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Article

Critical-Incident Trauma and Crime Scene Investigation: A Review of Police Organizational Challenges and Interventions

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Abstract: It is hypothesized that exposure to critical-incident trauma affects crime scene investigators. Individual and organizational attribution factors are analyzed through the use of self-report data collected from crime scene investigators working in a large Midwestern state. This paper analyzes key variables in the job of a crime scene investigator in an effort to determine the level of stress related to CSI work and the nature of organizational support available to the investigator. Although initial findings suggest a high level of satisfaction with the job, the nature of the job can lead to high levels of both professional and personal stress, with work-related stress often driving personal stress. Policy implications for reducing officer stress as well as future research questions are discussed.

Introduction

The landscape of American law enforcement is besieged with organizational challenges and interventions aimed at alleviating the stressors associated with critical-incident trauma [1–6]. Sewell [7] defines these stressors as being either event or organizational in nature. *Event stressors* relate to the critical-

incident event itself (i.e., exposure to traumatic stimuli, fear of personal injury, failure to complete an investigation and solve the crime). *Organizational stressors* examine police bureaucracy for manifest and latent challenges that intensify the effects of critical-incident trauma (i.e., administrative pressures to solve crime, inequities in the workplace, and conflicts over due process). Regardless of the form or content that these stressors take in any given situation where law enforcement officers are exposed to critical-incident trauma, the bureaucracy of policing needs to broaden its strategies of intervention from a customary, singular approach.

Critical-incident trauma results when law enforcement officers confront a crisis situation that produces either immediate or delayed stress. By this definition, much of what law enforcement officers confront on a daily basis meets the criteria of critical-incident trauma. The effects of this cumulative trauma are both damaging and dangerous. Heglund [8] writes that critical-incident trauma is analogous to “putting rocks in a backpack”. Over time, the backpack ruptures from the weight of the rocks in a similar way that law enforcement officers experience “ruptures” to their work and lives from the weight of exposure to cumulative trauma. Unrestrained, critical-incident trauma develops into post-incident stress behaviors that endanger the lives of law enforcement officers, those they love, and those they are sworn to protect (alcoholism, addiction, acts of brutality, and domestic violence are illustrative here). In ultimate demonstrations of post-traumatic stress, death occurs. In 2004, the Centers for Disease Control and Prevention estimated that of the 31,600 Americans who committed suicide, 447 were law enforcement officers. Even more compelling, 2007 data from the National Police Suicide Foundation estimate that law enforcement officer suicides now occur at the rate of 1 every 17 hours, or 547 annually [9]. Although these numbers are alarming, caution must be expressed. Suicide rates often vary by age, sex, ethnicity, proximity to human suffering, occupational culture, access to firearms, and so forth. In addition, they may be affected by the time period of the study, the inclusion of retirees, misreporting on the causes of death, and so forth [10–12]. Thus, an adequate comparison of law enforcement suicides to other individuals or occupations is difficult. With these caveats in mind, although expressing concerns over the rate of suicide by law enforcement officers, researchers have reported mixed results on the level of law enforcement suicide compared to other occupations and demographic groups [10–14].

Although the development of therapeutic intervention programs and coping strategies is important for all of law enforcement and their challenges with critical-incident trauma, this paper exclusively examines the effects of critical-incident trauma on crime scene investigators because of their chronic exposure to acts of violent crime (i.e., multiple homicides, questionable deaths, rapes, and violent property crimes). We believe that, in due course, crime scene investigators will develop intensive episodes of post-incident stress that will ultimately result in the acute emotional detachment from their role performances with family, peers, and the community at large. The costs for crime scene investigators and their sponsored police organizations in not focusing on the psychological effects of critical-incident trauma are immense least of which is approaching their law enforcement responsibilities from the hollowed position of “intimacy without emotion” [15].

The detachment of emotion from exposure to critical incidences is best understood through the trauma process itself. The stages of critical-incident trauma are involvement in the actual trauma, the ensuing shock, and the recurring traumatization (or post-traumatic stress). If crime scene investigators are not encouraged or mandated to participate in comprehensive psychological or emotional intervention, post-traumatic stress events will occur with greater frequency and versatility [16]. Moreover, if the investigators do not perceive it is safe to release their emotions, then family, friends, and colleagues may become overwhelmed by the investigators’ distress. At this point, effective organizational intervention becomes more difficult [17].

Therefore, this paper suggests that crime scene investigators, because of their chronic exposure to critical-incident trauma and the nature of police bureaucracy that adheres to an organizational culture out of alignment with the sensitivities of crime scene investigation, are at greater risk of experiencing cyclical re-traumatization than are law enforcement officers in general [18–20].

In agreement with this point, the National Institute of Justice has funded research on critical-incident trauma in the hope that police and corrections organizations develop and implement more comprehensive intervention programming [21]. A template for this intervention initiative is found with the Corrections and Law Enforcement Family Support (CLEFS) projects that focus on behavioral outcomes of stress (i.e., tardiness, absenteeism,

labor-management problems, and acts of brutality) instead of treating individual officers who suffer from post-traumatic stress. This change in programming focus away from the individual and toward negative behavior has led contemporary research to focus on the factors related to post-traumatic stress. Although the literature in psychology, public and community health, sociology, and criminal justice is extensive in the area of precursors to post-traumatic stress, for the purpose of parsimony in this paper, factors of post-traumatic stress are categorized as those at the *individual attribution level* and those at the *police organizational level*. Specifically, those factors attributed to individual attribution are physiology, gender, and negative affectivity; perceptions of self-determination and job control; and problem-solving methods based on emotion and fact. Those factors attributed to the police organization are job content and context, rank, and political skill.

Individual and Organizational Factors Linked to Post-Traumatic Stress

Post-traumatic stress, brought on by critical-incident trauma, underscores the need for effective contemporary police organizational intervention. A review of best practices indicates that current police intervention strategies originated with military-trauma intervention. As Sheehan et al. [22] note, the pressures of real-time intervention with injured and traumatized soldiers during World Wars I and II, and the Korean Conflict, obligated medical units to treat symptoms of shell shock, fatigue, and trauma using an intervention strategy based on (1) early involvement, (2) complete care, (3) peer support, and (4) specialized, tactical training. Examined collectively, these intervention strategies are established on the principles of *proximity*, *immediacy*, and *expectancy* [22]. If understood and applied wisely, these principles, especially expectancy or the belief that trauma-produced stress is normal, can elevate perceptions of police organizational loyalty and empathy for crime scene investigators. Moreover, as Heglund [8] suggests, there may be even greater advantage for police organizations to foster a perception of loyalty to the extent that they are willing to develop programs of external intervention. She writes that if first-responders (defined here as crime scene investigators) were permitted or mandated to attend external multiday retreats, crime scene investigators could more quickly regain the feelings of lost control over their lives by sharing their experiences with others experiencing post-traumatic stress and avoiding the perception trap of feeling betrayed by their department [8].

Individual Attribution Factors

Although best practices of military-trauma intervention are well served at the macro level of law enforcement, at the micro level, specific program initiatives for the intervention of critical-incident trauma need the attention of factors that govern both individual and organizational attributions.

Physiological Factors

According to Rees and Smith's [17] work on trauma theory, chronic exposure to trauma produces a cyclical alienation from society that results in either a fight or flight response. The reasons for these fight or flight responses are due to a fusion of cultural conditioning, reason, and an advanced nervous system. Therefore, when applied to crime scene investigators, either negative response to critical-incident trauma is going to result in cyclical alienation. Rees and Smith [17] state, "One of the reasons that trauma victims [defined here as crime scene investigators] sustain long-term negative effects [post-traumatic stress] is that they have been unable to 'release' the body from its highly charged state when the original [critical-incident trauma] event happened, and thereby store the effects in the body through a process called 'somatisation.'" [17]. Therefore, the exposure to trauma is physiologically stored indefinitely in the body of crime scene investigators without providing an appropriate cultural release from either the initial trauma or its subsequent stress. The result is the production of cyclical bureaucratic and social isolation [21, 23–26].

In a similar study on the role and functions of physiology related to post-traumatic stress, Anderson et al. [27] studied the heart rate of police officers to determine whether and when the onset of critical-incident trauma occurs. Their measure of stress was a "sustained heart rate of 22 beats per minute above rest throughout the shift" [27]. Their findings suggest little difference in heart rate for police officers at the beginning of each shift, immediately prior to a perceived event of critical-incident trauma, and during the critical incident event itself. They interpret this finding as indication that those police officers studied perceived stress as the reality of police work.

Psychological Factors

Related to these studies is the work of Aaron [28] on the relationship between perceived stress and psychological disposition. Depending on psychological dispositions, some

officers were better able to cope with stress than others. The difference in psychological predisposition (e.g., the degree of negative affectivity) determines officer reactions to job stressors, including critical-incident trauma [29]. Equipped with an understanding of the relationships between physiology, psychological predisposition, and culture to reactions of critical-incident trauma, police organizations can incorporate additional coping strategies into existing intervention programs.

Demographic and Job-Related Factors

As unique precursors to stress, physiology, psychological predisposition, and anticipatory socialization (or culture) beg the question, Is our understanding of stress too rudimentary within the categories of individual and organizational attribution? In a study of police officers in Greece, Stamatios [30] analyzed context-specific measures of stress (i.e., career opportunities, perception of roles and responsibilities, and work-life balance issues) to determine their impact on precursors to stress. The findings suggest that officer rank and gender offer the greater vulnerability to the stress associated with critical incidents, with those officers of lower rank and female being most susceptible. In an earlier study, Fernet et al. [31] attempted to predict burnout (a measure of officer stress) by controlling for perceptions of self-determination and job control. In a review of the literature on self-determination theory by Deci and Ryan [32], Fernet et al. [31] found officers who defined themselves as having high levels of work self-determination, and subsequent job control, were better able to moderate the effects of trauma and stress.

Correlated with high levels of self-determination and job control are job demands. In a study analyzing the relationship between job demands and burnout, Bakker et al. [33] found that job demands (work pressures) are universally important precursors to officer stress and job performance in that they create a cyclical pattern whereby officers feel less able to exert control over their work environment and, as a result, produce less. Within their findings, Bakker et al. noted a distinction between in-role job related tasks and extra-role performances. Based on the work by Rubino et al. [34], stressor-strain theoretical models contend that the strain of job demands in general will affect officer reactions to critical-incident trauma but mostly with in-role tasks. That is, where specific job demands may suffer under less efficiency for officers dealing with post-traumatic stress, officers are generally intrinsically motivated to perform extra-role performances that are perceived to promote a more effective organization [34].

Mitchell and Hogg [35] also addressed the issue of job demands on stress related to crime scene investigation. In particular, they noted that incidents that hit close to home or those involving especially tragic situations were more difficult for the investigator to deal with. Certain investigators also responded to the stress of accumulated incidents or continual court appearances. These individuals coped with these difficult situations by trying to exercise greater detachment, utilizing peer support, or just getting on with the job. Interestingly, a belief in a “just world” and the role of the investigator in achieving a more just world also helped the investigators cope. The added stress of crime scene investigation work was supported by Adderley et al. [36] who measured heart rate during both rest and crime scene investigation work-related activities. They noted that crime scene investigation activity “...tends to be associated with some of the highest recorded above-resting heart rate readings...” [36], suggesting that investigators experience high levels of psychosocial stress that is due to their jobs. Van Patten and Burke [37] noted that homicide investigators reported high levels of stress in homicides involving children, and Holt and Bevins [38], in a study involving forensic computer investigators, concluded that these individuals only experienced moderate levels of work-related stress, mostly due to crimes involving children.

As the previous studies indicate, post-traumatic stress that follows a critical incident is mediated by numerous individual factors. Not the least of these factors is the way that officers arrive at their own personal coping strategies outside of organizational intervention. Plaxton-Hennings [39], based on prior works by Lazarus and Folkman [40] and Smith [41], was interested in finding whether strategies based on an emotional focus or a problem-solving focus offered the more effective coping strategies in reducing post-traumatic stress. His findings suggest that, rather than using positive coping strategies that address the environment or oneself, officers who face critical incident trauma more often turned to denial or substance abuse.

Organizational Attribution Factors

Notwithstanding the influence of individual attribution factors on crime scene investigator reactions to critical-incident trauma, much of the research on organizational intervention strategies does not focus enough on promoting structural changes [42]. On this point, Ayres writes, “. . . an organization-centered approach . . . identifying the problems [crime scene investigators] have with their work, supervisors, and pay and making appropri-

ate changes may well have a greater influence on improving morale” [43]. By primarily addressing officer trauma-induced stress through counseling and peer support programs, police organizations have failed to restructure in meaningful ways to better support officers and improve on organizational morale and efficiency [42].

Although improvements to morale and efficiency are important considerations for police organizations, the question is, How can problems with morale and efficiency be reversed for crime scene investigators suffering from post-traumatic stress? The answer to decreases in *organizational commitment* [44] and *job performance* [45], and *increases in job turnover* [46], lies with what Jawahar et al. [47] refers to as political skill. Political skill is defined as “. . . the ability to understand others at work, and to use such knowledge to influence others” [47]. The ability of politically skilled crime scene investigators to take the role of the generalized other [48] provides them with a feeling of “personal security and self-confidence”, which provides officers with a buffer against exposure to critical-incident trauma or post-traumatic stress [47, 48].

It is clear from the review of the literature that the management of intervention strategies against critical-incident trauma must occur at both individual and organizational levels. In 2008, Richardson and Rothstein [49] conducted a meta-analysis of national stress management programs and concluded that across all intervention strategies, cognitive-behavioral intervention produced the stronger effects against critical-incident trauma. This study corroborates other research findings in suggesting the need for comprehensive therapeutic intervention for crime scene investigators that also suggest structural changes to the way police organizations conduct business (e.g., challenging the existing police culture that relies on suppressing feelings, re-examine rotational assignments, and improve funding for additional personnel and overtime).

Hypotheses

This study sought to determine whether critical-incident trauma affects crime scene investigators differently, and more comprehensively, than is true for law enforcement officers in general. Moreover, in keeping with the previously identified stressors, it is hypothesized that issues of perceived organizational nonsupport contribute more stress than individual characteristics.

Hypothesis #1: A majority of crime scene investigators experience symptoms of post-incident stress following involvement with critical-incident trauma.

Hypothesis #2: Crime scene investigator symptoms of post-incident stress become more acute with increases in the level of violence and morbidity associated with crime scenes.

Hypothesis #3: Context-specific measures (i.e., roles, responsibilities, and balance between work and life issues) are predictors of post-incident stress.

Hypothesis #4: Job demands including the use of rotational assignments are important precursors to post-incident stress.

Hypothesis #5: A lack of funding for equipment and additional personnel for crime scene investigators increases post-incident stress.

Hypothesis #6: The (perceived) lack of support by police organizations causes an increase in a sense of isolation for crime scene investigators.

Methods

Survey Instrument

Data were gathered by means of an anonymous questionnaire. The survey included demographic items on age, gender, education level, marital status, number of years in law enforcement, number of years in current position, rank, and promotional and retirement expectations. In addition to the demographic data, select items from the Spielberger et al. [50] 60-item police stress survey were used to obtain information on both organizational and inherent police work factors that cause crime scene investigator stress. As an additional qualitative measure, items from Eisenberger et al.'s [51] 17-item perceived organizational support scale were used.

In an effort to measure the tendencies of crime scene investigators to perceive critical-incidences as threatening, select items from the Spielberger et al. [52] state-trait anxiety inventory were used. Finally, to measure feelings of isolation and depersonalization, select items from the Bernstein and Putman's [53] disassociative experiences scale were used. Upon request, the authors of the study would be happy to provide a copy of the questionnaire to all interested parties.

For the purposes of analysis, post-incident stress was measured by combining survey items such as physical indicators of post-incident stress (questions referring to headaches, fatigue, shortness of breath, etc.); emotional and psychological indicators of post-incident stress (feelings of depression, tense and uptight, etc.); and specific coping strategies (i.e., verbally or physically lashing out at others). Each of the survey items was on a 5-point scale, with 80 being the highest possible individual total for measures of post-incident stress.

Sample

The participants in this study consisted of crime scene investigators who served 14 agencies across a large Midwestern state. For the purposes of this study, a crime scene investigator (CSI) was defined as a law enforcement investigator (both sworn and nonsworn) who properly identified, documented, collected, and preserved physical evidence in a criminal investigation. Although exposure to critical-incident trauma varied by jurisdiction, the uniform crime report showed that, within this state in 2012, there were 35,595 violent crimes (495 murders or non-negligent manslaughters; 3,658 forcible rapes; 15,235 robberies; 15,207 assaults) and 359,883 property crimes [54]. Seventy percent of the responding CSI officers worked full time and they worked an average of 17 crime scenes per month.

Letters were sent out to selected members of a national forensic association and to crime scene investigators working at 14 large law enforcement agencies that met the above definition of a CSI and lived within the Midwestern state. The letters included a letter of consent and a confidentiality agreement. A letter directed them to complete an anonymous online questionnaire that consisted of 76 questions. In addition, in an effort to reach officers for whom we did not have contact information, an introductory letter, along with the surveys, was also mailed to supervisors of each of the 14 agencies across the state that accommodates crime scene investigators. These supervisors were requested to hand out the letter and the accompanying materials to their CSI officers. Attached to the survey questionnaire was a self-addressed stamped envelope in which to return the survey to the researchers. Participation in the study was voluntary. Of the 111 CSIs who received a copy of the survey questionnaire, 51 completed and returned it, for a response rate of 46 percent.

Results

Descriptive Analysis

Various determinants of post-incident stress in CSIs in 14 agencies across a large, Midwestern state were analyzed. Of the 51 CSIs who completed the survey, 14 were female and 36 were male. There was one nonresponse. Eleven of the respondents were between the ages of 24 and 37, 24 were between the ages of 38 and 50, and 14 were between the ages of 51 and 62. There were two nonresponses. For the purposes of this study, post-incident stress symptoms included things such as headaches, upset stomach, trouble sleeping, fatigue, nightmares, loss of appetite, shortness of breath, feelings of depression, desire to change jobs. Post-incident stress symptoms, overall, were measured on a three-point scale.

Depending upon the question, the responses for many of our variables were coded 1 to 5, with 1 being low concern or frequency or satisfaction and 5 being high concern or frequency or satisfaction. Many responses in the following section reflect the percentage of officers who responded either 4 or 5, meaning they were on the high end of concern, frequency, or satisfaction. First, it is interesting to note that most CSIs enjoyed their job. On the 1-to-5 scale with 5 being very satisfied, 72 percent of the responding CSIs responded with either a 4 or 5, and 93 percent of the responding CSIs similarly said they derived satisfaction from helping to solve crimes.

Hypothesis #1: A majority of crime scene investigators experience symptoms of post-incident stress following involvement with critical-incident trauma.

In spite of satisfaction from helping to pursue justice, overall, 63% of the responding CSIs reported experiencing either a moderate or a high level of symptoms of post-incident stress following involvement with critical incident trauma. Specifically, 43% of respondents reported they “often experience fatigue” as a result of their job, 27% report feeling tense and uptight at work, and 78% report experiencing at least one physical symptom related to work (headaches, trouble sleeping, loss of appetite, etc.) Additionally, 52% of respondents reported they have too much work to do, and 50% felt that making one mistake in processing the crime scene may result in losing the case. Finally, although not reaching 50%, 38% of the respondents reported there were aspects of their job that made them upset, and 37% of

the respondents reported their mistakes were more public than other law enforcement officers. Thus, our data offer qualified support for Hypothesis #1: the job of a CSI officer is stressful.

Hypothesis #2: Crime scene investigator symptoms of post-incident stress become more acute with increases in the level of violence and morbidity associated with crime scenes.

Although level of morbidity is a somewhat subjective measure, we can assume, for the purpose of this study, that crime scenes involving homicide or crime scenes that remind a CSI of his or her loved ones are considered to be more morbid than crime scenes involving things in the “other” category, such as arson or burglary. The findings supported the second hypothesis: crime scene investigator symptoms of post-incident stress become more acute with increases in the level of violence and morbidity associated with crime scenes. Figure 1 shows the mean symptoms of post-incident stress based on specific crime scenes. Most notably, the mean symptoms of post-incident stress for incidents that reminded CSIs of loved ones was 44.5, whereas the mean for “other” incidents was 28.3. This was a statically significant difference, indicating that the symptoms of post-incident stress were significantly greater for those involved with incidents reminding them of loved ones compared to those involved with “other” incidents, which included offenses such as aggravated robbery, felonious assault, and arson. Additionally, incidents involving multiple victims ($\mu=29.5$) and incidents involving homicide ($\mu=37.1$) were reported to be very stressful (responded 3 or 4) as well, but were not found to be significantly more stressful than incidents that reminded CSIs of loved ones.

Interestingly, anecdotal data from the comments received suggest that some CSIs found incidents with multiple victims more distressing, whereas other officers found less distress in incidents in which the alleged perpetrator died. The absence of the stress in these latter cases was attributed to the lack of a trial. Thus, our data also support Hypothesis #2. The respondents found their work stressful and the stress level increased as the nature of the work became more disturbing.

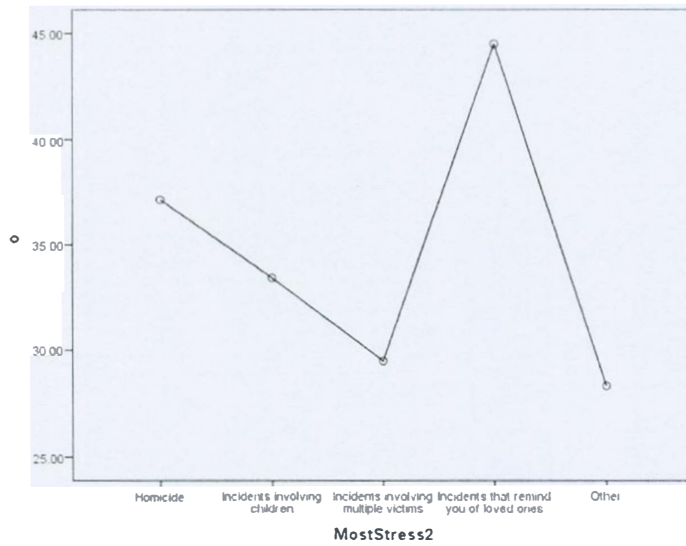


Figure 1

Mean incidents of post-incident stress.

Hypothesis #3: Context-specific measures (i.e., roles, responsibilities, and balance between work and life issues) are predictors of post-incident stress.

Symptoms of post-incident stress were found to increase as stress of context-specific measures (i.e., roles, responsibilities, and balance between work and life issues) and job demands increased. As Table 1 indicates, 12 participants reported low levels of work stress, with a correlated mean of 25.3 for symptoms of post-incident stress, whereas 30 participants reported moderate or high levels of work stress, resulting in means of 36.1 and 43.0, respectively, for symptoms of post incident stress. Mean symptoms of post-incident stress in this case was found to be statically significant ($F=12.7$, $Sig=.000$).

Work tress Level	<i>n</i>	Mean of Symptoms
Low Work Stress	12	25.3
Moderate Work Stress	22	36.1
High Work Stress	8	43.0

Table 1

Symptoms of post-incident stress by level of stress at work.

Interestingly, the CSIs reported very few problems with prosecutors or defense attorneys and did not feel that they had many problems with their supervisors. Figure 2 presents the positive correlation between levels of work stress and symptoms of post-incident stress. Interestingly, there was very little difference between the number of crime scenes worked per month and officer stress. It is possible this finding was due in part to the small number of respondents in the sample.

ot surprisingly, the responding CSIs felt their work disrupted the time they could spend with family members (56% responded 4 or 5), but only a minority of CSIs felt that their work disrupted the quality of family life (42%) or that they were unable to discuss what they did with loved ones (38%). Lastly, more than 70% of the CSIs who responded to our survey said that if they had to decide again, they would take the same job without hesitation. In spite of the overwhelming feeling that they would accept their jobs if offered again, the data does suggests that work-related activities of their job are stressful.

In addition, in general, females reported experiencing slightly more significant symptoms of post-incident stress (Table 2), but the differences were not significant ($t=.811$). Males, meanwhile, reported utilizing more severely negative coping strategies such as drinking and lashing out verbally. The data also reported a positive correlation between age and post-incident stress. The level of post-incident stress symptoms was lower for those who never married compared to those who were either currently married or divorced. This finding could also be attributed to age, because the younger CSIs were less likely to be married. In addition, those with children ($n=34$) were found to be more likely to experience post-incident stress symptoms than their childless colleagues ($n=12$). Thus, Hypothesis #3 is tentatively supported.

Gender	<i>n</i>	Mean of Symptoms
Female	13	36.1
Male	33	33.3

Table 2

Symptoms of post-incident stress by gender.



Figure 2

Correlation between levels of stress and symptoms of post-incident stress.

Hypothesis # 4: Job demands including the use of rotational assignments are important precursors to post-incident stress.

Nearly 78% of participants reported being on a nonrotational shift. Although the number of respondents on rotational shifts is small ($n=10$), the data suggest that rotational shifts contribute to higher levels of stress. For example, as noted in Table 3, the percentage of CSIs with low stress levels was twice as high for nonrotational CSIs when compared to rotational CSIs. In addition, the percentage of officers with high stress levels was higher among respondents who reported being on a rotational schedule. CSIs who were on call reported higher levels of stress than CSIs who responded as part of their rotation. Thus, Hypothesis #4 is supported.

Work Stress Level	Rotating Shift	
	Yes	No
Low Work Stress	20%	40%
Moderate Work Stress	50%	40%
High Work Stress	30%	20%
Total	$n=10$	$n=35$

Table 3

Symptoms of post-incident stress by rotating shift.

Hypothesis #5: A lack of funding for equipment and additional personnel for crime scene investigators increases post-incident stress.

Hypothesis #6: The (perceived) lack of support by police organizations causes an increase in a sense of isolation for crime scene investigators.

Levels of organizational support, as perceived by participants, were found to be correlated with higher levels of stress, higher levels of negative coping strategies, and higher feelings of isolation. For the purposes of this study, negative coping strategies included drinking too much, feeling like verbally lashing out, and feeling like physically lashing out. Feelings of isolation included inability to discuss work with loved ones and those not working in law enforcement, feeling uncomfortable talking to fellow CSIs or supervisors about troubles, and an inability to rely on fellow CSIs or religious beliefs for support. Negative coping strategies were measured on a scale from 1 to 3, with 1 being the lowest amount of negative coping strategies and 3 being the highest amount.

As noted previously, feeling overworked (52% responded 4 or 5), having too little manpower to complete the task (60%), and feeling that if they make a mistake it may jeopardize the case (50%) were all correlated with increased levels of stress. In addition, although the responding CSIs felt what they did was important (66%), only 36% felt their departments appreciated what they did, only 37% felt they could talk to their fellow officers about any troubles they might be having, and only 30% felt they could talk to a supervisor about problems with their work.

Figure 3 presents the means for negative coping strategies in relation to both low ($n=28$; $\mu=1.54$) and high ($n=16$; $\mu=1.38$) levels of organizational support. As indicated, CSIs who perceived their organization provided low emotional support reported higher negative coping strategies. Although the implications of the data provided in Figure 3 are problematic, one must note that very few CSIs reported using negative coping strategies such as drinking too much (less than 30%), verbally lashing out at others (8%), or physically lashing out at others (2%). Although the small number of respondents who used negative coping strategies makes it harder to tease out the relationship between such strategies and stress, it is reassuring to note that very few of our respondents reported using such mechanisms as a response to stress.

Negative coping strategies

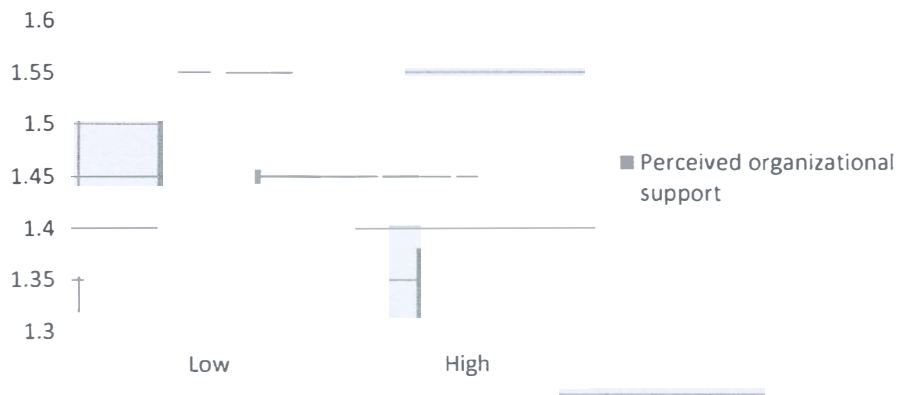


Figure 3

Negative coping strategies and their relationship to perceived organizational support.

Feelings of isolation were slightly higher ($n=16$; $\mu=2.0$) for those with a high perceived organizational support. It is worth noting, however, that there were a significant amount of nonresponses in the category of isolation. Thus, although the data is in the expected direction, because of small sample sizes, it is difficult to say that Hypotheses #5 and #6 are supported.

Discussion and Conclusion

Although it is often hypothesized that CSI work is difficult and therefore CSIs experience much stress in their work, there is very little research that actually addresses this issue [55]. This preliminary study is an attempt to begin to fill this void. We anonymously surveyed CSI investigators in a large Midwestern state to gain some understanding of their work and its impact upon their mental well-being. Although we found that CSIs did experience stress in their work, they also derived high levels of satisfaction from their jobs. The majority of responding CSIs enjoyed their jobs, received a high level of satisfaction from their jobs, and if they had to do it over again, would take their jobs without hesitation. In spite of these positive findings, we did find some reasons for concern. These findings were not surprising because constant exposure to human suffering is stressful. Although CSI officers may not have the direct exposure to the

criminal event, they are often called in to explore, investigate, and process the crime scene. Thus, even though they may not be directly dealing with victims or offenders and the emotions generated from the event, they may nonetheless experience stress.

With some suggesting that PTSD symptoms may be prevalent in approximately 85 percent of first responders [56], it is important that agencies be able to identify and address stress in an officer. Programs that provide support and counseling can lessen this burden. Efforts at resiliency training have also been suggested as a vehicle for helping officers bounce back from traumatic incidents [57]. We know how to deal with the stress an officer, CSI or otherwise, receives from the job. Setting up processes for officers to talk about stressful events is important. However, encouraging officers to actually do so is perhaps more important.

Both supervising and fellow officers can be taught to become more cognizant of the signs of stress overload in an officer, including paying more attention to self-destructive behavior by the officer. These fellow officers can then encourage an officer who is experiencing difficulty to seek help. Steps can also be taken to help officers re-examine their relationships with family and friends in an effort to get the officer to better understand the support networks that are available. Officers may also be trained to use their traumatic experiences to explore how they see the world. By getting officers to focus on characteristics such as resilience, internal locus of control, and hope for a better future, departments may be able to reduce some of the negative emotions that arise from traumatic events [57].

Included in the high stress levels reported by our respondents were feelings of being overworked and a sense their efforts were unappreciated by their organization. Although some of the solutions to these problems may be harder to fix than others, sometimes a simple thank you for a job well done and an appreciation of the stressful nature of the job can go a long way to reducing feelings of being unappreciated and isolated. Additionally, organizations can make CSIs feel more appreciated by simply seeking their input on the development of new policies and procedures or projects that relate to their work and by publicly recognizing their hard work by issuing letters of recommendation and awarding citations. At first glance, these latter recommendations may look simplistic; in essence they are. That is our point. Although it may go against the police

culture of individualism and machismo, reaching out and thanking an individual for a job well done may help to alleviate the underappreciated nature of being a CSI officer.

Because of the nature of their work, responding to crime scenes rather than working a traditional shift, CSI officers may face additional job-related stress. The feelings of being overworked can also be addressed by strategically hiring additional persons when funds allow, allowing the CSIs to take appropriate time off, encouraging positive coping strategies (i.e., access to workout facilities and health or wellness programs), and using a fair system for case assignment. CSI case assignment, approval for time off, and initial recognition of stress will fall upon the CSI's immediate supervisor. Organizations must properly train supervisors to understand and recognize the signs of stress and burnout and to be flexible when managing CSI workload.

The preceding analysis notwithstanding, the reader must remember that this was a preliminary study conducted within one jurisdiction in the Midwest. Although we attempted to survey all of the CSIs in the state selected, our response rate was below 50 percent. Clearly, there is more work to do to adequately assess the trauma associated with crime scene investigation work. It would be beneficial if others were to take our findings and attempt to replicate them elsewhere. Larger sample sizes would also help as would more in-depth interviews. It would also be interesting to sample different types of officers. For example, it has been hypothesized that investigators who spend their time focusing on child pornography suffer different types of stress. To date, little research on the stress associated with these types of investigations has been conducted.

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