OPERATIONAL STRESS AND MENTAL HEALTH AMONG LAW ENFORCEMENT: THE

MODERATING ROLE OF ORGANIZATIONAL STRESS AND SUPERVISOR SUPPORT

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by

Christina M Engelken

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DEDICATION

This thesis is dedicated to my parents, Carl and Michele. To my dad, thank you for always supporting me. No matter what, you have always encouraged me to work toward my dreams (even when I wanted to be a ventriloquist). To Michele, thank you for providing stability to our lives and always taking care of us. Even when I was a headstrong teenager, you never gave up on me. Thank you for everything you both have done for me. I know I could not have done it without you both.

ABSTRACT

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Partially a result of occupational stress, law enforcement officers have been found to have higher than average rates of suicide than the general population. Occupational stress can be measured in two dimensions: operational (resulting from the nature of the job) and organizational (resulting from bureaucratic practices). The extant literature has found that supervisor support may mitigate negative health outcomes while both forms of occupational stress may aggravate them. The present study examined the impact of supervisor support and organizational stress on the association between operational stress and correlates of suicide (i.e., depression, hopelessness, and PTSD). One hundred and three participants were analyzed for this study. Seventy-six participants were male while 38 were female. The average age of participants was 40.31 ($SD = 10.08$) years old. We hypothesized that operational stress, organizational stress, and supervisor support would each be related to the three mental health outcomes and that supervisor support and organizational stress would interact with operational stress in such a way that individuals experiencing low levels of supervisor support and high levels of organizational stress would have the worst mental health outcomes. The present study found the relationship between operational stress and PTSD as well as hopelessness (but not depression) to be significantly impacted by both organizational stress and supervisor support with both interactions resulting in worsened outcomes. Implications and directions for future research are discussed.

KEY WORDS: Occupational stress, Supervisor support, Law enforcement officers, Depression, Posttraumatic stress, Hopelessness

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CHAPTER I

Introduction

The stress literature has extensively documented the negative consequences of occupational stress at both the individual and organizational levels. For the employee, occupational stress may result in a variety of negative health outcomes such as increased risk of psychiatric disorders, weakened immune system function, and cardiovascular disease (Biglari et al., 2016; Kivimäki et al., 2006; Nixon, Mazzola, Bauer, Krueger, & Spector, 2011). For the organization, researchers have found chronically stressed employees to have high turnover intentions and low levels of organizational commitment (Ali & Kakakhel, 2013; Hwang, Lee, Park, Chang, & Kim, 2011; Thorsteinsson, Brown, & Richards, 2014). Further, it has been estimated that occupational stress results in a loss of over $180 billion in healthcare costs annually (Goh, Pfeffer, & Zenios, 2015). Due to the dangerous nature of law enforcement, occupational stress is a pervasive problem among officers. For the purposes of this study, "law enforcement officers" refers to individuals currently working as police or probation/parole officers.

Among those working in law enforcement, a number of physical and psychological conditions arise from chronic occupational stress. These include a greater frequency of physical complaints (Hartley, Burchfiel, Fekedulegn, Andrew, & Violanti, 2011; Johnson et al., 2005; Ogińska-Bulik, 2005), depressive symptoms (Gayman & Bradley, 2012; Gershon, Barocas, Canton, Li, & Vlahov, 2009;), and higher rates of posttraumatic stress disorder (PTSD) compared to the general public (Lewis, Lewis, & Garby, 2012; McCanlies, Mnatsakanova, Andrew, Burchfiel, & Violanti, 2014; Rhineberger-Dunn, Mack, & Baker, 2016). Further, while the research on suicidality in

probation and parole officers is scarce, the level of suicidality among police officers has been found to be more than twice that of the national average (Police Suicide Task Force, 2009; Violanti, Robinson, & Shen, 2013). Thus, the present study aims to identify areas of intervention which may reduce the negative consequences associated with chronic occupational stress. The high rate of suicide is arguably the most pressing problem among this population. For this reason and as a means of reducing suicidality, correlates of suicidal ideation (i.e., depression, PTSD, and hopelessness) were assessed (Kumar & Pradhan, 2003; Sareen, Houlahan, Cox, & Asmundson, 2005).

Occupational Stress on Mental Health Outcomes

Occupational stress is defined as negative occupational factors which contribute to psychological distress as a result of limited coping skills (Cooper & Marshall, 1976; Rees, 1997). DeLongis, Folkman, and Lazarus (1988) found a positive relationship between stress and negative health outcomes, especially among individuals who reported having unsupportive interpersonal relationships. Other researchers have since documented similar findings within organizational settings, noting that high levels of occupational stress are related to psychological health outcomes such as fatigue, anxiety, depression, and low levels of affective wellbeing among office workers and teachers (Malik & Noreen, 2015; Salami, 2010; Thorsteinsson et al., 2014). Similarly, in an analysis of six cross-sectional studies, Loerbroks and colleagues (2016) found that individuals who reported high amounts of occupational stress reported suicidal ideation at a rate of almost twice that of individuals who reported experiencing low amounts of occupational stress. Overall, it has been extensively documented that as levels of stress

increase, so do reports of negative health complaints (e.g., Klainin, 2009; Schneiderman, Ironson, & Siegal, 2005; Thoits, 2010).

Occupational stress may be measured in two dimensions: operational and organizational. Operational stress results from the occupation itself while organizational stress results from procedures or policies within the agency (McCreary & Thompson, 2006). For law enforcement officers, operational stress may stem from factors such as critical incidents, working alone at night, and shiftwork, while organizational stress may result from factors such as excessive paperwork, dealing with the court system, or inconsistent leadership (McCreary & Thompson, 2006). Predictably, multiple studies have found a strong connection between operational stressors such as critical incidents and PTSD (Brough, 2004; McFarlane & Bryant, 2007; Ward, Lombard, & Gwebushe, 2006). Further, Maguen and colleagues (2014) found the relationship between critical incident exposure and PTSD to be mediated by routine organizational stressors. Indeed, many studies have found organizational stressors to be significantly predictive of PTSD symptoms, sometimes even more so than exposure to critical incidents (Abdollahi, 2002; Collins & Gibbs, 2003; Liberman et al., 2002). Interestingly, Shane (2013) found that police report experiencing more organizational stress than operational stress. One reason for this may be that operational stressors are expected by officer recruits while organizational stress is an unexpected consequence of law enforcement work (Stinchcomb, 2004). Hakan Can, Hendy, and Karagoz (2015) suggest that law enforcement training may adequately prepare police recruits to effectively cope with operational stressors. As for organizational stressors, individuals may not be prepared to cope with the stress that results from their respective agency's policies. For this reason,

we propose that operational stress and organizational stress may contribute to individual outcomes differently, with organizational stress possibly interacting with operational stress for worsened outcomes.

Organizational Support Theory and Supervisor Support

Organizational Support Theory may provide guidance on how best to decrease the negative consequences of chronic stress among law enforcement officers. This theory posits that employees form a generalized view of the organization on the basis of perceived support, with individuals who perceive higher levels of organizational support showing better individual and organizational outcomes than those with lower levels (Kurtessis et al., 2017; Rhoades & Eisenberger, 2002; Riggle, Edmondson, & Hansen, 2009). Indeed, researchers have found a significant association between perceived organizational support (POS) and employee stress levels, physical health, burnout, job satisfaction, and turnover (Jain & Sinha, 2005; Jawahar, Stone, & Kisamore, 2007; Malik & Noreen, 2015; Maertz, Griffeth, Campbell, & Allen, 2007; Mahmoud, 2008). Several antecedent factors of POS have been identified. Rhoades and Eisenberger (2002) identified organizational fairness, supervisor support, and favorableness of job conditions as being particularly important. As the overarching literature on the alleviating effects of social support on stress and negative health outcomes is vast (Sarason, Sarason, & Gurung, 1997; Reblin & Uchino, 2008; Uchino, 2006), the present study focuses on supervisor support. In conjunction with the overarching social support literature, supervisory support is related to better health outcomes and less perceived occupational stress (Hansen et al., 2006; Woods, 2005). Due to the unique, high stress nature of the field, law enforcement officers may have difficulty obtaining the adequate outside

emotional support necessary for adaptive coping. For example, officers may have difficulty confiding in individuals outside of law enforcement as they do not understand the nature of the job (Conn & Butterfield, 2013). In this regard, supervisors are exceptionally important in providing emotional support to officers as they understand the nature of law enforcement.

Additionally, Organizational Support Theory posits that employees see their supervisors as being a representation of the organization as a whole (Eisenberger et al., 2010). Therefore, an employee's perception of his or her supervisor has a significant impact on their view of the organization in its entirety. One reason for this may be that supervisors are actively involved in distributing rewards and providing feedback to employees (Eisenberger et al., 2002; Shanock & Eisenberger, 2006). As supervisors are viewed as acting on behalf of the organization, poor treatment by a supervisor is generalized to an overall lack of organizational support rather than to the actions of an individual (Eisenberger et al., 2002). Furthermore, supervisors' attitudes and behaviors can have a profound effect on organizational climate (Fang, Wu, & Wu, 2015). In this way, supportive supervisors may foster a supportive organizational climate and, in turn, create better mental health outcomes for employees.

Perceived supervisory support has been found to not only increase levels of POS but serve as a buffer for negative outcomes that may result from chronic occupational stress (Gilbreath & Benson, 2004; Kula, 2017; Park, Wilson, & Lee, 2004; Rhoades & Eisenberger, 2002). However, few studies have examined the impact of supervisory support on correlates of suicide in law enforcement. Despite the extensive research regarding the negative effects of stress and the mollifying impact of perceived supervisor

support, law enforcement officers continue to suffer from psychological distress with little understanding of how different sources of stress impact individual outcomes, and the role supervisor support may have in these associations. To our knowledge, this is the first study to examine the impact of supervisory support and organizational stress on the association between operational stress and correlates of suicide (i.e. depression, hopelessness, and PTSD) in law enforcement officers.

Present Study

Using Organizational Support Theory, the goal of the current study is to examine the impact of supervisor support and organizational stress on the relation between operational stress and correlates of suicide (i.e. PTSD, depression, and hopelessness). With such high rates of suicide among this population (Police Suicide Task Force, 2009; Violanti, Robinson, Shen, 2013), research into factors that may influence the association between occupational stress and correlates of suicide in this population is important. The specific hypotheses are as follows: 1) Operational stress will be positively related to each psychological health outcome (i.e., PTSD, depression, and hopelessness) such that high levels of operational stress will be associated with worse outcomes. 2) Organizational stress will be positively related to each psychological health outcome (i.e., PTSD, depression, and hopelessness) such that high levels of organizational stress will be associated with worse outcomes. 3) Supervisor support will be negatively related to each psychological health outcome (i.e. PTSD, depression, and hopelessness) such that high levels of supervisor support will be associated with better outcomes. 4) Placed in the same model to account for both of their unique effects, both supervisor support and organizational stress will interact with operational stress on each of the three mental

health outcomes such that individuals experiencing high levels of organizational stress

and low levels of supervisor support will experience the worst mental health outcomes.

CHAPTER II

Methods

Participants

One hundred and seventeen participants were recruited from various Texas criminal justice agencies (e.g., police departments and community corrections departments). Seventy-six participants were male while 38 were female. The average age of the participants was 40.31 (SD = 10.08) years old. Ninety-nine (84.60%) participants identified as White while eight (6.80%) participants identified as Hispanic and seven (6.10%) participants identified as Black. In regard to highest level of education, 18.80% were a high school graduate, 9.40% received vocational training, 12.80% had an associate's degree, 45.30% had a bachelor's degree, and 11.10% had a master's degree. In regard to marital status, 70.90% of respondents were married while 13.60% were divorced and 11.70% had never been married. The average amount of time in one's current position was 67.73 months (5.64 years) while the average amount of time in law enforcement was 172.39 months (14.37 years).

Measures

Demographics. A demographics survey asked participants about their age, gender, race/ethnicity, educational level, employment information (i.e., occupation, hours per week, income), and marital status.

Police Stress Questionnaire (PSQ; McCreary & Thompson, 2006). Created to measure both operational and organizational stress among police, the 40-item PSQ measures the perceived stressfulness of various occupational factors using a 7-point Likert scale. Scores range from 1 (*no stress at all*) to 7 (*a lot of stress*). Respondents are

asked to read various aspects of being a law enforcement officer and to indicate their perceived stressfulness of each. The organizational scale (PSQ-Org) measures the bureaucratic aspects of the job such as "excessive administrative duties". The operational scale (PSQ-Op) measures aspects related to the nature of the occupation such as "working alone at night". High scores indicate a higher perception of work-stress, with a maximum score of 140 on each scale. In a series of validation studies, McCreary and Thompson (2006) found the PSQ to have excellent internal reliability. PSQ-Org was reported to have Cronbach's alphas ranging from .89 to .93. The PSQ-Op was reported to have Cronbach's alphas ranging from .90 to .93. The PSQs were moderately correlated with the Perceived Stress Scale, the Daily Hassles Scale, and the Negative Life Events Scale (r = .26 to .54). Additionally, there was no more than 30% shared variance, indicating sufficient discriminant validity. For this study, the Cronbach's alpha for the PSQ-Org was .94 while the Cronbach's alpha for the PSQ-Op was .93.

Survey of Perceived Supervisor Support (SPSS; Kottke & Sharafinski, 1988). Perceived supervisor support has often been measured using items from the Survey of Perceived Organizational Support (SPOS; Eisenberger et al., 2002; Kottke & Sharafinski, 1988; Rhoades, Eisenberger, & Armeli, 2001). The present study utilized the same 16-items from Kottke & Sharafinski (1988), which were adapted from the SPOS by replacing *organization* with *supervisor* (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Respondents are asked to indicate how much they agree with each statement regarding perceptions of supervisory support. An example item is, "my supervisor is willing to extend him or herself in order to help me perform my job to the best of my ability." The response scale is a 7-point Likert scale ranging from 1 (*strongly disagree*) to

7 (*strongly agree*). High scores indicate high levels of supervisor support. The

Cronbach's alpha of the SPSS has been reported to be .98 (Kottke and Sharafinski, 1988).

Similarly, Hutchison (1997) found the Cronbach's alpha of the SPSS to be .97, indicating

excellent internal consistency. The Cronbach's alpha for this study was .97.

PTSD Checklist for DSM-5 (PCL-5; Blevins, Weathers, Davis, Witte, &

Domino, 2015). The PCL-5 is a 20-item, self-report survey which screens for

posttraumatic stress disorder by measuring the severity of psychological symptoms

experienced after an extremely stressful event. Items on this inventory ask questions

related to four dimensions of PTSD: intrusion (e.g., "Repeated, disturbing, and unwanted

memories of the stressful experience?"), avoidance (i.e., "Avoiding memories, thoughts,

or feelings related to the stressful experience?"), negative alterations in mood or

cognitions (e.g., "Having strong negative feelings such as fear, horror, anger, guilt, or

shame?") and increased arousal symptoms (e.g., "Feeling jumpy or easily startled?").

Participants were asked to report how bothered they were by each symptom in the past

month. Responses are scored using a 5-point Likert scale ranging from not at all (0) to

extremely (4) with higher scores indicating more severe symptoms. The PCL-5 has

excellent internal consistency ($\alpha = .96$) and good test-retest reliability ($\alpha = .84$; Bovin et

al., 2016). In a sample of police officers, van der Meer, Bakker, Schrieken, Hoofwijk, &

Olff (2016) reported the internal consistency to be .93. Furthermore, Bovin and

colleagues (2016) also found the PCL-5 to have excellent convergent validity. The

Cronbach's alpha for the present study was .93.

Patient Health Questionnaire Depression Scale (PHQ-8; Kroenke, Spitzer,

Williams, & Lowe, 2010). The PHQ-8 is a 4-point Likert scale which measures the

severity of depressive symptoms over the past two weeks. Scores range from 0 (*not at all*) to 3 (*nearly every day*), with a maximum score of 29. Higher scores indicate greater severity of depressive symptoms. In a secondary analysis of data collected from two PHQ studies (n = 6000), Kroenke, Spitzer, Williams, & Lowe (2010) found the PHQ-8 to have good internal reliability (α = .86 to .89) as well as good criterion sensitivity and specificity (.88 for both). In a sample of police officers, Bowler and colleagues (2016) reported the Cronbach's alpha to be .89. The Cronbach's alpha for this study was .87.

Beck Hopelessness Scale (BHS; Beck, Lester, & Trexler, 1974). The BHS is a 20-item self-report survey which measures hopelessness using a true-false response method. The survey contains positive and negative statements to which respondents indicate if the statement is accurate. An example question is, "my future seems dark to me." True responses were given a 0 while false responses were given a 1. Negative items (i.e., "I might as well give up because I can't make things better for myself") were reverse coded. Higher scores indicate a higher level of hopelessness, with a maximum score of 20. Beck, Lester, & Trexler (1974) found a Cronbach's alpha of .93 in their study. In a sample of police officers, Violanti and colleagues (2016) reported the BHS to have good internal reliability (α = .81). The Cronbach's alpha for this study was .81.

CHAPTER III

Results

Preliminary Data Analysis

Using the Statistical Package for Social Sciences version 22 (SPSS; IBM Corp,

2016), in an analysis of missing data, the present study was found to have 9% of data

missing. The results of Little's MCAR test indicated this data was missing completely at

random (*Chi-Square* = 2059.94; *p* = 1.0). To minimize the impact of missing data on the

analyses, individuals with at least one complete scale missing were excluded from

analyses, resulting in 14 participants being excluded resulting in 103 participants.

Further, the present study utilized multiple imputation to account for the remainder of

missing data. Multiple imputation replaces missing data with plausible estimates to create

a complete data set (Barnard & Rubin, 1999). Five imputations were completed for the

present study. All analyses were completed using the resulting imputed data set. A post

hoc power analysis was conducted using the software package G*Power (Faul &

Erdfelder, 1996). With a sample size of 103 participants, an alpha level of .05 and a

medium effect size (f^2 = .15), the post hoc analysis revealed a power of .86. Thus, the

present study has adequate power to conduct the proposed hypotheses. All subsequent

data was analyzed using SPSS (IBM Corp, 2016).

Multiple linear regression has four main assumptions that must be met to

ensure valid results (Kelley & Bolin, 2013). These assumptions are linearity, normality of

errors, homoscedasticity, and statistical independence (multicollinearity). To test

linearity, each independent and dependent variable was entered into a scatterplot. The

scatterplots confirmed the assumption of linearity. To test normality of errors, a Q-Q plot

was run for operational stress, organizational stress, and supervisor support, respectively. Each plot indicated that the residuals were normally distributed. In addition, skewness and kurtosis were analyzed to assess normality. For skewness, a value of 2.5 indicates right skewness while a value of -2.5 indicates left skewness (Abbott, 2016). The skewness for operational stress, organizational stress, and supervisor support were .13, .36, and -.64, respectively. The skewness for PTSD, depression, and hopelessness were 1.40, .42, and 1.9, respectively. For kurtosis, a value of 3 or more is considered leptokurtic while a value of -3 or less is considered platykurtic (Abbott, 2016). Values that fall between 3 to -3 indicates that the distribution of the data is normal. The kurtosis of operational stress, organizational stress, and supervisor support were -1.04, -.38, and -.30, respectively. The kurtosis of PTSD, depression, and hopelessness were 2.05, -.62, and 2.90, respectively. To test homoscedasticity, each independent variable was plotted and assessed for any patterns in the data points. No patterns were apparent, indicating homoscedasticity. Multicollinearity was assessed by using the variance inflation factor (VIF) of each independent variable. If VIF of a variable exceeds 10, multicollinearity is present (Robinson & Schumacker, 2009). The variance inflation factor for operational stress (VIF = 2.54), organizational stress (VIF = 1.34), and supervisor support (VIF = 2.30) indicate no multicollinearity. In conclusion, the data met each of the main assumptions of multiple regression and inferences may be made with greater confidence.

Descriptive Data

Means, standard deviations, and intercorrelations for all variables are presented in Table 1. The mean scores of the outcome variables are as follows: PTSD ($M = 14.22$, $SD = 13.98$), depression ($M = 8.50$, $SD = 5.55$), and hopelessness ($M = 2.56$, $SD = 3.16$).

Operational stress and organizational stress were positively correlated ($r = .75$, $p < .001$). There was a negative correlation between operational stress and supervisor support ($r = -.42$, $p < .001$). Operational stress was correlated with each of the outcome variables: PTSD ($r = .45$, $p < .001$), depression ($r = .42$, $p < .001$), and hopelessness ($r = .34$, $p < .001$). For organizational stress, there was a negative correlation with supervisor support ($r = -.51$, $p < .001$). Additionally, organizational stress was positively correlated with all of the outcome variables: PTSD ($r = .37$, $p < .001$), depression ($r = .38$, $p < .001$), and hopelessness ($r = .35$, $p < .001$). Supervisor support was negatively correlated with all of the outcome variables: PTSD ($r = -.19$, $p < .001$), depression ($r = -.25$, $p < .001$), and hopelessness ($r = -.29$, $p < .001$).

Correlations and mean difference tests were conducted to assess the appropriateness of relevant variables as covariates. Regarding gender, there was a statistically significant difference between males and females for PTSD ($p < .01$), depression ($p = .004$), and hopelessness ($p < .01$). For PTSD, men had a mean score of 8.91 ($SD = 5.80$) while females had a mean score of 7.59 ($SD = 4.87$). For depression, males had a mean score of 16.94 ($SD = 14.95$) while females had a mean score of 15.59 ($SD = 11.53$). For hopelessness, males had a mean score of 2.83 ($SD = 3.57$) while females had a mean score of 2.06 ($SD = 2.11$). It was found that time in one's current position was significantly related to hopelessness ($r = .21$, $p = .04$). As a result of these analyses, further analyses of PTSD included age and gender as covariates. Further analyses of depression included age and gender as covariates. Further analysis of hopelessness included age, gender, and time in one's current position as covariates.

Double Moderation Model

A double moderation analysis was used to test the hypothesis that the association between operational stress and mental health outcomes would be influenced by organizational stress and supervisor support. This analysis was completed using the SPSS PROCESS macro, Model 2 (Hayes, 2013). Figure 1 illustrates the conceptual model of a double moderation. Scores for operational stress, organizational stress, and supervisor support were centered to ensure their tests of significance were interpretable (Hayes, 2013).

There was a significant main effect between operational stress and PTSD ($\beta = .20$, p < .001), depression ($\beta = .06$, $p < .001$), and hopelessness ($\beta = .02$, $p = .02$). In addition, there was a significant main effect between organizational stress and depression ($\beta = .04$, $p = .003$) and hopelessness ($\beta = .02$, $p = .03$) but not PTSD ($\beta = .07$, $p = .07$). There was a significant main effect between supervisor support and hopelessness ($\beta = -.03$, $p < .001$) but not PTSD ($\beta = -.04$, p = .10) or hopelessness ($\beta = -.02$, $p = .60$). Organizational stress and supervisor support were placed in the same model to account for each of their unique effects and examined as moderators of the association between operational stress and mental health outcomes (i.e., PTSD, depression, and hopelessness). In line with our hypotheses, there was a significant interaction between operational stress and organizational stress on PTSD ($\beta = .005$, $p < .001$). There was also a significant interaction between operational stress and supervisor support ($\beta = .005$, $p < .001$). Overall, the model explained 28% of the variance for PTSD, $F(7, 567) = 31.88$, $p < .001$. For hopelessness, there was a significant interaction effect between operational stress and organizational stress ($\beta = .001$, $p = .002$) and supervisor support ($\beta = .001$, $p = .03$). The

model explained 23% of the variance for hopelessness, $F(8, 566) = 20.70, p < .001$.

Contrary to our hypothesis, there was no significant interaction effect between

operational stress and organizational stress ($\beta < .001, p = .60$) or supervisor support ($\beta <$

$.001, p = .15$) for depression.

Conditional Effects

To assess the nature of the interactions, the focal predictor was assessed at the

mean, a standard deviation above the mean, and a standard deviation below the mean for

both supervisor support and organizational stress. The conditional effects for PTSD are

illustrated in Figures 2 and 3. For PTSD, when organizational stress and supervisor

support were both low, operational stress was not significantly associated with symptoms

($\beta = -.03, p = .57$). When organizational stress was low and supervisor support was

average, operational stress was significantly associated with PTSD symptoms ($\beta = .09, p$

$= .04$). When organizational stress was low and supervisor support was high, operational

stress was significantly associated with PTSD symptoms ($\beta = .21, p < .001$). When

organizational stress was average and supervisor support was low, operational stress was

not significantly associated with PTSD symptoms ($\beta = .08, p = .09$). When organizational

stress and supervisor support were both average, operational stress was significantly

associated with PTSD symptoms ($\beta = .20, p < .001$). When organizational stress was

average and supervisor support was high, operational stress was significantly associated

with PTSD ($\beta = .32, p < .001$). When organizational stress was high and supervisor

support was low, operational stress was associated with PTSD symptoms ($\beta = .18, p <$

$.001$). When organizational stress was high and supervisor support was average,

operational stress was significantly associated with PTSD symptoms ($\beta = .31, p < .001$).

Finally, when organizational stress and supervisor support were both high, operational stress was significantly associated with PTSD symptoms (β = .43, p < .001).

The conditional effects for hopelessness are illustrated in Figures 4 and 5. For hopelessness, when levels of organizational stress and supervisor support were both low, operational stress was not significantly associated with symptoms (β = -.01, p = .42). When organizational stress was low and supervisor support was average, operational stress was not significantly associated with hopelessness (β = .002, p = .88). When organizational stress was low and supervisor support was high, operational stress was not associated with hopelessness (β = .01, p = .19). When organizational stress was average and supervisor support was low, operational stress was not significantly associated with hopelessness (β = .01, p = .49). When organizational stress and supervisor support were both average, operational stress was significantly associated with hopelessness (β = .02, p = .02). When organizational stress was average and supervisor support was high, operational stress was significantly associated with hopelessness (β = .03, p = .002). When organizational stress was high and supervisor support was low, operational stress was significantly associated with hopelessness (β = .03, p = .01). When organizational stress was high and supervisor support was average, operational stress was significantly associated with hopelessness (β = .04, p < .001). When organizational stress and supervisor support were both high, operational stress was significantly associated with hopelessness (β = .05, p < .001).

CHAPTER IV

Discussion

Few studies have examined the impact of both operational and organizational stress on psychological outcomes among police and probation/parole officers. Further, no studies could be found which assessed the role of occupational stress on hopelessness in law enforcement, although studies have found that high levels of occupational stress are related to depression and PTSD (Wang et al., 2010; Gershon et al., 2009). Because this population has such a high rate of suicide (Police Suicide Task Force, 2009; Violanti et al., 2013) and because depression, PTSD, and hopelessness have been found to be correlated with suicidality (Gradus et al., 2010; Hawton, Casañas i Comabella, Haw, & Saunders, 2013; Riberio, Huang, Fox, & Franklin, 2018), research into this area is important.

The present study found operational stress to be significantly related to PTSD, depression, and hopelessness, such that high levels of operational stress are associated with worsened outcomes. Organizational stress was found to be significantly related to depression and hopelessness in such a way that high levels of organizational stress were associated with worsened outcomes. However, organizational stress did not significantly impact PTSD. This falls in line with previous research stating that operational stress is more associated with PTSD than organizational stress (Armstrong, Shakespeare-Finch, & Shochet, 2016). Further, there was a significant interaction effect between operational stress and organizational stress on PTSD and hopelessness. Specifically, the present study found that high levels of organizational stress influences the relationship between operational stress and PTSD and hopelessness. These results fall in line with previous

literature which have found organizational stress to significantly contribute to worsened mental health outcomes (Liberman et al., 2002; Maguen et al., 2009). Contrary to our hypothesis, this interaction effect did not hold for depressive symptoms. While operational stress and organizational stress are independently related to depression, organizational stress does not impact the relationship between operational stress and depressive symptoms. One reason for this may be that organizational stress results in anxiety more so than depression. Longstanding anxiety can give way to hopeless cognitions (Starr & Davila, 2012), which would explain why organizational stress influences the relation between operational stress and hopelessness but perhaps not depression.

Interestingly, the present study's results do not fall in line with previous literature which states that supervisor support should have a buffering effect on negative psychological outcomes that result from stress (Gilbreath & Benson, 2004; Kula, 2017; Park, Wilson, & Lee, 2004; Rhoades & Eisenberger, 2002). Indeed, the present study found higher levels of supervisor support to be related to worsened outcomes. One reason for this may lie within the scale of perceived supervisor support (Kottke & Sharafinski, 1988). Many items, while for occupations outside of law enforcement would likely be considered positive supervisor behaviors, may actually be a reflection of behaviors perceived negatively by law enforcement officers. For example, items such as "my supervisor shows a lot of concern for me", "my supervisor appreciates extra effort from me", or "my supervisor really cares about my wellbeing" would typically be considered beneficial. However, for officers under considerable operational and organizational stress, such behaviors may be perceived as placing them under scrutiny. This notion is

supported by previous research which has found officers to report very little autonomy

from their departments (Vito, Walsh, & Kunselman, 2005). Indeed, one common theme

of ineffective police supervision is micro-management (Schafer, 2010). Furthermore, as

supervisors are seen as agents of the organization (Eisenberger et al., 2010), perceived

overbearing behavior from direct supervisors may actually compound the negative effects

of organizational support, resulting in worsened outcomes. Moreover, as the culture of

law enforcement is rooted in masculinity (Franklin, 2007), officers may resist efforts

from their supervisor to provide emotional support as emotional expression is regarded as

weak and feminine (Cleary, 2012). Officers may fear that being seen as weak will result

in supervisors and peers doubting their ability to perform their job. As police recruit

training has strong themes of masculinity (Prokos & Padavic, 2002), officers may avoid

expressing emotions or confiding in their supervisors because they have been told this is

unacceptable. Indeed, literature on the culture of law enforcement has found that officers

are less likely to express internalizing emotions, view emotions in a positive light, or

confide in others for fear of stigmatization and negative job consequences (Addis &

Cohane, 2005; Dowling, Genet, & Moynihan, 2005). The fact that male officers reported

significantly worse symptoms of PTSD, depression, and hopelessness than their female

counterparts further supports the notion that a lack of emotion expression contributes to

worsened psychological outcomes, as previous research notes that women are more likely

to express their emotions to others (Chaplin, 2015; LaFrance, Hecht, & Paluck, 2003).

Implications

Organizational stress was found to influence the relationship between operational

stress, and PTSD and hopelessness. For this reason, decreasing organizational stress

among officers will likely result in better individual outcomes. Research has found the most stressful organizational factors for law enforcement include poor workplace communication (Gershon et al., 2009), and lack of autonomy (Zhao, He, & Lovrich, 2002). Criminal justice organizations should consider ways to reduce these stressors as a means of reducing organizational stress overall. Further, attempts to lessen organizational stressors will likely result in an increase in perceived organizational support (Kurtessis et al., 2017). High levels of perceived organizational support have been found to be related to better psychological outcomes (Marchand & Vandenberghe, 2015; Sang, Ji, Li, & Zhao, 2017) and higher levels of organizational commitment (Kim, Eisenberger, & Baik, 2016). In this way, lessening organizational stress could give way to better psychological outcomes (including reduced suicidality) among police officers. Further, criminal justice agencies may consider trainings on emotion regulation and coping skills. Effective emotion regulation and coping skills may mitigate the effects of operational stress, resulting in better outcomes (Arnetz, Arble, Backman, Lynch & Lublin, 2013; Galatzer-Levy et al., 2013). Supervisor support was associated with worsened outcomes among law enforcement officers. One reason for this may be that traditionally beneficial supervisory behavior may be considered scrutiny by police and parole/probation officers. Previous research has found increased autonomy to be associated with psychological wellbeing (Chung-Yan, 2010). For this reason, criminal justice agencies may consider ways to increase autonomy among police officers. For example, implementing a community policing organizational style. Community policing is a strategy in which officers work with the community to prevent crime and promote a sense of safety among citizens (Stein & Griffith, 2017). Indeed, community policing has been associated with

increased autonomy in police officers (Terpstra, 2011). As officers may fear that confiding in one's supervisor will result in stigmatization and negative job consequences, criminal justice organizations might consider implementing confidential, peer based support programs, such as the Police Organization Providing Peer Assistance program endorsed by the New York police department (Dowling et al., 2005). This program allows officers to call an anonymous hotline to receive support during times of distress. A confidential, peer based program would enable officers to confide in someone who has been through similar circumstances, without fear of stigmatization or perceptions of weakness. Further, there is a need for psychologists and other mental health professionals to be involved with the mental health of law enforcement officers. Psychologists and mental health professionals familiar with the law enforcement field may bring new perspectives to criminal justice agencies about the best ways to provide support and services to officers. Further, advocating for mental health treatment in criminal justice agencies may lessen the stigma of psychological distress, resulting in better outcomes for law enforcement officers.

Limitations and Future Directions

The present study had several limitations. First, 14 individuals were excluded from the analysis due to non-response. However, as the number of participants excluded was relatively small, this likely did not result in skewed results. Second, the current sample was not very diverse with most participants identifying as White. Indeed, only 6.8% of participants identified as Hispanic while 6.1% identified as Black. Due to this lack of racial/ethnic diversity in the sample, the results may not generalize to minority populations as minority populations may experience organizational and operational stress

differently (He, Zhao, & Ren, 2005). Future research should assess the role of

occupational stress on psychological outcomes in an ethnically diverse police population.

Third, our sample consisted of significantly more police officers (n = 81) than

probation/parole officers (n = 20). For this reason, the results may not generalize as well

to probation/parole officers. As such, the literature would benefit from research

examining differences between police and probation/parole officers. Fourth, while the

present study assessed the impact of organizational stress on the association between

operational stress and mental health outcomes, it only examined overall organizational

stress. Therefore, future research should assess specific organizational stress factors such

as poor workplace communication and lack of autonomy to determine which have the

biggest impact on psychological health outcomes. Finally, the present study used a scale

of supervisor support which, to our knowledge, has not been used in a police population.

It is possible that beneficial supervisor support may look differently in law enforcement.

For this reason, future research should focus on the creation of a valid measure of

supervisor support in law enforcement officers.

Conclusion

Occupational stress is a pervasive problem among law enforcement officers and

can contribute to negative psychological outcomes such as suicidality. Indeed,

operational stress (which results from the nature of the job) is associated with PTSD,

depression, and hopelessness. The present study found that organizational stress (which

arises from bureaucratic practices) and supervisor support influenced the impact that

operational stress had on PTSD and hopelessness. Criminal justice organizations who are

looking to decrease the negative psychological outcomes which result from operational

stressors that officers face daily should consider training supervisors on effective emotional support, making certain to provide officers with a sense of autonomy and independence. Further, organizations should consider evaluating the most pertinent causes of organizational stress in their agency and provide officers with coping skills to decrease negative mental health outcomes.

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APPENDIX A

*Table 1.*

Means, Standard Deviations, and Intercorrelations

	1	2	3	4	5	6	7
1. Operational Stress	—						
2. Organizational Stress	.75**	—					
3. Supervisor Support	-.42**	-.51**	—				
4. Posttraumatic Stress Disorder	.45**	.37**	-.19**	—			
5. Depression	.42**	.38**	-.25**	.70**	—		
6. Hopelessness	.34**	.35**	-.29**	.45**	.50**	—	
7. Months in Current Position	-.09*	.10	.02	-.02	.07	15**	—
8. Gender	-.05	.20**	-.22**	-.17**	-.11**	-.10*	.14**
Mean	64.35	62.93	77.80	14.22	8.50	2.56	67.74
SD	22.86	24.06	24.13	13.98	5.55	3.16	64.12

[a]Point-Biserial correlation was used for all correlations with Gender (where 1 = men and 2 = women)

p < .05

**p* < .01

APPENDIX B
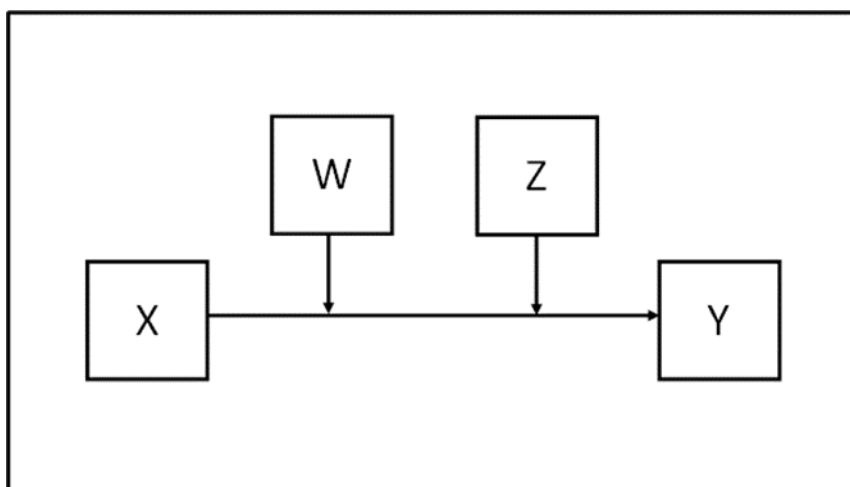
Figure 1. This figure illustrates the conceptual model of the relationship between operational stress, organizational stress, supervisor support, and psychological outcomes. X = operational stress; W = organizational stress; Z = supervisor support; Y = PTSD, depression, or hopelessness.
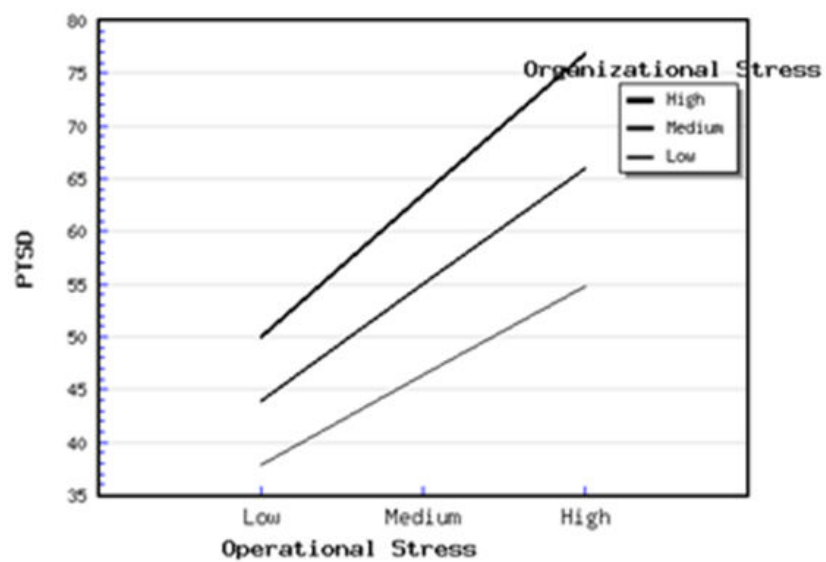
APPENDIX C

Table 2. Double Moderation Models Predicting Correlates of Suicidality in Police Officers

DV: Posttraumatic Stress Disorder, overall model (N = 103) $F(7, 568) = 31.87$, $p < .001$, $R^2 = .28$

Variables	Unstandardized coefficients			
	B	*SE*	*t*	95% CI
Constant	19.78	2.84	6.98	14.21 to 25.34
Operational Stress	.20	.04	5.51	.13 to .27
Organizational Stress	.07	.04	1.83	-.01 to .14
Supervisor support	-.03	.03	-1.12	-.08 to .02
Organizational Stress x Operational Stress	.005	.001	4.32	.003 to .007
Operational Stress x Supervisor Support	.005	.001	4.89	.003 to .007

DV: Depression, overall model (N = 103) $F(7, 570) = 23.86$, $p < .001$, $R^2 = .23$

Variables	Unstandardized coefficients			
	B	*SE*	*t*	95% CI
Constant	10.88	1.14	9.54	8.64 to 13.12
Operational Stress	.06	.02	4.18	.03 to .09
Organizational Stress	.04	.02	2.96	.01 to .07
Supervisor support	-.02	.01	-1.69	-.037 to .003
Organizational Stress x Operational Stress	.0002	.0004	.52	-.001 to .001
Operational Stress x Supervisor Support	.0006	.0004	1.43	-.0002 to .0014

DV: Hopelessness, overall model (N = 103) $F(8, 566) = 20.70$, $p < .001$, $R^2 = .23$

| Variables	Unstandardized coefficients			
	B	*SE*	*t*	95% CI
Constant	2.62	.69	3.78	1.26 to 3.98
Operational Stress	.02	.01	2.30	.003 to .037
Organizational Stress	.02	.01	2.23	.002 to .037
Supervisor support	-.03	.01	-4.65	-.039 to -.016
Organizational Stress x Operational Stress	.0008	.0002	3.06	.0003 to .0012
Operational Stress x Supervisor Support	.0005	.0002	2.12	.000 to .001

APPENDIX D

Figure 2. This figure illustrates the moderating effect of organizational stress on operational stress and PTSD.
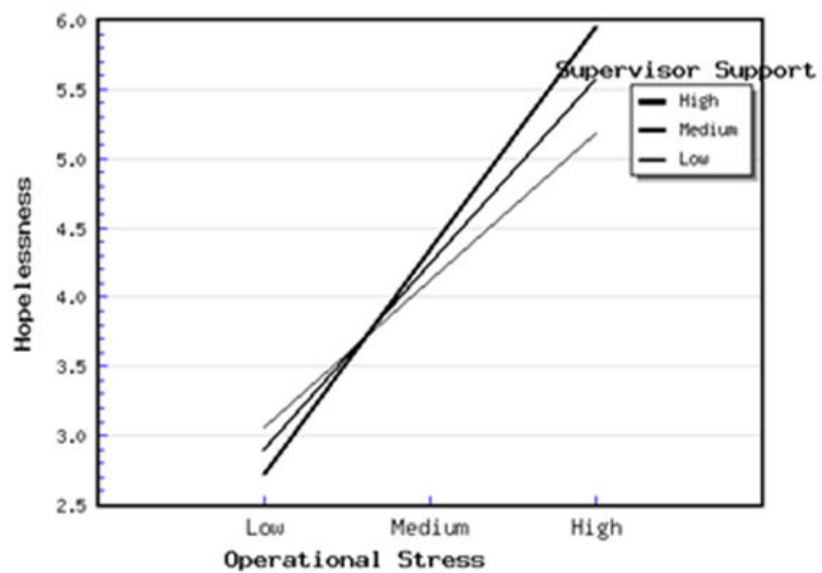
APPENDIX E
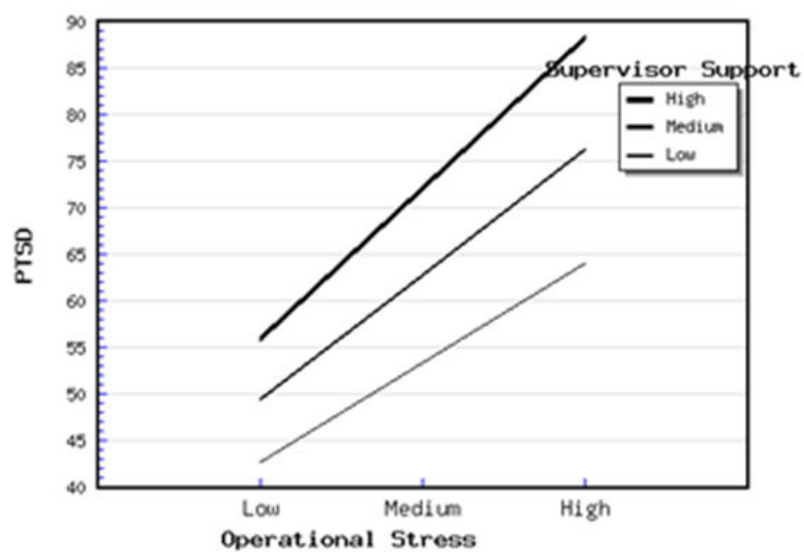
Figure 3. This figure illustrates the moderating effect of supervisor support on operational stress and PTSD

APPENDIX F
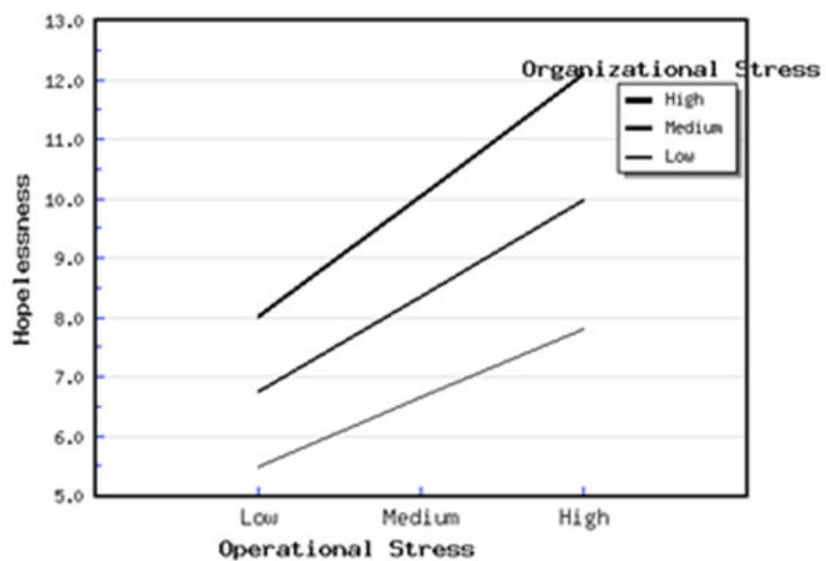
Figure 4. This figure illustrates the moderating effect of organizational stress on operational stress and hopelessness.

APPENDIX G

Figure 5. This figure illustrates the moderating effect of supervisor support on operational stress and hopelessness.

VITA

Christina M. Engelken

EDUCATION

Master of Arts student in Clinical Psychology at Sam Houston State University, August 2017-May 2019. Thesis title: "Operational stress among law enforcement: The moderating role of organizational stress and supervisor support."

Bachelor of Science (May 2017) in Psychology and Sociology, Kansas State University, Manhattan, Kansas.

ACADEMIC EMPLOYMENT

Graduate Teaching Assistant, Department of Psychology and Philosophy, Sam Houston State University, August 2017-May 2019. Responsibilities include: grading and providing feedback to undergraduate students.

Undergraduate Student Assistant, Department of Sociology, Anthropology, and Social Work, Kansas State University, August 2016-May 2017.

Responsibilities include: grading undergraduate student assignments.

PUBLICATIONS

Salami, T.K., Boland, G., & Engelken, C. (manuscript under review). Specific psychotherapy issues for managing human trafficking victims. In J. Coverdale, M. Gordon, & P. Nguyen (Eds.), *A concise guide on human trafficking for mental health professionals.*

Engelken, C. & Salami, T.K. (manuscript in preparation). Operational stress and mental health among law enforcement: The moderating role of organizational stress and supervisor support.

PRESENTATIONS AT PROFESSIONAL MEETINGS

Boland, G., Engelken, C., & Salami, T.K. (February 2019). Fostering inclusion through leadership identity development. *Diversity Leadership Conference*. Sam Houston State University, Huntsville, Texas.

ACADEMIC AWARDS

Special Graduate Scholarship, College of Humanities and Social Sciences, Sam Houston State University, Summer 2018.

Incoming Graduate Scholarship, College of Humanities and Social Sciences, Sam Houston State University, Fall 2017 – Spring 2018.

PROFESSIONAL MEMBERSHIP

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