the events: what surprised the officers about their initial reactions to these events, and how had their perspectives changed since these events. The final portion of the CAQ asked officers to rate the frequency and severity or traumatic nature of 10 police-specific events [2]. Officers rated the severity of each event on a scale from 0 (not at

all severe) to 100 (extremely severe), and these severity ratings were averaged in order to obtain a collective perception (i.e., from all officers) of the severity of each specific event.

RESULTS

Officers' Most Traumatic Events

The officers reported an average of 25.86 (SD = 103.40) traumatic on-the-job events, ranging from zero events (n = 4) to 1,250 events (n = 1). The specific type of event that officers reported was their most traumatic is presented in Table 2. The most common event was responding to the scene of a child death or serious injury, with more than

Table 2: Officers' "Most Traumatic Experiences" On the Job

Experience	Frequency (%)
Child death/serious injury	27.2%
Homicide/suicide/death scene (adult)	16.3%
Fellow officer killed/seriously injured	14.7%
Life threatened (e.g., shot, shot at, physical attack/injury)	13.6%
Others' threatened/killed (e.g., aim/discharge weapon, injure/kill suspect, observe other officer(s) injure/kill suspect)	12.1%
Fatal/serious accident	6.4%
Uncertain danger (e.g., high-speed chase, hostage, suspect arrest)	2.9%
Death notification	1.3%
Other (e.g., disciplinary action, civil suit, administrative difficulties)	1.3%
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Perceptions of control	
No control	35.5%
Very little control	19.8%
Some control	21.4%
A lot of control	15.0%
Total/complete control	3.5%
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Negative impact	
No effect	7.3%
Very little effect	20.1%
Some effect	39.6%
A large effect	24.3%
Affected every aspect	4.5%

Note. Nine officers (2.9%) indicated that they had not experienced an event that they considered to be particularly 'traumatic.'

one quarter (27.2%) of the officers identifying this as their most traumatic. The next most common responses were adult deaths scenes (e.g., homicide, suicide), fellow officers being killed or seriously injured in the line of duty, and situations in which the officer's life was threatened or harmed. These were followed by situations in which a suspect's life was threatened, harmed, or taken, and fatal or serious vehicle accidents. Least common were events involving uncertain danger (e.g., high-speed chase, hostage situation, arresting suspects), and notifying family members of a death.

Temporally, these events occurred at a point midway through officers' careers, in terms of years of service ($M = 7.11$ years, $SD = 5.62$) as well as their on-the-job trauma experiences ($M = 12.21$ events, $SD = 64.42$). However, the range of responses varied widely: Officers reported having only a few days on the job to more than 30 years of experience when they encountered their most traumatic event, and reported experiencing anywhere from no (0) to more than 1,000 traumatic events prior to their most traumatic. In general, the officers reported that they felt they had little (19.8%) to no control (35.5%) over these events. Their perceptions of the negative impact (i.e., sleep or memory disturbances, anxiety) that these events had on them varied, with a significant minority of officers (39.6%) reporting that it had "some effect" (Table 2).

Cognitive Appraisals Questionnaire

Factor analysis. Following deletion of significant outliers based on Mahalanobis distance scores, the CAQ was factor analyzed using principal components analysis with oblique rotation. The resulting factor structure yielded nine factors with Eigenvalues greater than 1.0 and accounted for 58.7% of the variance. However, two of these factors contained one item each, and examination of the scree plot suggested that a seven-factor solution (accounting for 51.7% of the variance) ought to be retained (Table 3). All items had factor loadings greater than .40, with four cross-loadings. Cronbach's alphas for the seven subscales ranged from acceptable (.70) to good (.79).

The first factor accounted for 16.8% of the variance and was labeled *Positive Role Appraisal*. This factor consisted of nine items that reflected an officer's perception of his or her abilities as an officer and a positive assessment of how he or she handled the situation. The second factor – *Disillusionment and Negative Worldview* – consisted of six items and accounted for 10.1% of the variance; this factor reflected not only a perception of the world and people as cruel, senseless, and unjust, but also a change (for the worse) in how one had previously viewed the world. The third factor accounted for 7.8% of the variance and was labeled *Personal and Familial Impact*. Six items reflected an association of the event to one's personal life. The fourth factor accounted for 5.4% of the variance and was labeled *Future-Oriented Threat and Self-Doubt*. Although four items loaded on this factor, examination of internal consistency estimates and the content of the items revealed that one item ought to be omitted, as it was not consistent with the other items on the scale. The remaining three items reflected doubt about one's abilities as an officer and anxiety about one's ability to handle similar events in the future. The fifth factor – *Challenge and Personal Growth* – consisted of five items that reflected an officer's perception of the event as one that challenged abilities, taught new skills, or provided an opportunity for

Table 3: Factor Structure of the Cognitive Appraisals Questionnaire

Scale / Items	Alpha / Factor Loading
Positive Role Appraisal	.78
I believed that I did everything I could to protect myself and others from harm or distress.	.57
I believed that I was able to handle the situation to the best of my ability.	.71
I believe that other officers would have done exactly what I did in this situation.	.44
*There are ways in which I could have handled this situation better.	.71
*I was somewhat hesitant due to the uncertainty of the situation.	.45
*I blamed myself for what happened.	.51
My perception of myself as an officer did not diminish as a result of this incident.	.58
I had faith in my ability to analyze the situation and act accordingly.	.56
I believed that I successfully performed my role as a police officer.	.65
Disillusionment and Negative Worldview	.79
This incident led me to perceive people, in general, as less kind, less caring, and less helpful.	.71
My faith in people diminished as a result of this incident.	.72
This event demonstrated how senseless and unjust life can be.	.61
As a result of what happened, I viewed the world as more random and uncontrollable.	.59
*This event did not diminish my belief in the fairness or meaningfulness of the world.	.65
I viewed what happened as an example of how cruel and malicious this world can be.	.75
Personal and Familial Impact	.75
I could not stop thinking about my family during or immediately following the event.	.67
I suffered some harm—either physically or mentally—as a result of this event.	.45
It was difficult to control my emotions during or immediately following the incident because the people involved reminded me of people I love.	.71
I kept thinking about how my family would be affected by what happened.	.56
This event made me realize that something similar could happen to the people that I love.	.65
This event brought back memories of similar people or events from my personal life.	.64

Table 3: Factor Structure of the Cognitive Appraisals Questionnaire (Cont.)

Scale / Items	Alpha / Factor Loading
Future-Oriented Threat and Self-doubt	.70
I was somewhat fearful about returning to duty following this incident	.69
Following the event, I reconsidered whether policing was the right career choice for me.	.64
Following the event, I was afraid that I would be unable to handle a similar situation in the future.	.71
Challenge and Personal Growth	.74
*I could not see how this event could be viewed as a learning experience.	.40
I viewed this event as an opportunity to test my abilities in a challenging situation.	.74
I gained useful knowledge that made me better equipped to handle similar situations in the future.	.72
I looked at this as an opportunity to grow as a police officer and to become a stronger person.	.79
*I could not see how I could gain anything positive from what happened.	.75
Threat, Anxiety, and Guilt	.68
Events seemed to happen so fast that I could not fully control what was going on around me.	.64
I felt intimidated and/or physically threatened during the incident.	.59
I felt my body tense with anxiety during or immediately following the incident.	.67
Following the event, I repeatedly thought about what I could have done differently at the time to make things better.	.60
Perceived Control	.68
I believed that I was able to have some influence on the events that happened that day.	.71
*I felt as though what happened was out of my hands.	.69
I felt as though I was able to maintain control over the situation and my surroundings.	.58
*The events that unfolded were beyond my ability to change or control.	.69

Note. Items marked with an asterisk (*) are reverse coded. One item was omitted from any scale due to poor internal consistency.

growth as an individual; this factor accounted for 5.1% of the variance. The sixth factor accounted for 4.2% of the variance and was labeled *Threat, Anxiety, and Guilt*. This factor consisted of four items that reflected a feeling of intimidation or lack of control during the event and a questioning of one's actions following the event. The final factor, labeled *Perceived Control*, consisted of four items and accounted for 3.3% of the variance. This

factor reflected an officer's perception of his or her ability to control or influence the events that occurred.

Mean scale scores for the seven cognitive appraisal factors ranged from a low of 1.96 ($SD = 0.71$) on Future-Oriented Threat and Self-Doubt to a high of 4.06 ($SD = 0.52$) on Positive Role Appraisal. In general, the factors reflecting more positive themes (e.g., role success, challenge) were correlated with one another, whereas those reflecting more negative themes (e.g., threat, anxiety, disillusionment) were related to one another. Table 4 reports the means and standard deviations for officers' cognitive appraisals, and Table 5 reports the intercorrelations among these appraisals as well as their relationships with years of experience and trauma exposure.

Table 4: Means and Standard Deviations for Officers' Cognitive Appraisals

Factor	M (SD)
Cognitive Appraisals Questionnaire (Range: 1-5)	
Positive Role Appraisal	4.06 (0.52)
Disillusionment and Negative Worldview	2.71 (0.74)
Personal and Familial Impact	2.87 (0.78)
Future-Oriented Threat and Self-Doubt	1.96 (0.71)
Challenge and Personal Growth	3.77 (0.72)
Threat, Anxiety, and Guilt	2.94 (0.89)
Perceived Control	2.76 (0.82)

Note. Higher scores reflect a higher amount of the construct.

Characteristics of the Event, Cognitive Appraisals, and Outcome

In order to examine more closely how officers appraise specific types of events, officers' most traumatic events were collapsed into three categories: events involving death (Death), events involving serious injury or threat of death (Death Threat), and events involving uncertain danger or non-life-threatening injuries (Danger). Multivariate analysis of variance (MANOVA) was run to determine whether there were significant differences in the seven types of cognitive appraisal across these three types of event experienced. MANOVA results revealed significant differences across event type in cognitive appraisals, Wilks $\lambda = .67$, $F(14, 544) = 8.69$, $p < .001$, partial $\eta^2 = .18$. Follow-up univariate analyses revealed significant differences across event type for three specific appraisals: Challenge and Personal Growth, $F(2, 278) = 4.57$, $p = .01$, $\eta^2 = .03$; Threat, Anxiety, & Guilt, $F(2, 278) = 18.70$, $p < .001$, $\eta^2 = .12$; and Perceived Control, $F(2, 278) = 36.98$, $p < .001$, $\eta^2 = .21$. All of these appraisals were more common in situations that involved threats of death ($M = 3.97$, 3.26 , and 3.26 , respectively) or non-life-threatening injuries ($M = 3.90$, 3.58 , and 3.39 , respectively) than in actual death encounters ($M = 3.69$, 2.72 , and 2.51 , respectively). Univariate analysis of variance (ANOVA) revealed that officers who

Table 5: Intercorrelations for Officers' Cognitive Appraisals

Variable	2	3	4	5	6	7	8	9
1. YEARS	.10	-.06	.04	.07	.07	-.08	.11	-.02
2. TRAUMA		.00	.05	-.04	-.06	-.08	.02	.08
3. ROLE			-.26**	-.26**	-.41**	.12*	-.38**	-.10
4. DISILL				.35**	.27**	-.21**	.17**	-.18**
5. PERS / FAM					.34**	-.10	.32**	-.19**
6. SELF-DOUBT						-.07	.44**	.00
7. CHALLENGE							.15	.34**
8. ANX / GUILT								.13*
9. CONTROL								

Note. YEARS = Years Experience; TRAUMA = Trauma Exposure; ROLE = Positive Role Appraisal; DISILL = Disillusionment & Negative Worldview; PERS / FAM = Personal & Familial Impact; SELF-DOUBT = Future-oriented Threat & Self-doubt; CHALLENGE = Challenge & Personal Growth; ANX / GUILT = Anxiety, Threat, & Guilt; CONTROL = Perceived Control.

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

had experienced actual death encounters reported a more difficult time recovering ($M = 3.06$) than did those who had been exposed to threats of death ($M = 2.75$). Those who had experienced non-life-threatening injuries ($M = 2.91$) did not differ from either group, $F(2, 293) = 3.01, p = .05, \eta^2 = .02$ (see Table 6).

Hierarchical multiple regression was conducted to determine the impact of cognitive appraisals after controlling for officers' years of experience and the severity of event (as indicated by officers' mean ratings). To a very small extent, officers' perceived negative outcome was related to their years of experience and the severity of their most traumatic event, with greater years of experience ($\beta = .11, p = .04$) and greater severity ($\beta = .17, p = .01$) predicting a more negative outcome, Block 1: $R^2 = .05, F(2, 272) = 6.57, p = .002$. However, officers' cognitive appraisals had a much stronger influence on their perceived negative outcome, Block 2: $\Delta R^2 = .39, \Delta F(7, 265) = 26.64, p < .001$, with neither years of experience nor severity any longer significant once appraisals were taken into account (Table 7).

DISCUSSION

The present study sought to examine how police officers' primary cognitive appraisals influenced their response to traumatic on-the-job events. The Cognitive Appraisals

Table 6: Means and Standard Deviations for Officers' Cognitive Appraisals and Negative Outcome by Event Type

Appraisal/Outcome Variable	Event Type		
	Death	Death Threat	Danger
Positive Role Appraisal	4.10 (0.51)	4.04 (0.49)	3.87 (0.60)
Disillusionment and Negative Worldview	2.78 (0.76)	2.57 (0.67)	2.61 (0.63)
Personal and Familial Impact	2.94 (0.82)	2.73 (0.69)	2.65 (0.76)
Future-Oriented Threat and Self-Doubt	1.67 (0.69)	1.64 (0.72)	1.94 (0.79)
Challenge and Personal Growth	3.69 (0.77)a	3.97 (0.57)b	3.90 (0.53)b*
Threat, Anxiety, and Guilt	2.71 (0.82)a	3.26 (0.82)b	3.58 (0.91)b*
Perceived Control	2.51 (0.72)a	3.26 (0.77)b	3.39 (0.63)b*
Negative Outcome	3.06 (0.98)a	2.75 (0.96)b	2.91 (0.81)ab*

Note. Subscripts indicate mean group differences.

* $p < .05$

Table 7 Hierarchical Multiple Regression Analysis Results Predicting Negative Outcome: Years of Experience, Severity, and Cognitive Appraisals

Block / Predictor	B (SE)	β	Part r	t
Block 1: $R^2 = .05$				
Years of experience	0.01 (0.01)	.11	.11	1.87*
Severity of event	0.01 (0.004)	.17	.16	2.76*
Block 2: $\Delta R^2 = .39$				
Years of experience	0.01 (0.01)	.08	.08	1.72
Severity of event	0.004 (0.003)	.06	.06	1.26
Positive Role Appraisal	0.07 (0.10)	.04	.03	0.66
Disillusionment / Negative Worldview	0.27 (0.07)	.21	.18	3.95**
Personal /Familial Impact	0.47 (0.07)	.38	.32	6.95**
Future-oriented Threat / Self-doubt	0.17 (0.07)	.13	.11	2.41*
Challenge / Personal Growth	-0.15 (0.07)	-.11	-.10	-2.26*
Anxiety, Threat, and Guilt	0.17 (0.06)	.16	.13	2.86*
Perceived Control	-0.01 (0.06)	-.01	-.01	-0.11

* $p < .05$, ** $p < .001$

Questionnaire (CAQ) was created to measure the specific ways in which officers' interpret and attribute meaning to the traumatic events they encounter on the job. It was designed to capture aspects of trauma more specific to the role of a police officer, and to provide a measure of more transient, event-specific cognitions as opposed to the more general schemas that embody our worldviews. The CAQ yielded a seven-factor solution that accounted for 52% of the variance. Cronbach's alphas were at or above the .70 benchmark for internal consistency, indicating good reliability for the exploratory nature of this study.

Major Findings: Implications for Treatment and Training

The results of the current study indicated that officers have vastly different experiences with trauma over the course of their careers as peacekeepers and public servants. Officers' trauma histories differed in terms of the number, type, and variety of events experienced (from officers reporting experiencing two traumas per week to none at all in a career of more than 20 years), and officers reported contrasting reactions to even similar types of events. In particular, officers in different roles or in different types of events had different appraisals about the incidents. For instance, officers who experienced either dangerous (but non-life-threatening) or life-threatening situations were more likely than those who experienced actual death encounters to appraise these events as being more within their control and as providing an opportunity for personal growth but also as ones that evoked more anxiety, threat, and guilt. It is likely that these situations afford both greater control and greater anxiety due to their ambiguous nature. That is, in these situations, the outcome is still undecided, so the officer has a greater role in determining the outcome. However, he or she also faces increased pressure to ensure a positive one. Death encounters are certain and final. Although stressful and traumatic in their own ways, these situations may not afford such opportunities for officers to make quick decisions and, in turn, to second guess their actions. The varied nature of officers' trauma histories and experiences speaks to the need for more individualized treatment, rather than the mass debriefings that have become routine in most police agencies. This 'one-size-fits-all' approach does not consider that each officer brings unique histories, perceptions, worldviews, and emotions to the therapeutic table. A treatment approach that recognizes and caters to their individual needs will likely be the most effective.

The results of the current study support the notion that primary cognitive appraisals had the greatest impact on officers' functioning and well-being in the months that followed, accounting for more variance than either years of experience or the severity of the event. Of particular import, officers who interpreted a traumatic event in a positive way (that is, as a learning experience, or as a situation in which they had some positive impact) reported less negative impact following an event than did those who interpreted it negatively (that is, as causing anxiety, guilt, or harm). This has important and optimistic implications for treatment. Officers have little control over the types of events they encounter in their work but they can control the meaning or the significance they attribute to these events. Thus, humanistic and cognitively-based therapeutic approaches that help officers to restructure and to re-interpret these events in a way that is more positive, more meaningful, and more coherent with their worldviews likely will aid in reducing posttraumatic symptoms and in

producing lasting effects (Janoff-Bulman, 1985, 1989, 1992; Janoff-Bulman & Berg, 1998; Janoff-Bulman & McPherson-Frantz, 1997). Such approaches should be combined with the more traditional exposure-based therapies (see Keane & Barlow, 2004, for a review) that have produced consistently positive results in treating trauma.

Consistent with recent research (Ferguson, 2005), the most significant predictor of negative outcome was the cognitive appraisal Personal and Familial Impact, or the officers' perception of how the event impacted their personal life. This most often occurs when the people involved in the situation are familiar or remind the officer of someone close to them. Alternatively, it may occur when an officer perceives his or her own life to be so threatened that it highlights the impact of the job on his or her family. It may be that as officers are trained to detach themselves from their work (a necessary survival mechanism when faced with such disturbing events on a regular basis), they come to rely on this shield to maintain their emotions and to remain focused on their jobs. A person who reminds an officer of someone he or she knows can serve as a retrieval cue that triggers unexpected emotions in an officer who may be attempting to remain detached. He or she may become overwhelmed when this shield is no longer there, and may feel vulnerable, anxious, guilty, and ineffectual about this inability to 'control' emotions. Therefore, another important aspect of working with traumatized officers may be helping them to develop sufficient outlets for emotional expression (both positive and negative) and to develop a healthy balance between home and work. This would enhance the officer's sense of control and help him or her not to become overwhelmed or distracted on the job. Additionally, it may be helpful to inoculate new officers to the kinds of emotions they may encounter on the job. Veteran officers who have recovered from traumatic events could relate their experiences to new cadets during academy training, normalizing such experiences for them, so these new officers do not become overwhelmed by unexpected emotions on the job.

Limitations and Suggestions for Future Research

There are a number of limitations to the current work which suggest the need for further research in this area. First, all of the variables included in the study were self-report. Although some – like cognitive appraisals – obviously are meant to be, others – such as the impact of an event – could be operationalized differently to allow for more precise measurement. For instance, the current study used a rather crude measure of impact (i.e., a five-point Likert-type question). However, due to the retrospective nature of the study and the fact that some officers were reporting on an event that occurred as many as 30 years ago, it did not seem that a more specific measure of symptoms would be any more valid. Future research might use a combination of self-report checklists of specific symptoms, rating scales from significant others, and more objective measures (e.g., days off of work, hours of sleep per night) to provide a more comprehensive analysis of the impact of traumatic events on officers.

Similarly, it is difficult to say with certainty how accurate are officers' estimates of the number of traumatic events they have experienced. As such, it is difficult to interpret some of the findings, such as those that would support a cumulative effect of trauma. It may

be that those who reported being more impacted by an event simply believed they have experienced more traumatic events or perceived more events as traumatic. Future research should endeavor to track the number of traumatic events from agency files. However, even this is not wholly accurate, as it requires someone else to define what is and what is not traumatic for a given individual.

Second, many of the analyses were conducted retrospectively, making it impossible to sort out causal or temporal connections. The officers in this study were asked to describe their thoughts surrounding events that happened as many as 30 years ago, thoughts which undoubtedly have been reshaped over the years in light of new experiences and knowledge. Future endeavors ought to attempt more temporally proximal investigations of officers' response to trauma (that is, data collection immediately following or soon after major traumatic events).

Third, given the mixed findings with regard to gender differences in officers' experience with trauma (Carlier et al., 1997; Hodgins, Creamer, & Bell, 2001; Martin et al., 1986; Stephens & Miller, 1998; Wellbrock, 2000), the present study had hoped to explore whether there were gender differences in officers' appraisals of traumatic events. However, there were too few female officers represented in the current sample (particularly relative to the number of male officers) to investigate such trends. Future studies should aim for a more balanced representation of genders in order to investigate this further.

Finally, there are a number of other historical variables that may play a role in officers' response to trauma that simply were not investigated in the present study, such as officers' experience with violence in general, with military combat, with mental health treatment, or with critical incident debriefings or stress management trainings. Future endeavors ought to investigate how these experiential factors influence officers' response to trauma.

CONCLUSIONS

The present work illustrated that police officers experience trauma in varied ways but also share some similarities in how they appraise and attribute meaning to the events they experience. The results lend support to a combination of exposure- and cognitively-based treatment approaches that work toward reinterpreting the event and reintegrating it in a meaningful way with one's basic worldviews. Officers need appropriate outlets for emotional expression and may need to be taught how to utilize these outlets effectively. This includes teaching a healthy separation of home and work and normalizing the unexpected emotions that they encounter on the job. Above all, it is important to remember that officers (like any other group) are individuals, and that each brings to the situation his or her own beliefs, perceptions, and world views, all of which must be reconciled with the event at hand. It is important for clinicians to treat each officer as such, rather than to assume that the same treatment will apply to everyone. With the specific suggestions outlined above, and a global framework that emphasizes recovery and resilience (rather than pathology and stagnancy), we can work toward a common goal of alleviating the suffering experienced by many officers and can assist them in full recovery from exposure to trauma.

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ENDNOTES

1. The present sample was slightly more Caucasian than the U.S. population of sworn officers but representative of the gender breakdown of such officers (Sourcebook of Criminal Justice Statistics 2003, Table 1.37.2003).
2. Officers did the same for 10 common life events selected from the Holmes and Rahe (1967) Social Readjustment Rating Scale. These results are reported in more detail in Colwell, 2009.

APPENDIX

COGNITIVE APPRAISALS QUESTIONNAIRE

*I would like you to think about the most traumatic event that you have experienced on the job as a police officer. This can be any event that YOU (or any reasonable officer in a similar situation) would interpret as stressful and/or disturbing (e.g., unpredictable arrest, accident scene, homicide, shooting incident, etc.). Also, this event does not have to be recent (i.e., within the past few months); I just want you to think about the incident that you would consider to be the most traumatic that you have experienced during your career. Please briefly describe the event on the space provided and answer the questions that follow.

How many years of law enforcement service did you have when this event took place? _____

How many events have you experienced over your career that YOU (or any reasonable officer in a similar situation) would define as traumatic? _____

How many had you experienced when the event you described above took place? _____

How much control did you feel you had over this situation? That is, to what extent did you feel that the decisions you made could influence the outcome?

1	2	3	4	5
No control	Very little control	Some control	A lot of control	Total/complete control

How much negative effect did this event have on your overall well-being (such as disturbances in sleep, memories of the event, anxiety in similar situations) in the months that followed?

1	2	3	4	5
No effect	Very little effect	Some effect	A large effect	Affected every aspect

Cognitive Appraisals Questionnaire (cont)

*Certain thoughts may come to mind during or following a stressful and traumatic event as people make sense of the things that happened to them. Looking back on this event as you understand it now, what kinds of thoughts do you have when you think about what happened? The following pages list several statements that officers might tell themselves after exposure to traumatic events on the job. Please read each statement and indicate using the scale below how much you AGREE or DISAGREE with each item. Circle the number corresponding to your belief for each statement, and please answer every item.

1 = Strongly disagree		2 = Disagree		3 = Neutral		4 = Agree		5 = Strongly agree		
1	2	3	4	5	1.	I believed that I did everything I could to protect myself and others from harm or distress.				
1	2	3	4	5	2.	I could not see how this event could be viewed as a learning experience.				
1	2	3	4	5	3.	This incident led me to perceive people, in general, as less kind, less caring, and less helpful.				
1	2	3	4	5	4.	I was somewhat fearful about returning to duty following this incident.				
1	2	3	4	5	5.	I could not stop thinking about my family during or immediately following the event.				
1	2	3	4	5	6.	I believed that I was able to have some influence on the events that happened that day.				
1	2	3	4	5	7.	I believed that I was able to handle the situation to the best of my ability.				
1	2	3	4	5	8.	My faith in people diminished as a result of this incident.				
1	2	3	4	5	9.	I viewed this event as an opportunity to test my abilities in challenging situations.				
1	2	3	4	5	10.	Following the event, I reconsidered whether policing was the right career choice for me.				
1	2	3	4	5	11.	I believed that other officers would have done exactly what I did in this situation.				
1	2	3	4	5	12.	I suffered some harm—either physically or mentally—as a result of this event.				

Please keep using this scale:

1 = Strongly disagree		2 = Disagree		3 = Neutral		4 = Agree		5 = Strongly agree	
1	2	3	4	5	13.	Events seemed to happen so fast that I could not fully control what was going on around me.			
1	2	3	4	5	14.	This event demonstrated how senseless and unjust life can be.			
1	2	3	4	5	15.	There are ways in which I could have handled this situation better.			
1	2	3	4	5	16.	I was somewhat hesitant due to the uncertainty of the situation.			
1	2	3	4	5	17.	It was difficult to control my emotions during or immediately following the incident because the people involved reminded me of people I love.			
1	2	3	4	5	18.	I gained useful knowledge that made me better equipped to handle similar situations in the future.			
1	2	3	4	5	19.	I felt as though what happened was out of my hands.			
1	2	3	4	5	20.	Following the event, I was afraid that I would be unable to handle a similar situation in the future.			
1	2	3	4	5	21.	I felt intimidated and/or physically threatened during the incident.			
1	2	3	4	5	22.	As a result of what happened, I viewed the world as more random and uncontrollable.			
1	2	3	4	5	23.	I kept thinking about how my family would be affected by what happened.			
1	2	3	4	5	24.	I blamed myself for what happened.			
1	2	3	4	5	25.	I felt my body tense with anxiety during or immediately following the incident.			
1	2	3	4	5	26.	This event did not diminish my belief in the fairness or meaningfulness of the world.			
1	2	3	4	5	27.	This event made me realize that something similar could happen to the people that I love.			

Please keep using this scale:

1 = Strongly disagree		2 = Disagree		3 = Neutral		4 = Agree		5 = Strongly agree	
1	2	3	4	5	28.	I felt as though I was able to maintain some control over the situation and my surroundings.			
1	2	3	4	5	29.	I was neither directly nor indirectly harmed or injured by this event.			
1	2	3	4	5	30.	I looked at this as an opportunity to grow as a police officer and become a stronger person.			
1	2	3	4	5	31.	I could not see how I could gain anything positive from what happened.			
1	2	3	4	5	32.	I viewed what happened as an example of how cruel and malicious this world can be.			
1	2	3	4	5	33.	This event brought back memories of similar people or events from my personal life.			
1	2	3	4	5	34.	My perception of myself as an officer did not diminish as a result of this incident.			
1	2	3	4	5	35.	I had faith in my ability to analyze the situation and act accordingly.			
1	2	3	4	5	36.	The events that unfolded were beyond my ability to change or control.			
1	2	3	4	5	37.	Following the event, I repeatedly thought about what I could have done differently at the time to make things better.			
1	2	3	4	5	38.	I believed that I successfully performed my role as a police officer.			

Cognitive Appraisals Questionnaire (cont)

*Please answer the following questions regarding your reaction to the event you described above.

What surprised you about your reaction to this event and how it affected you?

Is the way that you think about this event now in any way different from how you thought about it at the time?

_____ Yes

_____ No

Please explain.

Cognitive Appraisals Questionnaire (cont)

*The following is a list of events that police officers may encounter throughout their careers. Please read the list of events and then rate the severity or traumatic nature of each event by assigning a score from 0 to 100, where 0 = not at all severe and 100 = extremely severe. Please rate all items, regardless of whether or not it has happened to you. Then, please indicate how many times you have experienced or encountered each event over the past six months and over your entire career as a police officer. Although it may be difficult to recall exactly how many times you have experienced each event, please give your best guess using a specific number. Please do not give a range of numbers (e.g., 10-15), an open-ended response (e.g., 100s) or a verbal response (e.g., many).

	Severity (0 – 100)	Past 6 months	Entire career
1. Providing notification of death	_____	_____	_____
2. High-speed chase or accident	_____	_____	_____
3. Fellow officer killed in line of duty	_____	_____	_____
4. Fatal accident scene	_____	_____	_____
5. Killing someone in line of duty	_____	_____	_____
6. Responding to the death of a child	_____	_____	_____
7. Making arrests alone	_____	_____	_____
8. Physical attack or injury	_____	_____	_____
9. Child abuse/neglect	_____	_____	_____
10. Suicide/homicide scene	_____	_____	_____

Cognitive Appraisals Questionnaire (cont)

*The following is a list of events that many people experience throughout their lives. Please read the list of events and then rate the severity or traumatic nature of each event by assigning a score from 0 to 100, where 0 = not at all severe and 100 = extremely severe. Please rate all items, regardless of whether or not it has happened to you. Then, please indicate how many times you have experienced or encountered each event over the past six months and over your entire life. Although it may be difficult to recall exactly how many times you have experienced each event, please give your best guess using a specific number. Please do not give a range of numbers (e.g., 10-15), an open-ended response (e.g., 100s) or a verbal response (e.g., many).

	Severity (0 – 100)	Past 6 months	Entire life
1. Death of spouse	_____	_____	_____
2. Trouble with boss	_____	_____	_____
3. Change in residence or living conditions (such as moving, building a new home, remodeling, deterioration of home or neighborhood)	_____	_____	_____
4. Death of a close friend	_____	_____	_____
5. Marital separation or divorce	_____	_____	_____
6. Major personal injury or illness	_____	_____	_____
7. Major change in responsibilities at work (such as promotion, demotion, lateral transfer)	_____	_____	_____
8. Death of a close family member	_____	_____	_____
9. Major change in financial state (such as a lot worse off or a lot better off than usual)	_____	_____	_____
10. Major change in the health or behavior of a family member	_____	_____	_____

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