



Mississippi Forensic News

VOLUME 3 ISSUE 1

DECEMBER 17, 2019

SPECIAL POINTS OF INTEREST:

- Welcome note from your President
- 2020 Conference Info!
- Member Spotlight

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From the President

Greetings,

I am so happy to be serving as the MDIAI President for the 2019-2020 year and to continue the great work of the Division. I became a member of the MDIAI in 1996 and have served in the following capacities: Editor of the Magnolia Print, Second Vice-President, First Vice-President, President, and Board Chair over the course of the 23 years of my membership. I last held office in 2003 so I am excited to be serving in “official” capacity again.

Our mission is to encourage the enlargement and improvement of the science of forensic identification and crime detection. This is accomplished through the

cooperation of individuals who are actively engaged in forensic identification, investigation, scientific examination of physical evidence, and the criminal justice system. The MDIAI encourages research, education, and training in scientific crime detection.

Our highly attended annual training conference for 2019 was held in Meridian, MS, and focused on Mass Casualties. We are in the planning stages of the spring 2020 training conference so be on the lookout for more information in the coming weeks. Help us spread the word to the law enforcement and forensic science communities about the MDIAI and how

they can join our organization at www.mdiai.com.

If you are interested in serving within the MDIAI, please plan on joining us for the spring conference where you’ll have a chance to learn, network, and find a place to plug in to the organization.

Sincerely,

Karla McCary Pope



Karla McCary Pope
MDIAI President 2019-2020



SAVE
THE
DATE!

APRIL

20
THROUGH
22

WE HOPE
TO SEE
YOU
THERE!

Take a Byte Out of Crime at our 2020 MDIAI Conference!

Topics

Introduction to and Limitations of Digital Forensics

Computer Investigations

Training from [BlackBag Technologies](#)

Cellphone Dumps

[The Internet Crimes Against Children Task Force Program \(ICAC\)](#)

Legal Updates from the Mississippi Attorney General's Office

Venue

Holiday Inn Southaven Central - Memphis
280 Marathon Way
Southaven, MS 38671

[Click here](#) to reserve your room. Select the dates of your stay, check availability, and then use the code MDI to secure your discounted conference rate.

You have until March 29, 2020 to receive the discounted conference rate.

Social Event

Join us Tuesday evening as we put our problem solving skills to the test at [Liberation Escape Rooms](#)

Can you escape???



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Member Spotlight

Robert Grant

MDIAI Life Member

Bob Grant's Law Enforcement career spans from 1960 as a United States Marine serving with a Military Police Detachment in Sasebo, Japan, Escambia County Sheriff's Office as Deputy and ID Officer, Seminole County Sheriff's Department as the Lieutenant in charge of Records, Identification and Crime Scenes. After retiring from the Pensacola Police Department, Grant served with the District One Medical Examiner's Office, Pensacola, FL (Medical Legal Investigator-Field Identification of the Dead and Emergency Morgue Procedures). He served in Bosnia, Iraq and Afghanistan as a Police Adviser, Trainer, Investigator both in human rights and war crimes and CEXC and JEFF Latent print processing Laboratories and searching AFIS files. Bob has fingerprinted thousands of civil, criminal and deceased persons' in all environments.

Bob's accomplishments include:

- Past president of the FDIAI and IAI
- Associate Degree in Law Enforcement, Pensacola State College
- Certified Latent Print Examiner
- Certified Florida Police Standards Instructor
- Ten Print and Latent Print Instructor both in the State of Florida and Iraq
- Trained as a mass disaster team leader and was team leader for field identification of the dead and emergency morgue procedures in the Crash of National Airlines Flight 193 in Pensacola Bay on May 8, 1978
- Coauthored the first 40-hour Crime Scene Investigation Course for Florida Police Standards in 1971
- Authored "Field Identification of the Dead and Emergency Morgue Procedures" for Florida Police Standards
- Pensacola Police Dept. Crime Scene Technical Services Lt. (Retired). In charge of all major crime scenes, Latent Prints and Ten Prints.



MDIAI thanks Bob for his dedicated service



2019 Conference Pics!



Prevalence of Secondary Traumatic Stress/Vicarious Trauma in Crime Scene Personnel

By Anna Maria Savrock, M. C. J.

ABSTRACT

A proposal to measure occupational stress among first responder or helping professions is hardly groundbreaking. Academics have long understood the effects of exposure to violence and trauma on those who are called to help when humanity is at its ugliest. It is surprising, however, that few studies on the prevalence of occupational trauma have been completed on the subgroup of crime scene personnel. Crime scene personnel are exposed to traumatizing events at a more concentrated frequency due to the specialization of their work. To address this knowledge gap, this researcher examined the pervasiveness of risk factors for and manifestations of secondary traumatic stress among this group of responders. Through the use of a self-evaluative survey, this research will build upon an understudied body of work in order to raise awareness for the mental health of crime scene personnel.

Prevalence of Secondary Traumatic Stress/Vicarious Trauma in Crime Scene Personnel

Recognition of the impact of work-related stress in first responder careers has been increasing over the last three decades. Numerous studies have been presented that describe the relationship between high-stress careers in the area of public health and burnout, attrition and retention rates. Police officers, fire fighters, emergency medical professionals, and dispatchers have been the focus of multiple academic studies linking high levels of stress with shorter careers and lasting mental trauma. More recently, an urgent call for organizational preventative protocol has emerged as recognition that stress and burnout can lead to more devastating levels of injury to those employed in the public health and safety field. Researchers have demonstrated the potential for the inherent stress in these “helping” fields to lead to more severe psychological issues such as secondary traumatic stress syndrome (STS) and vicarious trauma (VT). Experts in the field are now calling for institutions to incorporate proactive measures protecting their employees from the dangers of STS and VT, not only to benefit their employees directly, but to retain employees and prevent the cost of

hiring and training replacements.

Professionals in the field of public health and safety are routinely exposed to violent traumatic events. These events can either be acute, as in the case of mass casualty events like the 9-11 attacks, or chronic exposure such as that experienced by a veteran child abuse detective. The American Psychiatric Association recognizes members of these professions to be a high risk group for developing symptoms similar to Post Traumatic Stress via a mechanism of either primary or secondary exposure to traumatic stressors. First responder exposure, that of police officers, firemen, and emergency medical workers is easily identifiable and direct. Secondary exposure is described as that experienced by victim coordinators, therapists, and social workers. Each of the above listed professional groups has been represented in published studies, but little attention has been paid to crime scene investigators and other civilian-dominated support professions.

Secondary traumatic stress syndrome includes symptoms of “burnout” but at an exaggerated level. Those suffering from STS may exhibit symptoms such as exhaustion, insomnia, headaches, increased susceptibility to illness, teeth grinding, and heart palpitations. Behavioral symptoms include anger, avoidance, isolation, compromised performance at work, inappropriate use of humor, and hypersensitivity. Vicarious trauma includes all of these but is characterized by a *cognitive schema*, or a break with personally held beliefs (Bell, Kulkarni, & Dalton, 2003). A significant body of work exists documenting the urgency of the problems facing many of the helping professions, e.g., therapists and social workers. Similarly, the psychological impact of working with survivors of violent crimes has been clearly documented in public safety professions where higher rates of work-related stress exist in the first responder populations. Startlingly, however, little work has been done illustrating this phenomenon in crime scene personnel and other civilian positions in public safety.

Crime scene personnel work side by side with first responders and are regularly exposed to the same traumatic events. Logically, crime scene personnel should be included in studies along with their sworn counterparts, measuring the psychological impact of traumatic exposure. This has not been done.

A study by Craun and Bourke (2015), one of a large number of studies addressing the psychological impact of secondary trauma on sworn personnel, examined the use of humor by detectives as a coping mechanism. The use of humor as a coping mechanism is also commonplace among crime scene personnel, but

with both groups is a red flag regarding psychological health. By contrast, a study by Mrevilje (2015) is one of few that examines exposure to the same trauma in crime scene personnel. This study demonstrates the need for more training for crime scene workers in order to protect the employees and their agencies with regard to attrition and quality of work product.

As popular as crime scene investigation has become, it is a profession where little attention is paid to the emotional stability of the employee. Experienced crime scene investigators are a tremendous asset to any department. Training is expensive and lengthy. Quality crime scene investigators require an extensive investment of time and money for any agency. Therefore, every attempt must be made to reduce attrition rates in this field. Additional research is needed that is specific to the highly specialized field of crime scene investigation in order to persuade agency leaders to protect the mental health of these at-risk employees and retain experienced professionals.

Crime scene personnel are exposed to the same acute and chronic traumatic experiences as police officers, firefighters, dispatchers, and social workers. Multiple studies have demonstrated the need for preventative programs to protect the well-being of the latter professions. Little work has been done in the specific area of crime scene investigation that demonstrates a prevalence of extreme stress and the need for similar preventative programs. Justification of this study includes the idea that crime scene personnel are even more at risk due to the nature of the work. Crime scene personnel encounter traumatic scenes with a greater frequency than the majority of traditional police officers. Additionally, crime scene personnel are tasked with more traumatic responsibilities at a scene, such as examination of the body, analysis of the violent acts including reconstruction of such behaviors, and personal interaction with living victims should specific forensic requests be received. Because of the specific focus of this work, it is theorized that the prevalence of stress-related disorders will be higher in these positions than in the general population and possibly higher than some other public health workers.

The limitations on this study will include the number of participating respondents and the number of participating agencies that provide proactive measures to combat work-related stress for this target

group. This researcher recognizes the limitations with regard to the demographics of the participants and participating agencies. Those offering the aforementioned services will tend to be larger in size with more available resources than a typical agency. Persons employed in this profession may also carry the stereotype of being more immune to exposure to traumatic environments. Such a population may be assumed to be resistant to violent scenes and the macabre than the general population and therefore less vulnerable to occupational stressors. These assumptions would skew the results when compared to a population where the environment is less morbid. This perception, unfortunately, may be responsible for the lack of concern for those most susceptible.

Target responders were sent an e-mail describing the purpose of the research, an invitation to participate, and a link to the introduction and consent in order to participate. This link included the promise of anonymity and the survey could not be opened without acknowledged consent. The email also contained an invitation to forward the survey to colleagues who may be interested in participating with the hopes of a snowball sampling method increasing the sample size. A total of 192 responses were collected. The response rate is unknown as an undetermined number of the email requests were blocked by departmental security features, diverted to junk email boxes, or otherwise never received. No completed surveys were excluded from this analysis.

A total of 192 respondents participated in this study. Participant's scores were totaled for 17 questions on the Likert scale. The lowest possible score was 17 and the highest possible score was 85. The mean score of the 192 respondents was 57.9, the median score was 58.5 and the mode was 64. The data show a standard deviation of 12.95. 120 respondents (62.5%) had cumulative scores fall within one standard deviation. 187 (97.4%) of the respondent's cumulative scores were within two standard deviations, as would be expected with a large standard deviation relative to the mean.

The majority of the respondents were female (57.8%) as was expected given the dominance of female professionals within this specialty.

The plurality of respondents held a Bachelor's Degree (50.0%), with Master's Degrees being the second highest reporting education level (26.6%). Other respondents included PhD (1%), Associate's Degree

(6.8%), some college (12%), and high school diploma/GED (3.7%).

Age ranges were fairly evenly distributed among the 5-year intervals from ages 21 to 56+, with a slightly higher response from 36-40 (16.7%) and 41-45 (16.1%) year old professionals.

Work experience was fairly evenly distributed among the 5-year interval choices (1-5 years, 6-10, 11-15, 15+).

The 17-item, self-reporting survey was measured on a 5 point Likert scale, with the response choices: 1=strongly disagree, 2=agree, 3=neutral/no opinion, 4=agree, and 5=strongly agree. Scores of each of the 17 survey questions were totaled with a minimum possible cumulative score of 17 and a maximum possible cumulative score of 85. Scores of 17-45 indicate high risk for Secondary Traumatic Stress and Vicarious Trauma, 46-61 indicate moderate or average risk levels, and 62-85 indicate low risk levels.

192 respondents completed the survey. 39 respondents (20%) had an individual cumulative score in the low risk range. 119 respondents (62%) had an individual cumulative score in the moderate or average risk range. 34 respondents (18%) had an individual cumulative score in the high risk range.

A total score under 45* is suggestive of the potential for STS as measured by PTSD criteria (Bride, 2007). A lower score indicates a more severe risk level for STS. The mean score of the respondents was 57.9; this mean is above the cutoff score of 45. This indicates that the majority of respondents are reporting average or below average level of risk for Secondary Traumatic Stress.

*This value was determined to be the cut-off score indicative of *potential* psychological risk factors for STS by performing an extrapolation from the data included in the published results of the 2007 study by Bride. An individual, cumulative score of 45 represents an item mean of 2.6 per item.

Perhaps the most revealing responses received as part of this survey were included in the free response section. The survey received a significant number of responses for both of the free response questions. Of 192 respondents, 88 (46%) offered responses for free response question 1. 99 respondents (51%) provided answers for free response question 2. All responses were included in the original study.

Two general trends emerged from the free response question #1, which asked respondents to propose

methods employers could reduce work-related stress for their employees. The first immediately identifiable trend was that the majority of respondents described effective communication as a possible means of mitigating stress. Responses involving communication far outnumbered those responses concerning physical outlets for stress.

The second notable trend was that the responses that focused on communication generally favored peer or professional counseling. Respondents did not reflect confidence in supervisors as a source for occupational stress mitigation.

Free Response Question #2 asked respondents to describe their personal methods for addressing work-related stress.

Many of the responses for this question revolved around physical outlets. The personal responsibility for mitigating work-related stress appeared to be strong among those responding and many described healthy outlets. Many responses received contained warning signs of poor personal coping mechanisms (alcohol, internalization, avoidance, and deflection through humor).

Overwhelmingly, however, the respondents reported healthy outlets for stress release during their personal time.

The qualitative results of the survey were as revealing as the quantitative data. Given the frequency of exposure to traumatic environments and the lack of organizational support provided for professionals in the field of crime scene investigation, finding a high percentage of respondents fall into a high risk category for secondary traumatic trauma was not surprising. Crime scene investigation is a popular and fast-growing field. Possibly as a result of its growing popularity and much faster than average employment change, organizations do not have a plan for the proper handling of these employees. According to the U. S. Department of Labor's Occupational Outlook Handbook, "Forensic Science Technician" jobs will experience a much faster than average increase in the future. The Department of Labor cites 15,400 such positions nationwide for the year 2016 and expected growth of 2,600 each year (U.S. Department of Labor, 2018). This census, however, does not differentiate between field technicians and laboratory positions which can significantly alter the exposure to traumatic environments, and therefore, the risks of Secondary Traumatic Stress.

The quantitative analysis of all data provided by the survey did support the hypotheses developed for this research. This researcher believes that a repeated distribution of this survey through professional channels would yield higher response rates, and likely similar results. One interesting limitation to this study is the correlation between willingness to participate and overall job satisfaction. This presumption was reinforced by chance during the data collection portion of this research. One of the participants contacted this researcher with a request for access to the results as the participant was also a peer support officer for his department. After a brief exchange, the participant offered unsolicited advice that relates directly to the limitations of a self-evaluation survey; *“For what it’s worth, at least on the police end, those that are dissatisfied with their environment are not typically willing to complete these type of questionnaires, or they are less than truthful as a “self-protection” mechanism... In other words, if they “tell everyone” they are happy, then they can tell themselves the same thing. After a while, this usually collapses, but by then it may be too late and they just become cynical and burned out.”* This is an opinion that is echoed in many of the studies upon which this research is modeled. Results are reported to a specific degree of scientific certainty, but those reported data sets are assumed to be limited by the inadequacies of self-evaluation.

The percentage of respondents found to be in the “high risk” category for STS and VT (18%) was higher than the general population. The lifetime prevalence of STS/VT or PTSD in America among the general population is as high as 7.8% (Kessler, Chiu, Demler, Merikangas, & Walters, 1995). The percentage of respondents found to be in the “high risk” category for STS and VT (18%) was higher than that reported by similar studies for other first responder or helping professions.

It is important to note that this survey is not diagnostic of STS, VT or PTSD. This survey reflects categories of risk for the development of symptoms of traumatization. Frequency of exposure to traumatic events, lack of support from the individual’s professional or personal circles, or inadequate management of these employees by management can easily result in the overwhelming of an individual’s ability to mitigate stress. The development of chronic stress-related illnesses is a process, not an event. Regular exposure to violence, death, survivors of traumatic events, and extraordinarily disturbing incidents describe the typical

work environment for first responders. This exposure is even more frequent for the crime scene personnel who specialize in the investigation of extreme and traumatic events.

Crime scene investigation has become one of the fastest-growing careers in America for multiple reasons. Not only has the importance of scientifically-based investigation become a pillar of the criminal justice system, but the jurors and general population have come to expect some forensic evidence or testimony to accompany any criminal action as described by the “CSI Effect” phenomenon (Alldredge, 2015). Agencies have responded to the growing demand by expanding their forensics units and investing significant funds towards equipment and salaries for these specialists. Much of the time, however, little attention is paid to the management of and mental health of these employees. Departments would benefit from protecting these employees from occupational stress, burnout or the more extreme forms of stress-related illness as described in this research. Departments can ensure a positive return on the investment made in crime scene personnel by acknowledging work-related stress and creating a supportive organizational culture.

Special note- The above article represents an abbreviated version of the research as submitted to William Carey University by Anna Maria Savrock. If you are interested in more information, please email a request to ASavrock@dps.ms.gov or message MDIAI at <https://www.mdiai.com/contact>

References

- Allredge, J. (2015). The "CSI Effect" and Its Potential Impact on Juror Decisions. *Research Journal of Justice Studies and Forensic Science*, 3(6). Retrieved from: <http://scholarworks.sjsu.edu/themis/vol3/iss1/6>
- Bell, H., Kulkarni, S., & Dalton, L. (2003). Organizational Prevention of Vicarious Trauma. *The Journal of Contemporary Human Services*, 84(4), 463-470. DOI: 10.1606/1044-3894.131
- Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C.R. (2004). Development and Validation of the Secondary Traumatic Stress Scale. *Research on Social Work Practice*, 14(1), 27-35. DOI: 10.1177/1049731503254106
- Craun, S. W., & Bourke, M. L. (2015). Is Laughing at the Expense of Victims and Offenders a Red Flag? Humor and Secondary Traumatic Stress. *Journal of Child Sexual Abuse*, (24), 592-602.
- Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C.B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archive of General Psychiatry*, 52(12), 1048-1060.
- Mrevilje, P. M. (2015). Coping with Work-related Traumatic Situations among Crime Scene Technicians. *Stress and Health*, 32(4), 374-382. <https://doi.org/10.1002/smi.2631>
- U.S. Department of Labor. (2018). *Occupational Outlook Handbook* [Data file] Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm>

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