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**DOES PERCEIVED EMOTIONAL INVALIDATION MODERATE THE
RELATION BETWEEN OCCUPATIONAL STRESS AND MENTAL
HEALTH OUTCOMES IN LAW ENFORCEMENT OFFICERS?**

SAHAR JAAFAR M.S.; M.A.

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Abstract

Police officers are exposed to operational stressors while on duty, including child abuse, domestic violence, car crashes, and homicides (Jetelina et al., 2020). Repeated exposure to these stressors is associated with the development of mental illness (Jetelina et al., 2020). Organizational stressors, including lack of support/validation, demand, job pressure, administrative/organizational pressure, and long working hours, may be an even greater source of stress for police officers (Purba & Demou, 2019). Exposure to such organizational stressors can result in psychological distress, burnout, and suicidal ideation (Purba & Demou, 2019). However, there is a dearth of research on invalidation and the role it plays in the development and maintenance of mental health outcomes among law enforcement officers. It is unclear how invalidation from supervisors, colleagues, and the general public, moderates the relation between occupational stressors and the development of mental health outcomes. The current study is the first attempt to evaluate whether perceived emotional invalidation moderates the relationship between mental health outcomes and occupational stress. Results could inform our understanding of the role emotional invalidation from supervisors, colleagues, and the general public has on the mental health outcomes of law enforcement officers after experiencing occupational stress.

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Does Perceived Emotional Invalidation Moderate the Relation Between Occupational Stress and Mental Health Outcomes Among Law Enforcement Officers?

American workers report high levels of occupational stress (Bhui et al., 2016; Milenkovic, 2019). Research shows that 83% of employees in the United States report work related stress (Milenkovic, 2019). A survey conducted by the American Institute for Stress reported that 35% of workers stated their jobs are harming their physical or emotional health. Furthermore, 80% of workers feel stress while acting in their dutiful roles at work, nearly 50% reported they need help coping with occupational stressors, and 42% reported their co-workers need help managing their stress (Milenkovic, 2019).

Occupational stress is defined as a ‘harmful reaction that people have to undue pressures and demands placed on them at work’ (Bhui et al., 2016). Occupational stress can result from a work environment with high work demands, poor control, extreme pressure, lack of support, and low decision-making flexibility (Fortes et al., 2020). The term ‘stress’ is used to describe the effects of anything that seriously threatens homeostasis or balance (Schneiderman et al., 2005). There are two types of stress recognized as a disturbance to homeostasis: acute and chronic stress (Schneiderman et al., 2005). Acute stress is the most common form of stress and is defined as a short-term stressor which is experienced as an immediate perceived threat, either physical, emotional, or psychological (Schneiderman et al., 2005). Chronic stress is defined as a prolonged and constant feeling of stress that is caused by daily pressures of family, work, or traumatic experiences (Schneiderman et al., 2005).

After the perception of an acute stressful event, there is a surge of changes in the nervous, endocrine, and cardiovascular immune system (Schneiderman et al., 2005). Acute stress

generally results in an adaptive response to the disruption of homeostasis, but the stress response may become harmful if it persists. In turn, an acute stressor may transition to a chronic stressor, if the stressor and response to the stressor persist (Schneiderman et al., 2005). Chronic stress may have damaging effects on an individual (Eisenmann et al., 2016). Chronic stress occurs when an individual's response system remains in a constant state of arousal due to the intensity or frequency of the stressor (Eisenmann et al., 2016). The habitual human response to threat is an intricate, integrated system of physiological and intellectual reactions (Herman, 1997). The sympathetic nervous system is initially aroused when threat arises, causing the person to have a sharp increase in adrenaline production and go into a state of alert (Herman, 1997). Individuals experiencing threat may experience an altered perception, in that they are often able to dismiss hunger, fatigue, or pain (Herman, 1997). The changes that take place in arousal, perception, emotion, and attention are normal, adaptive reactions due to the innate human response to a perceived threat (Herman, 1997). These changes are needed in order to mobilize the person under threat to act according to fight or flight (Herman, 1997). However, exposure to chronic stressful events may result in the development of complex trauma. When individuals develop complex trauma, they may be in a state of constant vigilance and arousal. They may also experience persistent sadness, anger, and/or suicidal thoughts (Herman, 1997).

Occupational stress, both acute and chronic, is associated with a number of negative mental health outcomes (Bhui et al., 2016). Occupational stress is a significant predictor of anxiety for employees (Fortes et al., 2020). In addition, studies suggest that occupational stress is inversely related to overall psychological well-being and positively associated with depressive symptoms (Fortes et al., 2020). A high level of occupational stress is also related to burnout and exhaustion symptoms, which may lead to different adverse mental health outcomes among

employees (Fortes et al., 2020). Furthermore, individuals exposed to occupational stressors which entail life-threatening events in the workplace, are at increased risk of developing psychopathology, such as post-traumatic reactions, poor emotion regulation, problems with behavioral control, depressive mood, and overall ineffective coping strategies (Overstreet et al., 2017).

Law Enforcement and Mental Health Outcomes

Occupations that entail risk to one's safety often have high levels of occupational stressors and in turn, more severe mental health outcomes (Violanti, 2020; Brown, Fielding, & Grover, 1999). Law enforcement officers often experience high levels of work-related stress because of the varied nature of crime they are required to respond to (Violanti, 2020). As such, law enforcement officers report greater rates of depression, post-traumatic stress, burnout, and other anxiety-related mental health conditions compared to the general working population (Violanti, 2020; Brown, Fielding, & Grover, 1999).

Exposure to stress-related incidents can result in negative mental and physical health consequences over time (Violanti, 2020). Many police officers experience alcohol abuse, depressive symptoms, post-traumatic stress, and suicidal thoughts due to high levels of stress (Violanti, 2020). Additionally, law enforcement personnel have one of the poorest cardiovascular health profiles due to job-related stress when among U.S. workers (Hartley et al., 2011.) An earlier study found that white male officers died, on average, seven years before the general U.S. white male population (Hartley et al., 2011; Vena et al., 1986). Compounding this concern is the finding that police officers experience high rates of work-related stress, unstable shift work, the capacity for witnessing or experiencing violent crises, and organizational demands (Hartley et al., 2011).

Law enforcement officers are at an increased risk of suicide compared to other populations (Violanti & Steege, 2021). Although studies investigating law enforcement suicide rates suggest conflicting results, with some studies suggesting low suicide rates, while others show high rates, there are some limitations in law enforcement suicide research (Violanti et al., 2019). The limitations in law enforcement suicide research include lack of an appropriate comparison group, small statistical power, under-reporting of suicides, and guarded survey responses from police officers (Violanti et al., 2019). Recent work by Jetalina (2020) found that in the United States, police officers have a 69% increased incidence of suicide compared to the general working population (Violanti, 2020; Jetalina et al., 2020). Another study conducted by Violanti and Steege (2021) found that based on the National Occupational Mortality Surveillance (NOMS, 2012) database, law enforcement officers had a significantly higher proportion of deaths from suicide compared to all the U.S. descendants in the study population who were employed during their lifetime. While the exact number of law enforcement officers who die by suicide each year is unknown, research suggests that more officers die by suicide yearly than in the line of duty (Heyman et al., 2018). Factors contributing to the high incidence of suicide include intense stress, pressure to conceal emotional distress in efforts to rank with masculinity culture, and easy access to deadly weapons (Heyman et al., 2018).

Occupational Stressors in Law Enforcement

In the field of law enforcement, occupational stressors can be divided into operational and organizational stressors. Operational stressors are defined as any persistent psychological difficulty resulting from operational duties executed as a function of one's profession (Maran, Zedda, & Varetto, 2018). For police officers, examples of operational stressors are risks to one's own safety or that of colleagues, exposure to suffering and violence, making critical decisions in

high-risk situations, using force or responding to gunfire, having to suppress their emotions when provoked, the ambiguous nature of police work, attending the scenes of accidents and injuries involving death, and the responsibility of serving and protecting the public (Maran et al, 2018; Schrage, 2012; Purba & Demou, 2019).

Research suggests that organizational stressors are also associated with poor mental health outcomes for police officers (Purba & Demou, 2019). Organizational stressors may be perceived as a greater source of stress compared to operational stressors because officers may perceive them as unnecessary and oppressive, while being perpetrated by their own organization (Purba & Demou, 2019). Organizational stressors are defined as sources of distress that include aggressive and harmful aspects of the work environment and organizational climate (Abbas et al., 2021). Such stressors include bureaucratic administration, inadequate relationships with colleagues and supervisors, the public's discernment of police work, long hours, inadequate salary/facilities, and demanding work environment and high commitment (Maran et al., 2018).

Ecological model of psychological trauma

The ecological model of psychological trauma (Harvey, 1996) explains how a community may positively impact an individual experiencing trauma and/or chronic stress. The model postulates that individuals are not equally vulnerable to trauma, nor do they equally internalize experiences as traumatic. Instead, vulnerability to trauma is largely dependent on the individual/s involved in the trauma, the event/s experienced, and the larger environment or person-community "ecosystem." Individuals who have been exposed to trauma may or may not receive clinical care. In fact, the majority of affected individuals will not access clinical care. Importantly, clinical care in the aftermath of trauma exposure may not necessarily guarantee recovery. In an ecological framework, centrality is placed upon the event, environmental factors,

and the degree to which emphasis is placed upon the community as a means of recovery and resiliency (Harvey, 1996). This perspective reflects the contribution a community has on the internalization and sustenance of trauma, while further encouraging the consideration of social, cultural, and political contexts within a community following exposure to critically stressful events (Harvey, 1996). This suggests that socio-cultural climates within law enforcement organizations should be considered to better understand the internalization of trauma and recovery among law enforcement personnel.

Social Support: Supervisors, Colleagues and General Public

Social support is hypothesized to be a buffer for the effects of stress among police officers (Purba & Demou, 2019). The extent to which an individual receives social support has been hypothesized to be one factor mitigating the relation between stress and psychological strain (Bannerman, 1996). Social support is defined as a broad construct that describes the network of family, friends, and community members that is available in times of need to provide emotional, physical, and financial help (Ozbay et al., 2007). Social support has been found to moderate the association between stressful working conditions and the development of clinical symptomatology, independent of the level of stress experienced (Harandi, Taghinasab, & Nayeri, 2017). In the context of police work, social support can be thought of as coming from several sources, including support from the general public, supervisors, and colleagues.

General Public's Perception of Police

The objective of law enforcement personnel is to perform five marked responsibilities within a community: preserving the peace, protecting people and property, investigating crimes and arresting perpetrators, crime prevention, and enforcing laws (Franklin et al., 2019). In efforts to assist communities with unique problems, collaborating within communities is incorporated in

police work. However, community policing continues to be a concern for police departments. The perception of police by the general public is pertinent to community policing because police cannot be as effective without public support. A lack of support from the public provides hardships when apprehending perpetrators, impedes information gathering when solving crimes, and may result in hate crime offenses against police officers. Moreover, law enforcement personnel often risk their lives in order to abide by their mission to serve and protect, and a lack of acknowledgement of those strides may leave officers feeling hopeless and unappreciated, while having implications on their mental health (Franklin et al., 2019).

Support from Supervisors and Colleagues

Police officers may be susceptible to poor mental health if they do not have support systems (Demou, Hale, & Hunt, 2020). Support systems in the field of law enforcement include dependable colleagues and supervisors (Demou, Hale, & Hunt, 2020). Inadequate supervisor support increases the risk of mental health outcomes among employees, specifically depression and anxiety disorders (Bhate, 2013). Moreover, perceived social support is associated with positive job satisfaction, while lack of perceived social support is strongly associated with emotional exhaustion, anxiety, burnout, and psychological strain (Hammlig, 2017). Furthermore, colleague support was shown to be positively related to job performance and negatively related to job dissatisfaction and psychological strain (Hammlig, 2017).

Emotional Invalidation

One aspect of the broader construct of social support that has not been studied previously with police officers is the construct of emotional validation or its converse emotional invalidation. Emotional invalidation has been defined as any social interaction in which an individual's feelings, thoughts, and experiences are disregarded, negated, minimized, or met with

a perverse response (Linehan, 1993; Zielinski & Veilleux, 2018). Studies suggest that perceived emotional invalidation predicts several negative symptoms after a stressful experience, including anxiety and depression (Witkowski, 2017). When emotional validation is provided, one is better able to recognize, identify, and control emotions and emotional responses. However, extensive emotional invalidation cultivates dysfunction in an individual's ability to regulate emotions, while adversely impacting one's ability to trust their own cognitive and emotional responses as accurate representations of their experiences (Hong, Ilardi, & Lishner, 2011; Linehan, 1993). Due to the perceived repeated history of emotional invalidation, an individual who has experienced a stressful event may not share their experience due to a fear of being ridiculed or met with disbelief (Hong et al., 2011). For example, revelations of distressing experiences met with negative, invalidating responses are correlated with more severe PTSD symptomology and overall mental suffering (Ullman & Filipas, 2003).

Linehan's biosocial theory of invalidation (1993) postulates that people who typically experience intense emotions and are frequently told that their emotional experiences are incorrect, develop difficulties regulating their emotions (Witkowski, 2017). Linehan (1993) adapted a transactional model in which vulnerability is influenced by experiencing repetitive and intense emotional reactions due to a specific kind of negative environment, also referred to as an invalidating environment (Witkowski, 2017). Linehan (1993) suggests that both the individual and the individual's environment work as collaborative components throughout development and experience of intense emotions.

Linehan (1993) asserted that an individual's emotional vulnerability trait is primarily influenced by genetic factors, but also recognized that environmental experiences may also lead to emotional vulnerability. Such environmental experiences can result in the individual's

questioning of their emotional experience and whether their emotions fit the situation. Linehan identified this set of environmental experiences as an invalidating environment and has referred to invalidating environments as indications of emotional abuse/neglect. Moreover, members of the individuals' environment either repeatedly invalidate a person's emotional experience by actively minimizing, punishing, or ignoring his or her emotional expressions. Conversely, an adaptive response to emotional expression would be to validate the response by acknowledging it, and regardless of whether the individual feels differently, conveying that the response is understandable (Linehan, 1993).

Linehan (1993) theorized that emotion dysregulation is the leading consequence of an emotionally vulnerable individual experiencing repeated invalidation of their emotional response. Linehan defined 'emotion dysregulation' as a poor ability to manage emotions, an inability to impede maladaptive behaviors under highly stressful conditions, and an inaptitude to engage in goal-directed behavior when in a state of emotional arousal. She coined the term 'distress tolerance' as one aspect of emotion dysregulation. Distress tolerance has been recognized as the ability to tolerate unpleasant emotions without engaging in self-destructive and impulsive behaviors.

The literature on social support and mental health outcomes in law enforcement has two important limitations. First, while studies have evaluated the relationship between mental health outcomes and the broad construct of social support from supervisors and colleagues in law enforcement, no study has examined the more focused behavioral construct of invalidation from supervisors, colleagues, and the general public, among police officers. Social support is a broad construct rooted in a system with many different forms of support, including informational, instrumental, or emotional support (Zhou, 2014). It is important to understand which type of

social support serves as an efficient resource to law enforcement personnel in order to effectively target their mental health outcomes. Second, no study has examined the role invalidation plays in the relationship between occupational stress and mental health outcomes in police officers. Specifically, is it possible that invalidation moderates this relationship so that the higher the perceived invalidation, the stronger the relation between stress and worse mental health outcomes. Emotional invalidation has been found to be a significant predictor of psychological distress in the general population. Researchers have found that emotional invalidation predicts symptoms such as depression and anxiety, while perceived emotional validation is associated with the ability to regulate and control one's emotions and emotional responses (Hong, Ilardi, & Lishner, 2011). In the field of law enforcement, police officers are exposed to various occupational stressors and are expected to respond to numerous calls on a consecutive basis with very little time to process their feelings in-between calls (Violanti, 2020). They may in turn experience invalidation of their emotional responses and further experience symptoms of burnout and depression, as well as elevated suicide risk (Violanti, 2020). Understanding this association is essential because police officers experience an increase in burnout when experiencing lack of support (Franklin et al., 2019). In an ecological framework, centrality is placed upon the event, environmental factors, and the degree to which emphasis is placed upon the community as a means of recovery and resiliency after experiencing a stressor (Harvey, 1996). This suggests that perceived validation or support from both public and workplace communities may exert an effect on the mental health of police officers.

The Current Study

The current study is the first to investigate the role of invalidation in the relationship between occupational stress and mental health outcomes among police officers.

This study addressed a gap in existing research by focusing on the emotional invalidation experienced by police officers across three distinct domains: their supervisors, colleagues, and the general public.

Data were collected on the perceived emotional invalidation from supervisors, colleagues, and the general public in order to provide descriptive statistics on their prevalence and magnitude. The current study then examined the association between emotional invalidation, mental health outcomes, and occupational stressors experienced by law enforcement officers. Specifically, this study tested whether emotional invalidation (from supervisors, colleagues, and the general public) moderated the relationship between mental health outcomes and occupational stressors. According to Baron and Kenny (1986), a moderating variable is a third variable that influences the strength and/or direction between two other variables. First, it was hypothesized that there would be a positive association between occupational stressor exposure and mental health outcomes (with higher scores indicating worse mental health). Second, it was hypothesized that there will be a positive association between mental health outcomes (i.e., PCL-5 and BSI-18) and perceived emotional invalidation (i.e., supervisors, colleagues, and the general public). Lastly, it was hypothesized that emotional invalidation moderates the strength and/or direction of the relationship between mental health outcomes and occupational stressors, such that higher emotional invalidation is associated with a stronger relationship between occupational stressors and worse mental health outcomes. It is important to understand the association between emotional invalidation and negative mental health outcomes in efforts to decrease mental health symptoms, including suicide risk, among police officers. Because emotional validation plays an important role in therapeutic healing and promoting psychological

growth (Linehan, 1993; Zielinski & Veilleux, 2018), it is reasonable to expect that emotional invalidation exacerbates mental health outcomes among law enforcement officers who were exposed to occupational stress.

Method

Participants

Fifty-four subjects were sworn police officers recruited from local police departments within the United States. In order to qualify, participants had to be involved in one or more of the following activities: gathering evidence, investigating and/or prosecuting perpetrators, responding to emergency calls, assisting crime victims, testifying in court, conducting outreach to the public, and/or witnessing or being involved in a police shooting. All police officers were recruited in precincts and using online forums by presenting potential participants with information about the study, prior to enrollment, in order to establish interest and willingness to serve as research subjects. Participants were also recruited through flyers posted in precincts across local law enforcement agencies. Participants were told they will be entered in a raffle to receive one of four \$25 Visa® gift cards. The final sample consisted of 54 police officers.

It cannot be known how many officers were provided with the information to the survey, therefore it is impossible to compute a response rate. However, we can track that 75% of those who accessed the survey completed it. The effective sample had a mean age between 35 to 44 (SD=) and 100% of participants were sworn police officers. Almost 82% of participating officers were male, and 63% were White, with 5.6% Black, slightly more than 20% Latino/a, 7.4% Asian, 1.9% Middle Eastern or North African, and 1.9% refused to disclose racial identification. Most had obtained a bachelor's degree (55.6%) and subjects primarily identified as married (61.1%). The majority of officers who completed the survey identified as police officers

(51.9%), while 20.4% were police detectives, 13.0% were police sergeants, 11.1% were police lieutenants, and 3.7% were deputy inspectors. The average length of employment as a police officer in the sample is 10-15 years. Descriptive statistics for the demographic characteristics of the sample are further reported in Table 1.

Table 1.

Descriptive Statistics for Demographic Characteristics of Participants

Variable	<i>n</i>	%
Gender		
Male	44	81.5%
Female	10	18.5%
Ethnicity		
White or Caucasian	34	63%
Black or African American	3	5.6%
Hispanic or Latino	11	20.4%
Asian or Asian American	4	7.4%
Middle Eastern or North African (MENA)	1	1.9%
Prefer not to Disclose	1	1.9%
Age		
21-24	1	1.9%
25-34		27.8%
35-44	15	37.0%
45-54	20	22.2%
55-64	12	11.1%
	6	

Education		
Associate Degree	17	31.5%
Bachelor's Degree	30	55.6%
Master's Degree	3	5.6%
High School Graduate	4	7.4%
High School/ 66 College Credits	1	1.8%
Some College	3	5.4%

Relationship Status		
Single	9	16.7%
In a casual relationship	2	3.7%
In a serious, committed relationship	6	11.1%
Unmarried, but cohabiting	2	3.7%
Married	33	61.1%
Divorced	2	3.7%

Children		
None	17	31.5%
1	12	22.2%
2	18	33.3%
3	6	11.1%
3+	1	1.9%

Police Rank		
Police Officer	28	51.9%
Police Detective	11	20.4%
Police Sergeant	7	13.0%
Police Lieutenant	6	11.1%
Deputy Inspector	2	3.7%
Length of Employment		
Less than 2 years	3	5.6%
2-5 years	3	5.6%
5-7 years	4	7.4%
7-10 years	8	14.8%
10-15 years	8	14.8%
15-25 years	22	40.7%
25+ years	6	11.1%

Measures

Participants completed several accepted and pre-validated measures.

To develop a clear understanding of the characteristics of the sample, personal and occupational data were obtained using a self-report Demographic Questionnaire. The age, marital status, number of children, and level of education of each subject was determined. Occupational demographics, including number of years on the job, division and unit, and the number of years employed with officers’ current partner and supervisor, were also procured.

Occupational Stressors

Occupational stressors were assessed using the Operational Police Stress Questionnaire (PSQ-Op) and the Organizational Police Stress Questionnaire (PSQ-Org). The PSQ-Op and the PSQ-Org, developed by McCreary & Thompson (2006), each include 20 items assessing the distinct operational and organizational stress sources experienced by police officers. Sample items of the PSQ-Op include “How much stress has it caused you in the past 6 months: “Risk of being injured on the job,” “Occupation-related health issues,” and “Upholding a ‘higher image’ in public?” Sample items of the PSQ-Org include “Feeling like you always have to prove yourself to the organization,” “Internal investigations,” and “Perceived pressure to volunteer free time.” The items were evaluated on a Likert scale ranging from 1 (“no stress at all”) to 7 (“a lot of stress”), with a score of 4 indicating moderate stress. The PSQ-Op was found to be highly reliable (alphas > .90; corrected item-total correlations between .40 and .60) and positively correlated ($r = .50$ or less) as compared to other measures evaluating general stress in the workplace. The PSQ-Org was found to be reliable and demonstrated construct validity (correlations between perceived stress and frequency), discriminant validity (compared with general life stressors), and concurrent validity (compared with job satisfaction measures) (McCreary & Thompson, 2006).

Emotional Invalidation

Emotional invalidation was assessed using the Perceived Invalidation of Emotion Scale (PIES). Existing measures of invalidation are focused on childhood invalidation and do not specifically target invalidation of emotion. The PIES, a novel measure developed by Zielinski & Veilleux (2018), provides an operationalized definition of emotional invalidation and includes 10 items assessing for adults’ experiences of emotional invalidation. Sample items include “When I

share how I'm feeling, others look down on me or judge me," "Others make me feel like it's not okay for me to feel the way that I do, "Others don't take my side or agree with how I'm feeling," and "Others make me feel that my emotions are unimportant." A series of five studies were conducted to assess the psychometric properties of the PIES. This measure was found to have excellent internal consistency, and promising validity and reliability ($\alpha_{T1} = .91$, $\alpha_{T2} = .93$). Since no formal measure exists to assess for perceived emotional invalidation in the workplace and from the general public, the investigator modified the PIES measure for the purposes of this study. The modified version of the PIES measure instructs participants to rate the items on the PIES across three domains: validation from colleagues, supervisors, and the general public. The modified version of the PIES measure, developed by the investigator, consists of 30 items assessing for emotional invalidation. The items were rated on a 5-point Likert scale from 1 (Almost never; 0-10%) to 5 (Almost always; 91-100%). A mean invalidation score is determined using the average ratings retrieved. The internal consistency of the PIES measure was not jeopardized in the current study, as the content of most of the items remained consistent in the modified version developed by the investigator.

Mental Health Outcomes

Mental health outcomes were assessed using the Brief Symptom Inventory 18 (BSI-18) and the PTSD Checklist for DSM-5 (PCL-5). The BSI-18 is an 18-item self-report measure intending to screen for psychological distress in community and medical populations (Derogatis, 2001). The BSI-18 is a shortened version of the 53-item BSI and was reduced in efforts to maintain its structural validity and decrease its average completion time (Meijer, De Vries, & Bruggen, 2011). Domains assessed include somatization (six items), depression (six items), and anxiety symptoms (six items); such domains comprising the Global Severity Index (GSI). The

GSI assesses overall psychological functioning. The BSI Anxiety, Depression, and Somatization subscales were included in this survey because they were believed to be the most relevant to this population. Participants rated the level of distress they experienced during the past week on each of the 18 items using a 5-point Likert scale from “0” (i.e., not at all) to “4” (i.e., extremely). The BSI-18 is written at a sixth-grade reading level and takes about 4 minutes to complete.

Participants were asked to report the degree to which they may have been feeling “distressed or bothered” in the previous week by each symptom. Following retrieval of raw score data, four raw scores are converted to area T-scores to further interpretation. The BSI is a valid and reliable measure (Derogatis, 2001). Internal consistency reliability was strong for Somatization ($r = .74$), Depression ($r = .84$), Anxiety ($r = .79$), and the GSI ($r = .89$). Test-retest estimates range from $r = .68$ to $.84$ on the symptom dimensions over an unspecified time-interval based on a sample of 60 nonpatients who completed the BSI. GSI test-retest reliability was $r = .90$. The construct validity of the BSI-18 was measured by correlating the three symptom scores and the GSI with the Symptom Checklist, 90 items, revised (SCL-90-R) assessment (Derogatis, 2001). Correlations were high on all three scales: Somatization ($r = .91$), Depression ($r = .93$), Anxiety ($r = .96$), and the GSI ($r = .93$).

Officers’ posttraumatic stress symptoms were measured using the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013). The PCL-5 is a 20-item self-report measure intending to screen for PTSD symptoms in the past month. Sample items include “How much have you been bothered by that problem in the past month: ‘Repeated, disturbing, and unwanted memories of the stressful experience,’ ‘Avoiding memories, thoughts, or feelings related to the stressful experience’ and ‘Trouble remembering important parts of the stressful experience?’” The items were rated on a 5-point Likert scale from “0” (i.e., not at all) to “4” (i.e., extremely). Items are

summed to provide a total severity score (range = 0-80) and a cut-off score of 31-33 appears to be reasonable based upon current psychometric work (Weathers et al., 2013). This measure was found to have strong internal consistency ($\alpha = .94$), test-retest reliability ($r = .82$), and convergent ($r_s = .74$ to $.85$) and discriminant ($r_s = .31$ to $.60$) validity.

Procedure

Individuals were asked to participate in an online study examining the job-related experiences of police officers. The presence and severity of mental health outcomes, specifically depression, anxiety, somatization, post-traumatic stress, as well as the potential role emotional invalidation has on clinical symptomatology, was assessed. Participants were asked to allot approximately thirty minutes to complete the online survey. The assessment measures were completed by participants in the order in which they appear in the Measures section. Once completed, the assessment measures were scored and interpreted by the investigator.

Individuals were recruited by distributing recruitment flyers to law enforcement precincts across New York City and posting flyers on law enforcement Facebook groups. Participants were also recruited via snowball sampling, a sampling technique where previous participants recruit additional participants by informing their acquaintances of the study. Surveys were completed online through the use of SurveyMonkey®, a website that allows for the online creation, distribution, and completion of questionnaires. Any identifying information provided by the participants during the course of the study were kept anonymous and IP addresses were not recorded.

Participants were informed that the purpose of this study is to learn more about law enforcement officers and understand the profession from their perspective. Specific dependent variables were not disclosed to reduce threats to internal validity, specifically reactivity of

assessment—changes in results based on awareness of criteria being measured. Participants were given the option to be entered into a raffle to win one of four \$50 Visa® gift cards for their study involvement. Following study completion, participants were provided with information about participating in the gift card raffle, however none of the participants reached out to the investigator for raffle purposes.

Statistical Analyses

All analyses were conducted using IBM SPSS Statistics 27 (IBM Corp, 2021).

Pearson Correlation analyses were used to examine relationships between each of the variables. Bivariate correlations were run to assess Hypothesis 1, specifically examining the relationship between both types of occupational stress (i.e., operational and organizational stress) and mental health outcomes. Bivariate correlations were also conducted to examine the relationship between mental health outcomes and perceived emotional invalidation.

SPSS Process by Hayes was used to conduct a moderated regression analysis. A moderated regression analysis was used to examine Hypothesis 3: does perceived emotional invalidation moderate the relationship between occupational stressors and mental health outcomes? Specifically, each of the independent (occupational stressors) and moderator variables (emotional invalidation) were centered. Interaction terms were created using a two-predictor case and computing the product of occupational stressors and emotional invalidation. Next, I ran multiple regressions, one for each of the IVs. Lastly, I interpreted the results by determining whether they are significant and examining the interaction. If the results of an interaction effect were significant, a simple slope analysis was conducted for each interaction to determine the slope at a particular level (i.e., low, at the mean, and high) of the moderator variable.

Treatment dropout & missing data

Two participants (2.7%) did not provide consent to participate in the study, eight participants (11.1%) provided consent to participate in the study and did not proceed to the following question, four participants (5.5%) completed the demographic questionnaire and stopped prior to beginning the protocol, five participants (6.9%) completed the demographic and occupational stress scales (i.e., did not complete mental health outcomes and perceived emotional invalidation scales), and one participant (1.4%) completed all scales prior to the mental health outcomes scale. The data of those participants who withdrew from the study or missed completing the protocol in its entirety were removed using SPSS listwise deletion and their data were not used in the following analysis.

Results

Descriptive Statistics

Descriptive statistics associated with both dimensions of occupational stress (i.e., operational and organizational), mental health outcomes (i.e., PTSD and BSI-depression, anxiety, and somatization) and perceived emotional invalidation across three domains (i.e., supervisors, colleagues, and the general public) are reported in Table 2.

Table 2

Descriptive statistics for measures

Measure	<i>M</i>	<i>SD</i>
PTSD Checklist-5	40.29	17.47
Brief Symptom Inventory (BSI-18)	29.50	13.75
Somatization (BSI-18) Subscale	9.111	4.60
Depression (BSI-18) Subscale	10.77	5.29
Anxiety (BSI-18) Subscale	9.611	4.76

Operational Stressors Assessment	40.35	9.46
Organizational Stressors Assessment	40.85	10.18
Total PEI	90.20	23.79
PEI Supervisors	22.33	11.57
PEI Colleagues	18.18	9.41
PEI General Public	49.68	8.79

Hypothesis 1: There will be a positive association between occupational stress exposure (i.e., operational and organizational) and mental health outcomes (i.e., PCL-5 and BSI-18), with higher scores indicating worse mental health. There was a statistically significant relationship between operational stress and mental health outcomes indicated on the BSI-18 ($r(54) = .395, p = .003, 95\% \text{ CI } (.142, .599)$). There was a statistically significant relationship between organizational stress and mental health outcomes indicated on the BSI-18 ($r(54) = .446, p < .001, 95\% \text{ CI } (.202, .637)$).

There was a statistically significant relationship between operational stress and mental health outcomes indicated on the PCL-5 ($r(54) = .492, p < .001, 95\% \text{ CI } (.259, .672)$). There was a statistically significant relationship between organizational stress and mental health outcomes indicated on the PCL-5 ($r(54) = .553, p < .001, 95\% \text{ CI } (.335, .715)$).

Hypothesis 2: There will be a positive association between mental health outcomes (i.e., PCL-5 and BSI-18) and perceived emotional invalidation (i.e., supervisors, colleagues, and the general public). Pearson Correlation analyses were used to examine the following relationships. There was a statistically significant relationship between mental health outcomes indicated on the PCL-5 and total perceived emotional invalidation ($r(54) = .645, p < .001, 95\% \text{ CI } (.456, .778)$). There was a statistically significant relationship between mental health outcomes indicated on the PCL-5 and perceived emotional invalidation from supervisors ($r(54)$

= .508, $p < .001$, 95% CI (.278, .683)). There was a statistically significant relationship between mental health outcomes on the PCL-5 and total perceived emotional invalidation from colleagues ($r(54) = .605$, $p < .001$, 95% CI (.402, .751)). There was a statistically significant relationship between mental health outcomes indicated on the PCL-5 and total perceived emotional invalidation from the general public ($r(54) = .531$, $p < .001$, 95% CI (.307, .699)).

There was a statistically significant relationship between mental health outcomes indicated on the BSI-18 and total perceived emotional invalidation ($r(54) = .483$, $p < .001$, 95% CI (.247, .665)). There was a statistically significant relationship between mental health outcomes on the BSI-18 and perceived emotional invalidation across from supervisors ($r(54) = .462$, $p < .001$, 95% CI (.222, .650)). There was a statistically significant relationship between mental health outcomes on the BSI-18 and perceived emotional invalidation from colleagues ($r(54) = .576$, $p < .001$, 95% CI (.364, .731)). There was a statistically significant relationship between mental health outcomes on the BSI-18 and perceived emotional invalidation from the general public ($r(54) = .081$, $p < .001$, 95% CI (-.191, .341)).

Hypothesis 3: Emotional invalidation will moderate the relationship between occupational stressors and mental health outcomes, such that higher emotional invalidation will be associated with a stronger relationship between occupational stressors and worse mental health outcomes.

Correlation analyses across both dimensions of occupational stress (i.e., operational and organizational), mental health outcomes (i.e., PTSD and BSI-depression, anxiety, and somatization) and perceived emotional invalidation across three domains (i.e., supervisors, colleagues, and the general public) were examined. The results revealed that there were positive and significant correlations between variables, suggesting that moderation analyses could be

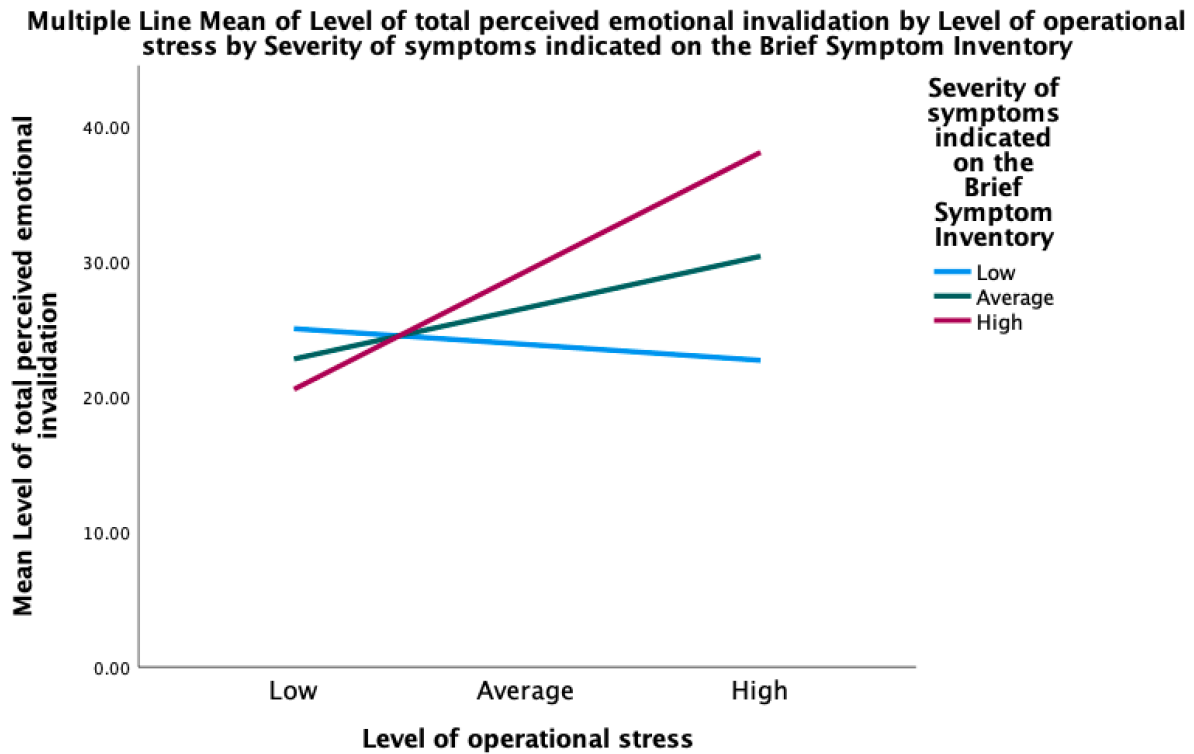
conducted. In the following paragraphs, direct and indirect slopes are reported, followed by simple slope analyses of significant outcomes. The direct slope would represent the relationship between occupational stress and mental health outcomes, while the indirect slope would represent the relationship between occupational stress and mental health outcomes, through the moderator variable of perceived emotional invalidation. Simple slope analyses were conducted to determine the nature of the moderation effect. Specifically, it involves calculating the slope of the regression line between the independent variable and the dependent variable at different levels of the moderator variable. By doing this, we can determine whether the relationship between the independent and dependent variables is stronger or weaker, positive or negative, or even non-existent, depending on the level of the moderator variable. The ensuing paragraphs indicate significant findings, whereas non-significant findings are discernible in Appendix G.

Interaction: Perceived Emotional Invalidation and Operational Stress Predicting BSI

For the interaction analysis between perceived emotional invalidation and operational stress predicting BSI, the direct effect of perceived emotional invalidation on BSI was not statistically significant, $b = .1594$, $t = 1.977$, $p = .0536$. The direct effect of operational stress on BSI was not statistically significant, $b = .2881$, $t = 1.45$, $p = .1535$. The interaction effect between perceived emotional invalidation and operational stress predicting BSI was statistically significant, $b = .0221$, $t = 3.676$, $p = .0006$. When perceived emotional invalidation is low, there is a non-significant negative relationship between operational stress and the BSI, $b = -.24$, $t = -1.0$, $p = .322$. When perceived emotional invalidation is at the mean, there is a non-significant relationship between operational stress and the BSI, $b = .288$, $t = 1.45$, $p = .154$. When perceived emotional invalidation is high, there is a statistically significant positive relationship between operational stress and the BSI, $b = .813$, $t = 3.21$, $p = .002$.

Figure 3.1

Simple slopes equations of the regression of the total BSI on operational stress at three levels of total perceived emotional invalidation



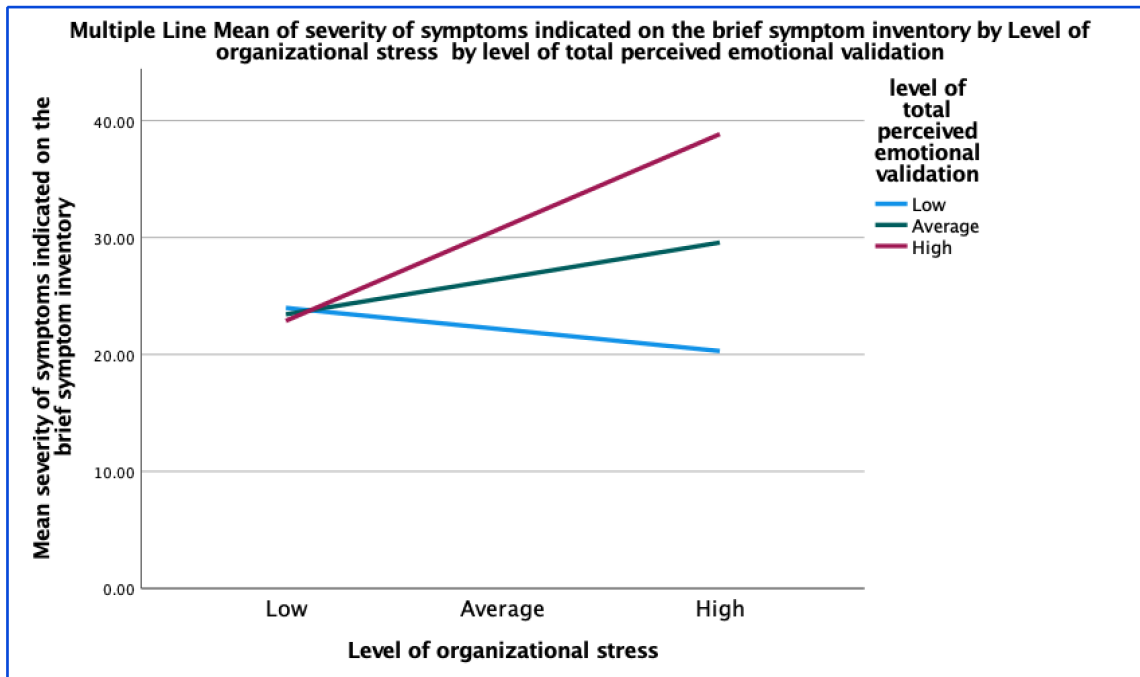
Interaction: Perceived Emotional Invalidation and Organizational Stress Predicting BSI

For the interaction analysis between perceived emotional invalidation and organizational stress predicting the BSI, the direct effect of perceived emotional invalidation on BSI was not statistically significant, $b = .0641, t = .7594, p = .4512$. The direct effect of organizational stress on BSI was statistically significant, $b = .4746, t = 2.52, p = .015$. The interaction effect between perceived emotional invalidation and organizational stress predicting BSI was statistically significant, $b = .0252, t = 4.324, p = .0001$. When perceived emotional invalidation is low, there is a significant negative relationship between organizational stress and the BSI, $b = -.1262, t = -.600, p = .551$. When perceived emotional invalidation is at the mean, there is a significant positive relationship between organizational stress and the BSI, $b = .4746, t = 2.52, p = .015$.

When perceived emotional invalidation is high, there is a statistically significant positive relationship between organizational stress and the BSI, $b = 1.076, t = 4.12, p = .001$.

Figure 3.2

Simple slopes equation of the regression of the total BSI on organizational stress at three levels of perceived emotional invalidation



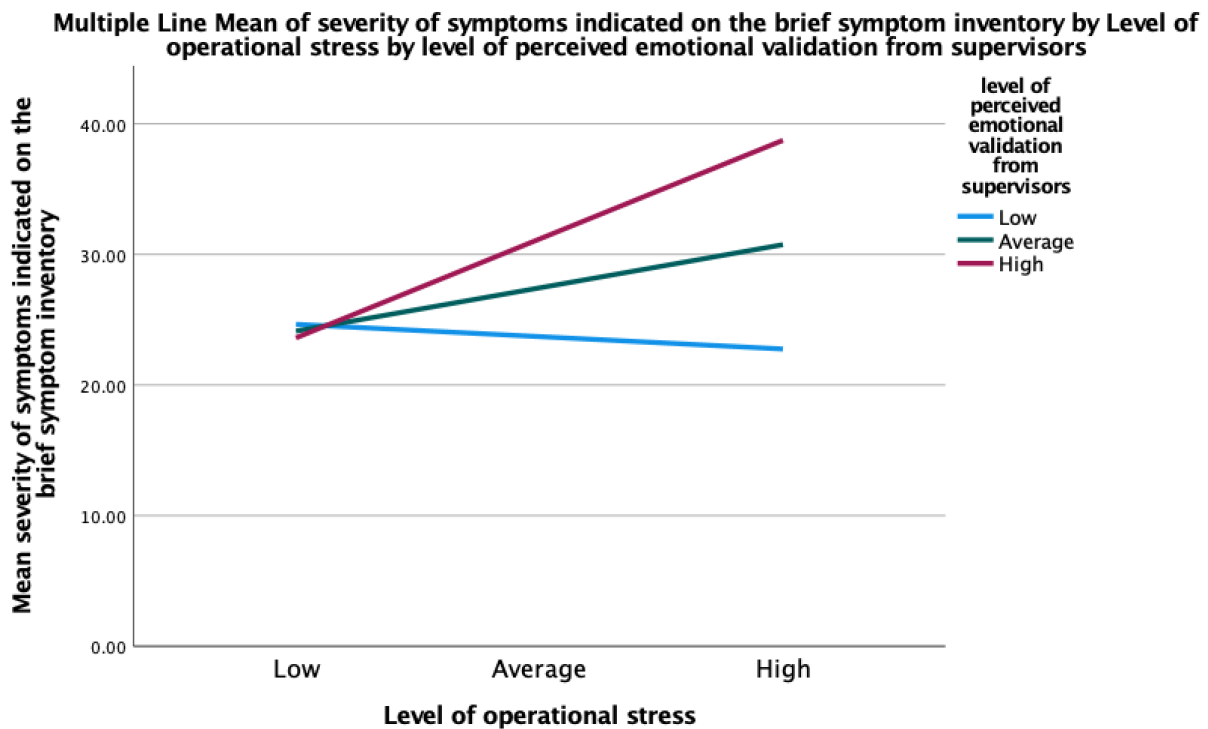
Interaction: Perceived Emotional Invalidation from Supervisors and Operational Stress Predicting BSI

For the interaction analysis between perceived emotional invalidation from supervisors and operational stress predicting BSI, the direct effect of perceived emotional invalidation from supervisors on BSI was statistically significant, $b = .3223, t = 2.02, p = .0485$. The direct effect of operational stress on BSI was not statistically significant, $b = .3505, t = 1.84, p = .072$. The interaction effect between perceived emotional invalidation from supervisors and operational stress predicting BSI was statistically significant, $b = .0389, t = 2.783, p = .0076$. When perceived emotional invalidation from supervisors is low, there is a non-significant negative relationship between operational stress and the BSI, $b = -.09, t = -4.1, p = .68$. When perceived

emotional invalidation from supervisors is at the mean, there is a non-significant positive relationship between operational stress and the BSI, $b = .35, t = 1.84, p = .072$. When perceived emotional invalidation from supervisors is high, there is a statistically significant positive relationship between operational stress and the BSI, $b = .80, t = 3.12, p = .003$.

Figure 3.3

Simple slopes equation of the regression of the total BSI on operational stress at three levels of perceived emotional invalidation from supervisors



Interaction: Perceived Emotional Invalidation from Supervisors and Organizational Stress

Predicting BSI

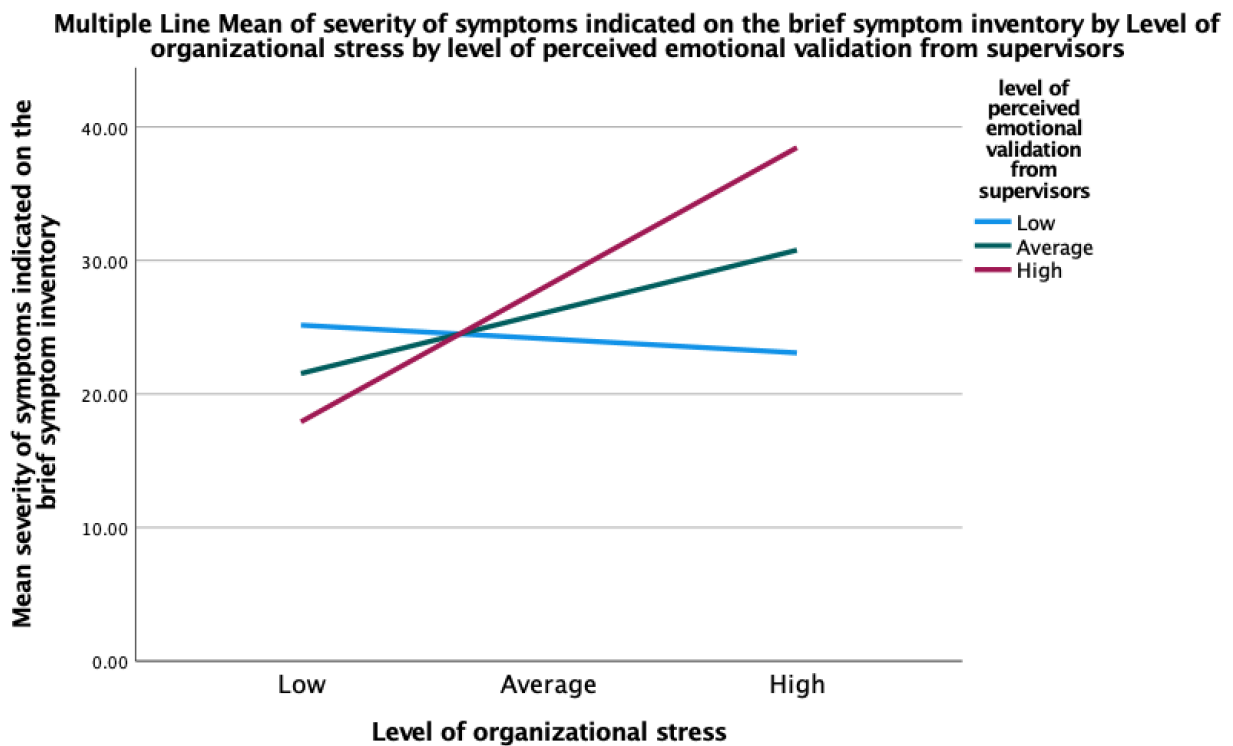
For the interaction analysis between perceived emotional invalidation from supervisors and organizational stress predicting the BSI, the direct effect of perceived emotional invalidation from supervisors on BSI was not statistically significant, $b = .1756, t = 1.033, p = .3062$. The direct effect of organizational stress on BSI was statistically significant, $b = .4536, t = 2.440, p = .0182$. The interaction effect between perceived emotional invalidation from supervisors and

organizational stress predicting BSI was statistically significant, $b = .0480, t = 3.56, p = .0008$.

When perceived emotional invalidation from supervisors is low, there is a non-significant negative relationship between organizational stress and the BSI, $b = -.10, t = -.45, p = .65$. When perceived emotional invalidation from supervisors is at the mean, there is a statistically significant positive relationship between organizational stress and the BSI, $b = .45, t = 2.44, p = .018$. When perceived emotional invalidation from supervisors is high, there is a statistically significant positive relationship between organizational stress and the BSI, $b = 1.00, t = 3.88, p = .0003$.

Figure 3.4

Simple slopes equation of the regression of the total BSI on organizational stress at three levels of perceived emotional invalidation from supervisors

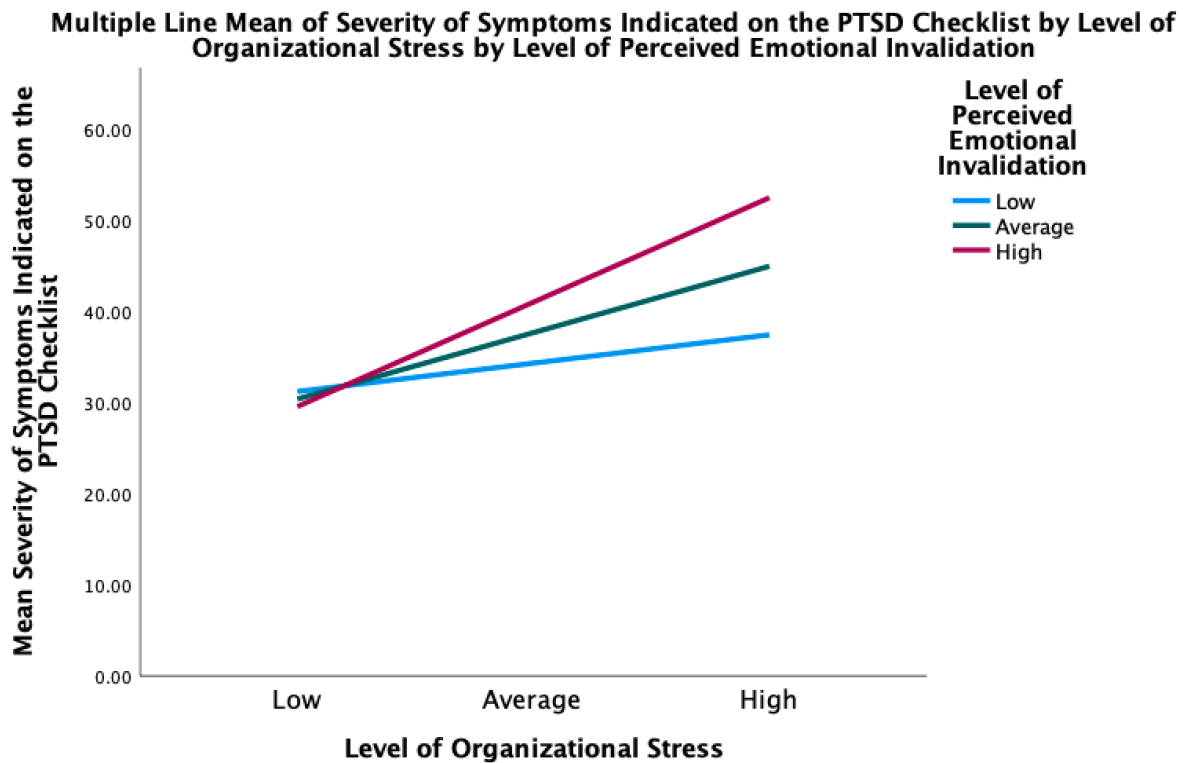


Interaction: Perceived Emotional Invalidation and Organizational Stress Predicting PTSD

For the interaction analysis between perceived emotional invalidation and organizational stress predicting PTSD, the direct effect of perceived emotional invalidation on PTSD was not statistically significant, $b = .2405$, $t = 1.258$, $p = .2140$. The direct effect of organizational stress on PTSD was significant, $b = .7143$, $t = 2.865$, $p = .006$. The interaction effect between perceived emotional invalidation and organizational stress predicting PTSD was statistically significant, $b = .0172$, $t = 2.2278$, $p = .0304$. When perceived emotional invalidation is low, there is a non-significant positive relationship between organizational stress and PTSD, $b = .305$, $t = 1.10$, $p = .277$. When perceived emotional invalidation is at the mean, there is a statistically significant positive relationship between organizational stress and PTSD, $b = .7143$, $t = 2.87$, $p = .006$. When perceived emotional invalidation is high, there is a statistically significant positive relationship between organizational stress and PTSD, $b = 1.124$, $t = 3.32$, $p = .002$.

Figure 3.5

Simple slopes equation of the regression of PTSD on organizational stress at three levels of perceived emotional invalidation



Interaction: Perceived Emotional Invalidation from Colleagues and Organizational Stress

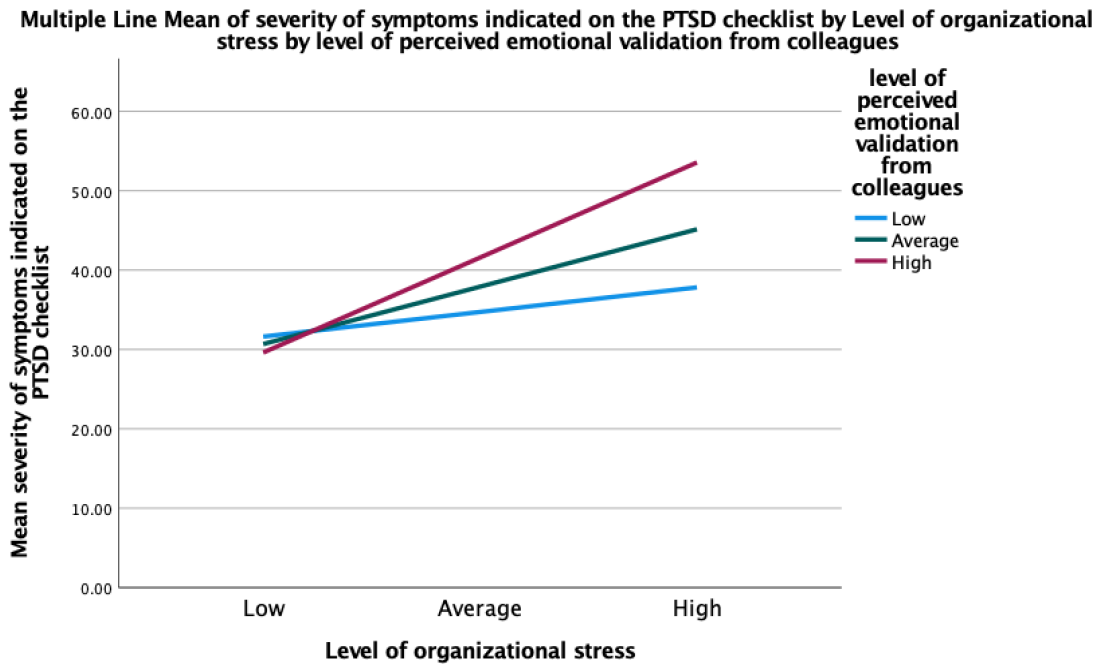
Predicting PTSD

For the interaction analysis between perceived emotional invalidation from colleagues and organizational stress predicting PTSD, the direct effect of perceived emotional invalidation from colleagues on PTSD was not statistically significant, $b = .3902, t = 1.47, p = .1483$. The direct effect of organizational stress on PTSD was statistically significant, $b = .7095, t = 3.482, p = .0010$. The interaction effect between perceived emotional invalidation from colleagues and organizational stress predicting PTSD was statistically significant, $b = .0495, t = 2.632, p = .0113$. When perceived emotional invalidation from colleagues is low, there is a non-significant positive relationship between organizational stress and PTSD, $b = .304, t = 1.38, p = .174$. When perceived emotional invalidation from colleagues is at the mean, there is a significant positive relationship between organizational stress and PTSD, $b = .71, t = 3.5, p = .001$. When perceived

emotional invalidation from colleagues is high, there is a statistically significant positive relationship between organizational stress and PTSD, $b = 1.18, t = 3.88, p = .0003$.

Figure 3.6

Simple slopes equation of the regression of PTSD on organizational stress at three levels of perceived emotional invalidation from colleagues



Interaction: Perceived Emotional Invalidation from Colleagues and Operational Stress

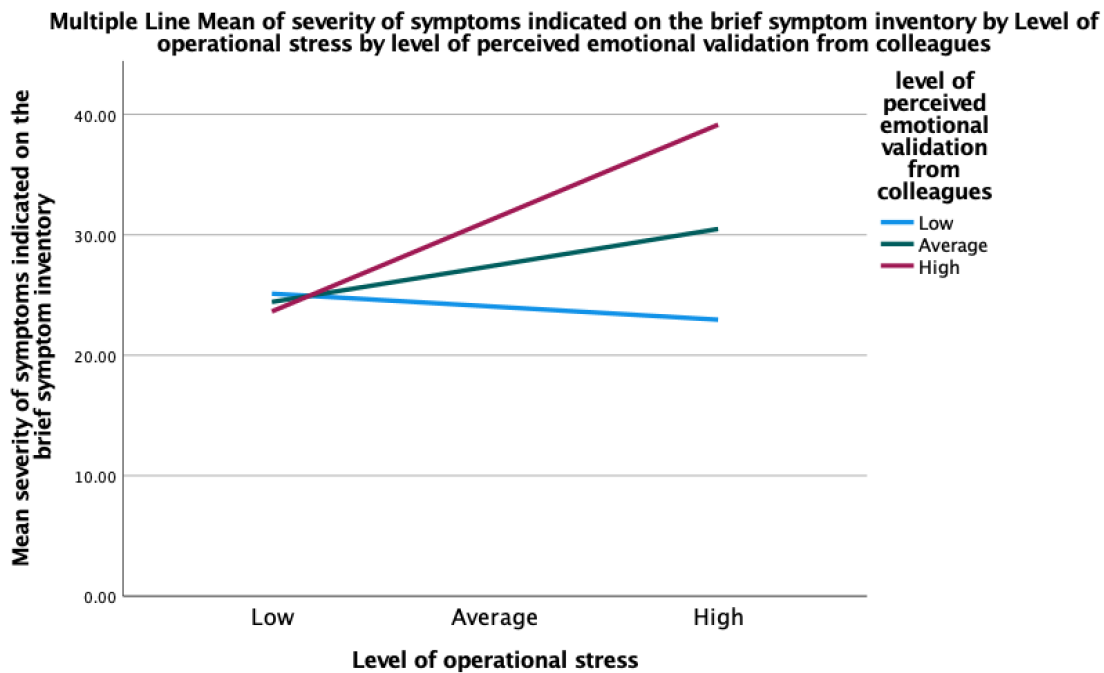
Predicting BSI

For the interaction analysis between perceived emotional invalidation from colleagues and operational stress predicting BSI, the direct effect of perceived emotional invalidation from colleagues on BSI was statistically significant, $b = .4181, t = 2.352, p = .0226$. The direct effect of operational stress on BSI was not statistically significant, $b = .3204, t = 1.99, p = .0511$. The interaction effect between perceived emotional invalidation from colleagues and operational stress predicting BSI was statistically significant, $b = .0531, t = 4.036, p = .0002$. When perceived emotional invalidation from colleagues is low, there is a non-significant negative relationship between operational stress and the BSI, $b = -.114, t = -.619, p = .539$. When

perceived emotional invalidation from colleagues is at the mean, there is a non-significant positive relationship between operational stress and the BSI, $b = .321, t = 1.99, p = .051$. When perceived emotional invalidation from colleagues is high, there is a statistically significant positive relationship between operational stress and the BSI, $b = .819, t = 3.86, p = .0003$.

Figure 3.7

Simple slopes equation of the regression of the total BSI on operational stress at three levels of perceived emotional invalidation from colleagues



Interaction: Perceived Emotional Invalidation from Colleagues and Organizational Stress

Predicting BSI

For the interaction analysis between perceived emotional invalidation from colleagues and organizational stress predicting BSI, the direct effect of perceived emotional invalidation from colleagues on BSI was not statistically significant, $b = .0717, t = .3771, p = .7077$. The direct effect of organizational stress on BSI was statistically significant, $b = .4866, t = 3.336, p = .0016$. The interaction effect between perceived emotional invalidation from colleagues and organizational stress predicting BSI was statistically significant, $b = .0727, t = 5.404, p = .0000$.

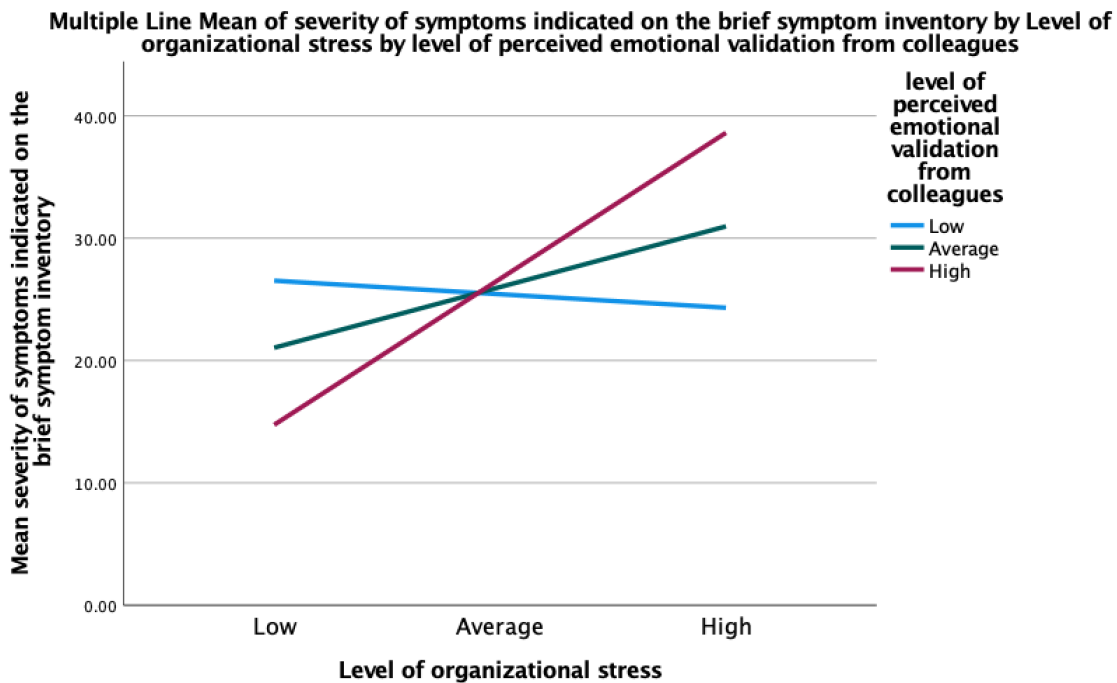
When perceived emotional invalidation from colleagues is low, there is a non-significant negative relationship between organizational stress and the BSI, $b = -.109, t = -.69, p = .494$.

When perceived emotional invalidation from colleagues is at the mean, there is a significant positive relationship between organizational stress and the BSI, $b = .487, t = 3.37, p = .001$.

When perceived emotional invalidation from colleagues is high, there is a statistically significant positive relationship between organizational stress and the BSI, $b = 1.17, t = 5.39, p = .0000$.

Figure 3.8

Simple slopes equation of the regression of the total BSI on organizational stress at three levels of perceived emotional invalidation from colleagues



Discussion

The purpose of the present study was to evaluate whether occupational stress, specifically operational and/or organizational stressors, and perceived emotional invalidation from supervisors, colleagues, and the general public are significant predictors of mental health outcomes among law enforcement officers. Additionally, this study explored whether perceived

emotional invalidation across three domains (i.e., supervisors, colleagues, and the general public) moderated relations among occupational stress (i.e., operational and organizational stress) and mental health outcomes (i.e., PTSD symptoms, depression, anxiety, and somatization). While perceived emotional invalidation significantly moderated the relations between occupational stress and mental health outcomes, this was not true for all mental health outcomes. The present study uncovered a trend regarding perceived emotional invalidation from supervisors and colleagues as a moderator for depression, anxiety, and somatization symptoms. Researchers also uncovered a trend regarding perceived emotional invalidation significantly moderating the relation between organizational stress and PTSD symptoms. Perceived emotional invalidation from supervisors was not a moderator for PTSD symptoms, however perceived emotional invalidation from colleagues moderated the relationship between occupational stress and PTSD symptoms. Overall, findings also indicated that perceived emotional invalidation from supervisors and colleagues predicted more mental health outcomes (i.e., anxiety, depression, and somatization) than perceived emotional invalidation from the general public. The majority of the direct effects between mental health outcomes and perceived emotional invalidation from the general public were significant, which implies that a relationship exists independently.

The first hypothesis was supported. There was a positive association between occupational stress exposure (i.e., operational and organizational) and mental health outcomes (i.e., posttraumatic stress symptoms on the PCL-5 and depression, anxiety, and somatization on the BSI-18), with higher scores indicating worse mental health, consistent with the hypotheses and previous research. Studies suggest that occupational stress is inversely related to overall psychological well-being and positively associated with depressive symptoms (Fortes et al., 2020). Individuals exposed to occupational stressors which entail life-threatening events in the

workplace, are at increased risk of developing psychopathology, such as post-traumatic reactions, poor emotion regulation, problems with behavioral control, depressive mood, and overall ineffective coping strategies (Overstreet et al., 2017). Law enforcement officers often experience high levels of work-related stress because of the varied nature of crime they are required to respond to (Violanti, 2020). As such, law enforcement officers report greater rates of depression, post-traumatic stress, burnout, and other anxiety-related mental health conditions compared to the general working population (Violanti, 2020; Brown, Fielding, & Grover, 1999).

The second hypothesis was supported. There was a positive association between mental health outcomes (i.e., PCL-5 and BSI-18) and perceived emotional invalidation (i.e., supervisors, colleagues, and the general public), consistent with the hypotheses and existing research on the ecological model of psychological trauma (Harvey, 1996) and Linehan's biosocial theory of invalidation (1993). The ecological model of psychological trauma explains how a community may positively impact an individual experiencing trauma and/or chronic stress. In an ecological framework, significance is placed upon the event, environmental factors, and support from the community as a means of recovery and resiliency (Harvey, 1996). This perspective reflects the contribution a community has on the internalization and sustenance of trauma following exposure to critically stressful events (Harvey, 1996). Police officers may be susceptible to poor mental health if they do not have community support systems (Demou, Hale, & Hunt, 2020). Support systems in the field of law enforcement include dependable colleagues and supervisors (Demou, Hale, & Hunt, 2020). Inadequate supervisor and collegial support increase the risk of mental health outcomes among employees, specifically depression and anxiety disorders (Bhate, 2013). There is no prior research on the impact support from the general public has on the mental health outcomes of police officers, however the present study has also found a general trend

indicating that perceived emotional invalidation from the general public is associated with worse mental health outcomes in law enforcement officers.

In accordance with Linehan's biosocial theory of invalidation, studies suggest that perceived emotional invalidation predicts several negative symptoms after a stressful experience, including anxiety and depression (Witkowski, 2017). When emotional validation is provided, one is better able to recognize, identify, and control emotions and emotional responses. However, extensive emotional invalidation cultivates dysfunction in an individual's ability to regulate emotions and understand their emotional responses, leading to adverse mental health symptoms (Hong, Ilardi, & Lishner, 2011; Linehan, 1993). Conversely, in accordance with the transactional model of the biosocial theory of invalidation (Linehan, 1993), emotion dysregulation may also induce invalidating environments. The model suggests that when individuals experience challenges in controlling their emotions, they may inadvertently create an atmosphere where emotional experiences are disregarded or invalidated. One noteworthy factor contributing to the formation of invalidating environments is the difficulty experienced when confronted with another person's intense emotions. Managing strong emotions in others can be challenging and may trigger discomfort or unease in individuals, specifically within a police culture. Consequently, these individuals might unintentionally respond to intense emotions with invalidation, perpetuating an environment where emotional experiences are not acknowledged or respected. By recognizing the nuanced dynamics outlined in the transactional model, we can cultivate emotionally supportive environments that validate and respect the diverse emotional experiences of individuals, ultimately fostering greater emotional health and resilience.

The third hypothesis was partially supported. Emotional invalidation from supervisors, colleagues and the general public were each examined as a moderator between occupational

stress (i.e., operational and organizational stress) and mental health outcomes (i.e., PTSD symptoms on the PCL-5 and depression, anxiety, and somatization on the BSI-18). Empirical research demonstrates that there is a relationship between stress, perceived emotional invalidation, and mental health symptoms, however existing research does not examine this relationship via moderation. Furthermore, existing research has not examined these relationships and their respective domains within the field of law enforcement. The present study found that perceived emotional invalidation from supervisors and colleagues moderated the relationship between both types of occupational stress in law enforcement (operational and organizational stress) and mental health outcomes of depression, anxiety, and somatization indicated on the BSI-18 questionnaire. This informs us that emotional validation from supervisors and colleagues may have a protective effect on the mental health of law enforcement officers, specifically symptoms of depression, anxiety, and somatization in high-stress work environments.

Given the significant moderation results, this finding has several important clinical and research implications. This finding highlights the importance of emotional validation, particularly from supervisors and colleagues, in mitigating the negative effects of occupational stress on mental health outcomes. Interventions aimed at reducing the negative impact of occupational stress on mental health may benefit from targeting emotional validation as a key mechanism, focus on reducing modifiable stressors, as well as enhancing social support networks. This finding also has implications for the culture of law enforcement organizations. If emotional validation from supervisors and colleagues is found to be a critical factor in protecting against the negative impact of occupational stress on mental health, then it may be necessary to promote a culture that values emotional expression and social support. Lastly, the finding that both operational and organizational stress are related to mental health outcomes suggests that

interventions aimed at reducing the negative impact of occupational stress on mental health should target both types of stressors, operational and organizational stressors.

Additional results indicated that perceived emotional invalidation from the general public did not moderate the relationship between mental health outcomes and occupational stress, despite officers in the study sample indicating high levels of emotional invalidation from the general public. A plausible explanation for this finding could stem from the fact that a preponderance of officers attested in the survey to the general public's failure to comprehend the nuances of their daily job experiences. Consequently, police officers may exhibit a decreased susceptibility to internalize invalidation from the general public as a coping mechanism, given that they may distance themselves from those who lack an adequate understanding of their profession.

When examining perceived emotional invalidation from supervisors and the general public as a moderator between occupational stress and PTSD symptoms, the results of this study suggest that there are direct relationships between PTSD symptoms, both types of occupational stress, and perceived emotional invalidation from supervisors and the general public independently. However, an interconnected relationship may not exist between the three variables. Results of this study suggest that invalidation from colleagues strengthened the relationship between occupational stress and PTSD symptoms, placing an emphasis on collegial support as a mitigating factor for the experience of PTSD symptoms.

Despite the aforementioned non-significant moderation results, these findings are informative. There could be several possible explanations for why an interconnected relationship does not exist between PTSD symptoms, occupational stress, and perceived emotional invalidation from supervisors and the general public. It is possible that individual personality

traits and coping styles may influence how perceived emotional invalidation from supervisors and the general public are internalized. It is also possible that invalidation from supervisors and the general public are not internalized due to potential support from colleagues who experience similar situations and as a result, form a connection with invalidated officers. When an officer is invalidated by their colleagues, it can be particularly damaging to their mental health because they are likely to feel isolated and unsupported. Invalidation from supervisors and the general public may also be harmful, but it may not be as impactful as invalidation from colleagues who the officer interacts with on a daily basis and who they may rely on for emotional support. Invalidation from colleagues may also be seen as a form of betrayal or a breach of trust, which can further exacerbate the officer's stress and worsen their PTSD symptoms due to the lack of camaraderie and a sense of brotherhood/sisterhood, which is emphasized in law enforcement populations. Another plausible explanation for these findings may be study limitations described below.

Limitations

The current study has some important limitations. One of the primary limitations is that this study used self-report measures that are subject to biases, despite its promise of confidentiality. When considering the organizational culture of law enforcement, masculinity and resilience are most often prioritized, which can create an environment where officers are covertly discouraged from reporting symptoms or partaking in surveys addressing mental health symptoms. Additionally, there is a stigma regarding mental health issues and some officers may fear being perceived as weak or unfit for duty if they disclose that they are struggling with mental health symptoms (Heyman et al., 2018). As such, this stigma may have resulted in the minimization or under-reporting of symptoms by police officers in the measures administered or

may have impacted the 8.3% of officers who voluntarily dropped out of the study upon reaching the mental health outcome measures in the survey. Another limitation related to the measures used to collect data in this study is that items on the PIES (Zielinski & Veilleux, 2018) were tailored to fit the study population, specifically adding context to the items rather than changing the content of the items, and an additional domain was added to the measure to assess invalidation from the general public (See Appendix F). As such, the validity and reliability of the PIES measure is impacted.

A third limitation is that the current study may not be representative of all police officers in the United States. The researcher broadened the sample size to include police officers across the nation, encompassing diverse police cultures with varying emphasis on mental health intervention, organizational support systems, and differing public perception of law enforcement based on the demographic region and political system. While including a more diverse sample can be beneficial, it may also be difficult to ensure that the sample is truly representative of all police officers across the nation. Some subgroups may be underrepresented or overrepresented, which can limit the generalizability of the study findings.

Another limitation is that the current study tailored and added items on the Perceived Invalidation of Emotion Scale (PIES, 2018) to measure invalidation of emotion within the context of law enforcement, which may limit the exact validity of the scale. The researcher maintained the use of the content in the PIES scale, however added context to the items in the form of domains. The domains used were invalidation from supervisors and invalidation from colleagues. The researcher also added a third domain, invalidation from the general public, and created items while maintaining reliability and validity using reverse scoring of items.

Lastly, this study addresses the association between occupational stress and mental health outcomes, however it does not incorporate other psychosocial stressors due to the timely nature of the present questionnaire. Psychosocial factors, unrelated to work-related pressure, may be contributing to mental health symptoms experienced by police officers. Consequently, findings from the present study may not be able to fully explain the complexity of mental health outcomes in police officers, as other factors such as personal relationships, financial stress, or traumatic events outside of work could also be influencing mental health. The inclusion of psychosocial factors may assist researchers in better understanding other sources of stress impacting the severity of mental health outcomes indicated by officers in the present sample.

Future Directions

There are several potential directions for future research. When examining the impact occupational stress has on mental health symptoms, specifically suicidal ideation, previous research findings indicate a significantly higher proportion of deaths from suicide among law enforcement officers in the U.S. compared to all other occupations. Law enforcement officers are 54% more likely to die of suicide compared to all other occupations (Violanti & Steege, 2021). Given such a high propensity for suicidal ideation in law enforcement, future research should further explore mitigating factors to reduce the likelihood of suicide within this specific field of employment. The current study findings inform researchers of a mitigating factor, emotional validation, that may help reduce mental health symptoms and potential suicidality within the law enforcement profession. Researchers may consider using emotional validation as a starting point to investigate potential interventions aimed at reducing mental health symptoms and mitigating

the risk of suicidality among law enforcement professionals, as suggested by the current study findings.

Law enforcement administrations have implemented training programs which aim to address mental health, resilience, emotion regulation, and distress tolerance among their officers (Jennings, Snow, Griffith, & Wolfson, 2019). Given the established correlation between organizational stressors and adverse mental health outcomes in both the present study and existing research (Purba and Demou (2019), future research should scrutinize the degree of supervisory involvement in such meetings. Supervisory involvement in training programs about mental health may cultivate a more supportive environment for officers and may also assist in implementing changes in supervisory style.

There are several potential directions for future research exploring perceived emotional invalidation as a moderator of the relationship between occupational stress and mental health outcomes. Conducting longitudinal studies to examine the relationship between perceived emotional invalidation, occupational stress, and mental health symptoms allows researchers the ability to assess these relationships over time. Such studies may allow for researchers to conduct intervention outreach to test the efficacy of interventions aimed at increasing perceived emotional validation in law enforcement officers, including training programs for supervisors and colleagues to provide emotional validation to their peers. Cross-cultural studies may also further study findings by examining the moderating role of perceived emotional invalidation in law enforcement officers from different states and differing police cultures across the United States. Police training and educational interventions on support and mental health issues in law enforcement may vary across different states and cultural contexts. Incorporating training and interventions that target the destigmatization of mental health concerns as elements of police

work culture may improve mental health and well-being, reduce stigma and discrimination, and improve job satisfaction and retention among police officers. Additionally, future research may incorporate other psychosocial variables associated with mental health outcomes in law enforcement officers, such as interpersonal conflict/marital discord, social support from family and friends, financial stressors, and substance use.

Conclusion

Occupational stress impacts the mental health and well-being of individuals across various fields of employment. In the field of law enforcement, police officers experience a multitude of stressors due to the nature of their work, which may impact their quality of life.

This study adds to an expanding body of literature highlighting the importance of exploring ways to mitigate the impact occupational stress has on the mental health of police officers. Previous studies have explored the general construct of social support, as a mitigating factor, to address job satisfaction and well-being in law enforcement populations, however this study focused on perceived emotional validation to further elucidate a specific form of support hitherto unexplored. This study was also the first of its kind to explore the impact the general public has on the mental health of police officers, setting a significant milestone in the field. More specifically, unveiling a noteworthy finding that police officers' mental health is negatively impacted by emotional invalidation from the general public, yet mitigated by validation from both supervisors and peers, thereby underscoring the importance of organizational support in safeguarding law enforcement personnel's psychological well-being. Taken together, the results of the present study and suggested future directions, offer a new perspective into the types of interventions law enforcement administrators may employ to improve the mental health and well-being of police officers.

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Appendix A

Demographic Questionnaire

1. Are you a sworn Police Officer?
 - Yes
 - No

2. What county and state are you employed in? (text box)

3. How long have you been employed as a Law Enforcement Officer?
 - Less than 2 years
 - 2-5 years
 - 5-7 years
 - 7-10 years
 - 10-15 years
 - 15-25 years
 - 25+ years

4. What is your gender?
 - Male
 - Female
 - Gender Variant/Non-Conforming
 - Transgender Male
 - Transgender Female

5. What race do you identify with?
 - White or Caucasian
 - Black or African American
 - Hispanic or Latino
 - Asian or Asian American
 - American Indian or Alaska Native
 - Native Hawaiian or other Pacific Islander
 - Middle Eastern and/or North African (MENA)
 - Other (please specify)

6. How old are you?
 - 21-24
 - 25-34
 - 35-44

- 45-54
 - 55-64
 - 65+
7. What is the highest level of education you have completed?
- Associate Degree
 - Bachelor's degree
 - Master's degree
 - Doctorate
 - Other (please specify)
8. What is your current relationship status?
- Single
 - In a casual relationship
 - In a serious, committed relationship
 - Unmarried, but cohabiting
 - Married
 - Widowed
 - Divorced
9. How many children do you have?
- None
 - 1
 - 2
 - 3
 - 4+
10. What is your current police rank?
- Police officer
 - Police detective
 - Police Sergeant
 - Police lieutenant
 - Other (please specify)
11. Please indicate whether you have participated in any of the following activities while on duty:
- Gathering evidence
 - Investigating and/or prosecuting perpetrators
 - Responding to emergency calls
 - Assisting crime victims

- Testifying in court
- Conducting outreach to the public
- Witnessing a police shooting
- Being involved in a police shooting
- None of the above

12. How long have you been working with your current supervisor? (text box)

13. How long have you been working with your current partner? (text box)

Appendix B

Operational Police Stress Questionnaire

Below is a list of items that describe different aspects of being a police officer. After each item, please indicate how much stress it has caused you over the past 6 months, using a 7-point scale (see below) that ranges from “No Stress At All” to “A Lot of Stress.”

No Stress At All			Moderate Stress			A Lot Of Stress
1	2	3	4	5	6	7

1. Shift work
2. Working alone at night
3. Over-time demands
4. Risk of being injured on the job
5. Work related activities on days off (e.g., court, community events)
6. Traumatic events (e.g., MVA, domestics, death, injury)
7. Managing your social life outside of work
8. Not enough time available to spend with friends and family
9. Paperwork
10. Eating healthy at work
11. Finding time to stay in good physical condition
12. Fatigue (e.g., shift work, over-time)
13. Occupation-related health issues (e.g., back pain)
14. Lack of understanding from family and friends about your work
15. Making friends outside the job
16. Upholding a “higher image” in public
17. Negative comments from the public
18. Limitations to your social life (e.g., who your friends are, where you socialize)
19. Feeling like you are always on the job
20. Friends/family feel the effects of the stigma associated with your job

The Operational Police Stress Questionnaire is provided free for non-commercial, educational, and research purposes.

Appendix C

Organizational Police Stress Questionnaire

Below is a list of items that describe different aspects of being a police officer. After each item, please indicate how much stress it has caused you over the past 6 months, using a 7-point scale (see below) that ranges from “No Stress At All” to “A Lot of Stress.”

No Stress At All			Moderate Stress			A Lot Of Stress
1	2	3	4	5	6	7

1. Dealing with co-workers
2. The feeling that different rules apply to different people (e.g., favouritism)
3. Feeling like you always have to prove yourself to the organization
4. Excessive administrative duties
5. Constant changes in policy/legislation
6. Staff shortages
7. Bureaucratic red tape
8. Too much computer work
9. Lack of training on new equipment
10. Perceived pressure to volunteer free time
11. Dealing with supervisors
12. Inconsistent leadership style
13. Lack of resources
14. Unequal sharing of work responsibilities
15. If you are sick or injured your co-workers seem to look down on you
16. Leaders over-emphasize the negatives (e.g., supervisor evaluations, public complaints)
17. Internal investigations
18. Dealing the court system
19. The need to be accountable for doing your job
20. Inadequate equipment

The Organizational Police Stress Questionnaire is provided free for non-commercial, educational, and research purposes.

Appendix D

PTSD Checklist for DSM-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at all	A Little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting like the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful event?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering	0	1	2	3	4

important parts of the stressful experience?					
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being “superalert” or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4

19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

Appendix E

Brief Symptom Inventory-18

0 = Not at all, **1** = A little bit, **2** = Moderately, **3** = Quite a bit, **4** = Extremely
How much were you distressed by:

1. Faintness or dizziness
2. Feeling no interest in things
3. Nervousness or shakiness inside
4. Pains in heart or chest
5. Feeling lonely
6. Feeling tense or keyed up
7. Nausea or upset stomach
8. Feeling blue
9. Suddenly scared for no reason
10. Trouble getting your breath
11. Feelings of worthlessness
12. Spells of terror or panic
13. Numbness or tingling in parts of your body
14. Feeling hopeless about the future
15. Feeling so restless you couldn't sit still
16. Feeling weak in parts of your body
17. Thoughts of ending your life
18. Feeling fearful

Appendix F

The Perceived Invalidation of Emotion Scale (PIES)

This measure has been modified by the researchers to better assess the variables used in this study. The reliability and validity of this measure have not been compromised.

Please take a moment to think about your relationships with the people you are in contact with on a regular basis (i.e., at least once per week) and how they respond to your emotions when you share them. You will be prompted to consider your relationships with family, supervisors, colleagues, and the overall general public.

Then, please indicate how often each item applied to you over the past month using the following scale:

Almost Never (0-10%)	Sometimes (11-35%)	About half the time (36-65%)	Most of the time (66-90%)	Almost Always (91-100%)
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Supervisors:

1. When I share how I’m feeling, my supervisors don’t seem to mirror or match my emotions. For example, they don’t share sadness with me when I’m sad or happiness with me when I’m happy.
2. When I share how I’m feeling, my supervisors want me to “get over it” or “accept it and move on.”
3. When I share how I’m feeling, my supervisors seem like they don’t want to hear what I have to say.
4. When I share how I’m feeling, my supervisors look down on me or judge me.
5. When I share how I’m feeling, my supervisors don’t take me seriously.
6. When I try to share how I’m feeling, my supervisors tell me or imply how I should actually feel.
7. My supervisors get mad or upset at me when I express my feelings.
8. My supervisors don’t take my side or agree with how I’m feeling.
9. My supervisors make me feel like it’s not okay for me to feel the way that I do.
10. My supervisors make me feel like my emotions are unimportant.

Colleagues:

11. When I share how I'm feeling, my colleagues don't seem to mirror or match my emotions. For example, they don't share sadness with me when I'm sad or happiness with me when I'm happy.
12. When I share how I'm feeling, my colleagues want me to "get over it" or "accept it and move on."
13. When I share how I'm feeling, my colleagues seem like they don't want to hear what I have to say.
14. When I share how I'm feeling, my colleagues look down on me or judge me.
15. When I share how I'm feeling, my colleagues don't take me seriously.
16. When I try to share how I'm feeling, my colleagues tell me or imply how I should actually feel.
17. My colleagues get mad or upset at me when I express my feelings.
18. My colleagues don't take my side or agree with how I'm feeling.
19. My colleagues make me feel like it's not okay for me to feel the way that I do.
20. My colleagues make me feel like my emotions are unimportant.

General Public:

21. I feel unappreciated by the general public.
22. I feel seen and heard by the general public.
23. My interactions with the public leave me feeling misunderstood.
24. The general public does not understand what I go through in my job.
25. The public's behavior toward me is degrading.
26. The public's behavior toward me is affected negatively by my race.
27. The public sees me as an individual and not just a cop.
28. The public sees me as an individual and not just a member of my racial group.
29. The public rejects my efforts to be helpful to them.
30. The public appreciates my sacrifices.
31. I can't be my true self when I interact with the public.
32. I can share my real feelings when I interact with the public.
33. I can be myself around members of the public.

Appendix G

Non-Significant Findings:
Moderated Regression Interaction Effects

Interaction: Perceived Emotional Invalidation and Operational Stress Predicting PTSD

For the interaction analysis between perceived emotional invalidation and operational stress predicting PTSD, the direct effect of perceived emotional invalidation on PTSD was statistically significant, $b = .2428$, $t = 2.29$, $p = .026$. The direct effect of operational stress on PTSD was not statistically significant, $b = .5153$, $t = 1.97$, $p = .054$. The interaction effect between perceived emotional invalidation and operational stress predicting PTSD was not statistically significant, $b = .013$, $t = 1.65$, $p = .106$.

Interaction: Perceived Emotional Invalidation from Supervisors and Operational Stress Predicting PTSD

For the interaction analysis between perceived emotional invalidation from supervisors and operational stress predicting PTSD, the direct effect of perceived emotional invalidation from supervisors on PTSD was statistically significant, $b = .4812$, $t = 2.38$, $p = .0214$. The direct effect of operational stress on PTSD was statistically significant, $b = .6055$, $t = 2.498$, $p = .0158$. The interaction effect between perceived emotional invalidation from supervisors and operational stress predicting PTSD was not statistically significant, $b = .0190$, $t = 1.071$, $p = .2889$.

Interaction: Perceived Emotional Invalidation from Supervisors and Organizational Stress Predicting PTSD

For the interaction analysis between perceived emotional invalidation from supervisors and organizational stress predicting PTSD, the direct effect of perceived emotional invalidation from supervisors on PTSD was not statistically significant, $b = .2956$, $t = 1.352$, $p = .1824$. The direct effect of organizational stress on PTSD was statistically significant, $b = .7284$, $t = 3.045$, $p = .0037$. The interaction effect between perceived emotional invalidation from supervisors and

organizational stress predicting PTSD was not statistically significant, $b = .0308$, $t = 1.778$, $p = .0814$.

Interaction: Perceived Emotional Invalidation from Colleagues and Operational Stress

Predicting PTSD

For the interaction analysis between perceived emotional invalidation from colleagues and operational stress predicting PTSD, the direct effect of perceived emotional invalidation from colleagues on PTSD was statistically significant, $b = .7321$, $t = 3.061$, $p = .0035$. The direct effect of operational stress on PTSD was statistically significant, $b = .5530$, $t = 2.563$, $p = .0134$. The interaction effect between perceived emotional invalidation from colleagues and operational stress predicting PTSD was not statistically significant, $b = .0275$, $t = 1.557$, $p = .1259$.

Interaction: Perceived Emotional Invalidation from the General Public and Operational Stress

Predicting PTSD

For the interaction analysis between perceived emotional invalidation from the general public and operational stress predicting PTSD, the direct effect of perceived emotional invalidation from the general public on PTSD was not statistically significant, $b = -.3223$, $t = -1.126$, $p = .265$. The direct effect of operational stress on PTSD was statistically significant, $b = 1.065$, $t = 4.05$, $p = .0002$. The interaction effect between perceived emotional invalidation from the general public and operational stress on PTSD was not statistically significant, $b = .0112$, $t = .4580$, $p = .6490$.

Interaction: Perceived Emotional Invalidation from the General Public and Organizational Stress Predicting PTSD

For the interaction analysis between perceived emotional invalidation from the general public and organizational stress predicting PTSD, the direct effect of perceived emotional invalidation from the general public on PTSD was not statistically significant, $b = -.240$, $t = -.92$, $p = .362$. The direct effect of organizational stress on PTSD was statistically significant, $b = 1.041$, $t = 4.651$, $p = .0000$. The interaction effect between perceived emotional invalidation from the general public and organizational stress on PTSD was not statistically significant, $b = .0059$, $t = .2598$, $p = .7961$.

Interaction: Perceived Emotional Invalidation from the General Public and Operational Stress Predicting BSI

For the interaction analysis between perceived emotional invalidation from the general public and operational stress predicting BSI, the direct effect of perceived emotional invalidation from the general public on BSI was not statistically significant, $b = -.304$, $t = -1.29$, $p = .2023$. The direct effect of operational stress on BSI was statistically significant, $b = .7223$, $t = 3.335$, $p = .0016$. The interaction effect between perceived emotional invalidation from the general public and operational stress on BSI was not statistically significant, $b = .0212$, $t = 1.059$, $p = .2945$.

Interaction: Perceived Emotional Invalidation from the General Public and Organizational Stress Predicting BSI

For the interaction analysis between perceived emotional invalidation from the general public and organizational stress predicting BSI, the direct effect of perceived emotional invalidation from the general public on BSI was not statistically significant, $b = -.246$, $t = -1.13$,

$p = .265$. The direct effect of organizational stress on BSI was statistically significant, $b = .7027$, $t = 3.752$, $p = .0005$. The interaction effect between perceived emotional invalidation from the general public and organizational stress on BSI was not statistically significant, $b = .0181$, $t = .9459$, $p = .3487$.