

## Examining the Impact of Critical Incidents, Organizational Variables and Coping Skills on Sleep Quality in Law Enforcement Officers

Jamie Washington, Asiah Byers, Megan J. DeBrabander, and Dr. Temilola K. Salami

Law enforcement officers are out on the front lines every day to serve justice, which means they are regularly confronted with dangerous situations (Burke, 1994). These dangerous situations, along with other aspects of a police officer's job, can cause psychological distress (Lucas, Weidner, & Janisse, 2012). Previous research has explored different factors that lead to law enforcement stress, including lack of support from their supervisors or from their organization, traumatic experiences, poor coping skills, and the overall work environment (Abdollahi, 2002). These stressors bring about negative consequences, such as poor sleep quality (Hartley et al., 2014). A study by Giorgi et al. (2018) investigated the relationship between sleep disorders, job performance, and burnout in a nurse sample and found that sleep quality and experiencing dysfunction in the workplace were significantly associated with burnout. Stated differently, given that this was a cross-sectional study, poor sleep quality had an association with factors that lead to burnout such as poor job performance and lack of passion for the job (Giorgi et al., 2018). Further, poor sleep quality has been found to be associated with a number of negative psychological outcomes such as cognitive impairment, sleep disorders, and anxiety (Giorgi et al., 2018). Due to these associations, and the high need to reduce psychological distress amongst law enforcement, it is particularly pertinent to investigate what may lead to poor sleep quality in law enforcement officers (Chang et al., 2015). Despite the importance of sleep, there is little research on the association between sleep quality and police-related stressors. Thus, the hypotheses of the current study are as follow: 1) Based on previous research that found police-related stressors to be associated with sleep quality (Hartley et al., 2014), we hypothesized that more critical incidents, dysfunctional coping skills, and police stress would be positively associated with sleep quality, while less supervisor and organizational support would be negatively correlated with poorer sleep quality. 2) Based on the research on coping as a potential mitigating factor for a number of stress variables and psychological consequences (Hartley et al., 2014), we hypothesized that dysfunctional coping skills will have the most influence on poor sleep quality followed by perceived supervisor and organizational support.

For the present study, 125 law enforcement officers participated in an online survey. The average age was around 41 years old and they were primarily male (81%) and Caucasian (81%). We used various measures to assess the factors related to police-work, stress, and sleep. The Critical Incident History Questionnaire (Weiss et al., 2010) assessed how often someone experienced critical incidents, which are traumatic events that are so overwhelming that it is hard for the individual to cope effectively. The Brief COPE (Carver, 1997) provided information on the different styles of coping that an individual uses to manage stress. Although a number of subscales can be derived from the Brief COPE, for the purposes of our study, we focused on dysfunctional coping skills. The Police Stress Questionnaire (McCreary & Thompson, 2006)

measures two types of stress: operational and organizational stress. The questionnaire captures the specific stressors that police officers experience in an organizational setting (e.g. excessive administrative duties, bureaucratic red tape, dealing with supervisors) and the operational setting (e.g. traumatic events, fatigue, occupation-related health issues). The Perceived Supervisor Support Scale (Kottke & Sharafinski, 1988) assessed officers' perception of the relationship between supervisors and police officers. The Perceived Organizational Support Scale (Eisenberger et al., 1986) measured officers' perception of their support from the organization as a whole. Finally, the Pittsburgh Sleep Quality Index (Buysse et al., 1988) is a series of questions about a person's sleep habits that provides an overall score for quality of sleep in which higher scores indicate poorer sleep quality.

After running a correlation analysis with the data, our results showed that there were significant associations between dysfunctional coping skills, operational stress, organizational stress, organizational support, and poor sleep quality ( $p < .05$ ). Specifically, as dysfunctional coping, operational stress, and organizational stress increased, so did poor sleep quality. On the other hand, as organizational support decreased, poor sleep quality increased. We also ran a linear regression to determine how much each of these factors accounted for differences in sleep quality when all other variables were controlled. The results indicated that the regression model with all factors included accounted for 41% of the variance on sleep quality. The total model was significant ( $p < .001$ ). Further, our analyses also showed that dysfunctional coping and operational stress had the greatest effect on sleep quality, though organizational stress also contributed.

Overall, our hypotheses were partially supported. Critical incidents, supervisor support and organizational support were not significantly associated with sleep quality as we had predicted. However, consistent with our hypotheses, operational stress (which accounted for the most effect) and dysfunctional coping were significantly and positively correlated with poor sleep quality. These results are likely due to the strong association between stress and sleep quality (APA, 2013). It is also possible that the other variables in the study, such as critical incidents, supervisor support, and organizational support, serve as moderators of the relationship between stress and sleep rather than having direct effects. Surprisingly, organizational stress was associated with sleep quality in the opposite direction than expected. Though organizational stress was positively associated with poor sleep quality in the correlation analysis, when put in the regression model with the other variables the beta value was negative, indicating that as organizational stress decreases, poor sleep quality increases. It is likely that the addition of the other variables in the regression model changed the effect of organizational stress on sleep quality. This implies that there are potential moderators that might influence the association between organizational stress and sleep that will need to be examined in future research.

Though the current study provided some insight into factors that impact sleep quality among law enforcement populations, some limitations of the study are of note. 1) The study included self-report assessments which may not measure sleep quality as accurately, with some individuals perhaps having less insight into their sleep. Thus, future research may need to use

multi-method approaches such as information from confederates or information from technology to measure sleep. 2) The lack of diversity in the sample may not allow these findings to generalize to the larger population. Overall, this study adds to the literature by allowing us to better explain factors that affect sleep quality in law enforcement officers. These findings could aid police departments in being able to better understand the effects of various factors within their organizations so they can create interventions and policies to enhance sleep quality, and in turn reduce psychological distress and burnout and increase job performance.

## References

- Abdollahi, K. (2002) Understanding Police Stress Research. *Journal of Forensic Psychology Practice*, 2(2), 1-24, doi: [10.1300/J158v02n02\\_01](https://doi.org/10.1300/J158v02n02_01)
- American Psychological Association (2013) Stress and Sleep [Press release]. Retrieved from <https://www.apa.org/news/press/releases/stress/2013/sleep>
- Burke, R. J. (1994). Stressful Events, Work-Family Conflict, Coping, Psychological Burnout, and Well-Being among Police Officers. *Psychological Reports*, 75(2), 787–800. <https://doi.org/10.2466/pr0.1994.75.2.787>
- Buyse, D. J., Reynolds, C. F. III, Monk, T. H., Berman, S. R., and Kupfer, D. J. (1988). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28, 193-213. [https://doi.org/10.1016/0165-1781\(89\)90047-4](https://doi.org/10.1016/0165-1781(89)90047-4)
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4(1).
- Chang, J., Huang, P., Lin, Y., Lin, C., Lin, C., Shieh, Y., Lin, Y. (2015). Association between sleep duration and sleep quality, and metabolic syndrome in Taiwanese police officers. *International Journal of Occupational Medicine and Environmental Health*, 28(6), 1011-1023. <https://doi.org/10.13075/ijomeh.1896.00359>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied psychology*, 71(3), 500.
- Giorgi, F., Mattei, A., Notarnicola, I., Petrucci, C., & Lancia, L. (2018). Can sleep quality and burnout affect the job performance of shift-work nurses? A hospital cross-sectional study. *Journal of Advanced Nursing*, 3, 698.
- Hartley, T. A., Violanti, J. M., Sarkisian, K., Fekedulegn, D., Mnatsakanova, A., Andrew, M. E., & Burchfiel, C. M. (2014). Association between police-specific stressors and sleep quality: influence of coping and depressive symptoms. *Journal of law enforcement leadership and ethics*, 1(1), 31.
- Kottke, J. L., Sharafinski, C. E. (1988). Measuring perceived supervisory and organizational support. *Educational and Psychological Measurement*, 48, 1075-1049. <https://doi.org/10.1177/0013164488484024>
- Lucas, T., Weidner, N., & Janisse, J. (2012). Where does work stress come from? A generalizability analysis of stress in police officers. *Psychology & Health*, 27(12), 1426–1447. <https://doi-org.ezproxy.shsu.edu/10.1080/08870446.2012.687738>
- McCreary, D. R., & Thompson, M. M. (2006). Development of two reliable and valid measures of stressors in policing: The Operational and Organizational Police Stress Questionnaires. *International Journal of Stress Management*, 13(4), 494–518. <https://doi.org/10.1037/1072-5245.13.4.494>
- Weiss, D. S., Brunet, A., Best, S. R., Metzler, T. J., Liberman, A., Pole, N., ... & Marmar, C. R. (2010). Frequency and severity approaches to indexing exposure to trauma: The Critical Incident History Questionnaire for police officers. *Journal of traumatic stress*, 23(6), 734-743.



## Introduction

Due to the nature of their work, law enforcement officers experience a great deal of stress (Lucas, Weidner, & Janisse, 2012). Within their work, factors that consistently impose negative conditions for law enforcement officers include the potentially isolating police culture, dangerous working conditions, and the sometimes negative rhetoric about police (Woody, 2006). One negative consequence of stress that law enforcement experience is poor sleep quality (American Psychological Association, 2013). Unfortunately, sleep disorders are twice as prevalent among police officers compared to the general public (Rajaratnam et al., 2011). It is especially pertinent for law enforcement officers to have good sleep quality because sleep deficiencies are associated with poorer job performance (Rajaratnam et al., 2011), which would impact decision-making and reaction times in the field. Despite being a critical element in the field of law enforcement, there is little research on how specific factors related to police-work affect sleep quality.

## Hypotheses

**Hypothesis 1:** Critical incidents, dysfunctional coping skills, and police stress will be positively correlated with poorer sleep quality, while perceived supervisor and organizational support will be negatively correlated with poorer sleep quality.

**Hypothesis 2:** Based on the research on coping as a potential mitigating factor for a number of stress variables and psychological consequences (Hartley et al., 2014), we hypothesize that dysfunctional coping skills will have the most influence on poor sleep quality followed by perceived supervisor and organizational support.

## Methods

Participants:

- 125 law enforcement officers participated in an online survey
  - $Mage = 41.75$  ( $SD = 10.75$ )
  - Gender:
    - Male = 81%
    - Female = 19%
  - Race/Ethnicity:
    - Caucasian = 81%
    - African American = 9.6%
    - Hispanic/Latino = 8.8%
    - Native American = 0.8%

## Methods

Measures:

- Critical Incident History Questionnaire (Weiss et al., 2010)
- Brief COPE (Carver, 1997)
- Police Stress Questionnaire (McCreary & Thompson, 2006)
  - Operational Stress
  - Organizational Stress
- Perceived Supervisor Support (Kottke & Sharafinski, 1988)
- Perceived Organizational Support (Eisenberger et al., 1986)
- Pittsburgh Sleep Quality Index (Buysse et al., 1988)

## Results

### Correlation Analyses: Hypothesis 1

Means, Standard Deviations, and Correlations with Poor Sleep Quality

	<i>r</i>	<i>M</i>	<i>SD</i>
Critical Incidents	.15	169.11	147.66
Dysfunctional Coping	.51**	17.90	5.09
Operational Stress	.50**	3.25	1.08
Organizational Stress	.28**	3.28	1.14
Supervisor Support	-.15	62.66	25.63
Organizational Support	-.29**	3.23	1.21

\*\*  $p < .01$

### Regression Analyses: Hypothesis 2

Predictors of Poor Sleep Quality in Law Enforcement Officers

	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Critical Incidents	.08	.08	1.10	.27
Dysfunctional Coping	.34	.08	3.95	<.001
Operational Stress	.45	.11	4.21	<.001
Organizational Stress	-.24	.11	-2.19	.03
Supervisor Support	-.07	.09	-.75	.46
Organizational Support	-.17	.09	-1.80	.07

## Results

**Hypothesis 1:** A Pearson correlation revealed significant associations of dysfunctional coping skills, operational stress, organizational stress, and perceived organizational support on poor sleep quality.

**Hypothesis 2:** A linear regression analysis, including all independent variables in the model, indicated that model account for 41% of the variance on sleep quality ( $F(6) = 12.56, p < .001$ ).

- Dysfunctional coping and operational stress were the best predictors of variance in sleep quality. Though, organizational stress was also a contributor.

## Discussion

When all other variables where accounted for, critical incidents, supervisor support and organizational support were not significantly associated with sleep quality. However, consistent with our hypotheses, operational stress (accounting for the most effect) and dysfunctional coping were significantly and positively correlated with poor sleep quality. These results are likely due to the strong association between stress and sleep quality (APA, 2013). It is possible that the other variables in the study serve as moderators of the relationship between stress and sleep rather than having direct effects.

Limitations:

- Self-report assessments may be biased with future research needing multi-method assessment modalities.
- Lack of diversity in the sample may not allow for generalizability of the current findings.

Implications:

- The results add to existing knowledge by pinpointing specific contributors to poor sleep quality, allowing for more focused research and interventions.

## Selected References

American Psychological Association (2013) Stress and Sleep [Press release]. Retrieved from <https://www.apa.org/news/press/releases/stress/2013/sleep>

Giorgi, F., Mattei, A., Notarnicola, I., Petrucci, C., & Lancia, L. (2018). Can sleep quality and burnout affect the job performance of shift-work nurses? A hospital cross-sectional study. *Journal of Advanced Nursing*, 3, 698.

Hartley, T. A., Violanti, J. M., Sarkisian, K., Fekedulegn, D., Mnatsakanova, A., Andrew, M. E., & Burchfiel, C. M. (2014). Association between police-specific stressors and sleep quality: influence of coping and depressive symptoms. *Journal of law enforcement leadership and ethics*, 1(1), 31.

Lucas, T., Weidner, N., & Janisse, J. (2012). Where does work stress come from? A generalizability analysis of stress in police officers. *Psychology & Health*, 27(12), 1426–1447. <https://doi-org.ezproxy.shsu.edu/10.1080/08870446.2012.687738>

Rajaratnam, S. M. W. et al. (2011). Sleep Disorders, Health, and Safety in Police Officers. *The Journal of the American Medical Association*, 306(23), 2567–2578. doi: 10.1001/jama.2011.1851

Woody, R.H. (2006). Family interventions with law enforcement officers. *The American Journal of Family Therapy*, 34, 95-103.