

OCCUPATIONAL STRESS AND WORK-LIFE  
CONFLICT AMONG POLICE OFFICERS

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Abstract: Stress from police work carries negative implications for the physical and psychological wellness of officers and consequences for their work-life interface to include relationships with family and friends. The ways in which officers respond to, and manage, occupational stress influences their overall wellbeing. The present research used data from Phase 1 of the National Police Research Platform to examine the relationship between use of humor as a coping strategy in the context of the police academy and emotional distress among police recruits from a transactional view of stress and coping. Additionally, the present research examined how the manifestation of occupational stress, through physical stress symptoms and psychological burnout, impacts life outside of work for officers from a stress spillover perspective.

Results from the first study indicated that police recruits use humor as a coping strategy at greater levels upon academy completion compared to their use of humor at the beginning of academy training. Additionally, results showed that greater levels of using humor as a coping strategy in the police academy predicted lower emotional distress upon academy graduation for recruits. Findings from the second study showed that higher levels of physical stress symptoms and psychological burnout were associated with higher levels of work-life conflict for police officers.

The present work adds to existing knowledge of police stress and coping by linking humor with lower levels of emotional distress among police recruits during academy training, thereby providing evidence that humor used during the stressful academy experience can be adaptive for police recruits and their emotional wellness. Findings from the present work also established a relationship between physical stress symptoms experienced by officers, psychological burnout, and their influence on officers' relationships with family and friends outside of work, lending support for the stress spillover hypotheses. Implications for officers, police organizations, law enforcement families, and communities are discussed.

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## CHAPTER I

### INTRODUCTION

Police officers are exposed to traumatic experiences while working, often leading to occupational stress which can spillover into domains of life outside of work. The utilization of maladaptive coping strategies by police have been identified as early in the career as police academy training (McCarty & Lawrence, 2016; Violanti, 1993). The present research will examine issues related to police occupational stress and officer wellness, and in doing so will focus both on early career emotional distress in the context of police academy training as well as how the physical and psychological manifestation of stress among police officers is related to their work-life conflict. Extant research has established the link between occupational stress in police work and deleterious outcomes for officers to include physical and psychological health and wellness repercussions (Marmar et al., 2006; Mohr et al., 2003; Regehr, LeBlanc, Jelley, & Barath, 2008; Slate, Johnson, & Colbert, 2007; Violanti et al., 2007; Violanti et al., 2013). Research has also demonstrated that police officers tend to rely on maladaptive coping strategies to deal with the stress of the job, to include increases in the use of negative coping strategies throughout the duration of police academy training (Aaron, 2000; Atkinson-Tovar, 2003; Cross & Ashley, 2004; Leonard & Alison, 1999; McCarty & Lawrence, 2016; Swatt, Gibson, & Piquero, 2007). However, less is known about early career emotional distress in the context of police academy training and how the use of humor as a coping strategy influences perceived emotional distress among police recruits.



Beyond the police academy, officers are at-risk for experiencing the effects of cumulative stress over the course of their careers (Papazoglou, 2013). While it is known that occupational stress can negatively impact various areas of life for officers extending beyond work, it is less clear if work-life issues are attributed to the physical manifestation of stress experienced by officers or to the psychological manifestation of their stress. This is an important line of inquiry given the emergence of police wellness as a pillar of 21<sup>st</sup> Century policing, as recommended by the federal government in response to growing concerns about balancing the ability of law enforcement to both reduce crime and promote public trust (President's Task Force on 21<sup>st</sup> Century Policing, 2015).

Two theories are used to guide the present research. First, the transactional theory of stress and coping provides a framework from which to view changes in use of coping strategies over time. This theory will be applied to the present examination of changes in the use of humor as a coping strategy for police recruits and how their use of humor explains variation in emotional distress (Folkman & Lazarus, 1991; Lazarus & Folkman, 1987). Next, spillover framework lends itself to the examination of the relationship between physical and psychological manifestations of stress and work-life conflict. This theory is used to examine the spillover, or cascade, of police occupational stress into domains outside of the work environment (Bolger, DeLongis, Kessler, & Wethington, 1989; Repetti, 1989; Staines, 1980). Therefore, the present study will be positioned within the broader literature on police stress and wellness while transactional stress and coping theory, along with spillover framework, will guide the research methodology and interpretation of findings.

To examine issues around police occupational stress and how the manifestation of occupational stress interferes with life outside of work for police officers, this dissertation is organized to include the following:

- An introductory chapter outlining key study concepts, an overview of the literature, and an overview of the methodology.

- A manuscript examining the use of humor as a coping strategy among a sample of police recruits during their police academy experience and how humor is related to recruits' levels of emotional distress upon completion of their academy training.
- A manuscript examining the relationship between physical stress symptoms, psychological burnout, and work-life conflict in a law enforcement sample from a spillover perspective.
- A concluding chapter summarizing research findings, implications for future research, and practical implications to inform prevention and intervention around police stress and wellness.

### **Problem Statement**

Stress from police work carries negative implications for officers ranging from problems sleeping and poor heart health to burnout, posttraumatic stress disorder (PTSD) and suicide rates which exceed the general population (Charles et al., 2007; Fekedulegn et al., 2017; Marmar et al., 2006; Mohr et al., 2003; Violanti et al., 2007; Violanti et al., 2013). Occupational stress in police work and its impact on the wellbeing of officers poses significant risks that extend beyond those incurred by officers themselves to include their families and friends, police organizations managing the recruitment and retention of officers, and the communities where officers serve and protect. Existing research has primarily been conducted using samples of officers post-police academy training and has largely focused on the relationship between occupational stress and individual outcomes of wellness for officers (Violanti et al., 2007; Violanti et al., 2013). Less is understood about early career changes in emotional wellness during the stressful context of academy training. The present research was two-fold. Manuscript 1 examined changes in emotional distress of police recruits during the academy as well as the role that coping through humor played in their emotional distress. Manuscript 2 sought to expand upon extant literature on police stress and wellness by examining the interface of stress and work-life conflict to better understand how the manifestation of

occupational stress, through physical stress symptoms and psychological burnout, impacts life outside of work for officers.

### **Purpose and Importance**

Understanding early career changes in emotional distress and how the use of humor influences the emotional distress of recruits who are entering the field of policing upon completion of their training is important for enhancing police wellness and policing practices. Findings on the relationship between stress and work-life conflict contribute to the understanding of how occupational stress affects life outside of work for officers. Unique contributions of physical and psychological manifestations of stress on work-life conflict provide evidence from which to guide targeted prevention for the personal lives of officers outside of work with the goal of maintaining healthy work-life balance.

### **Definitions of Key Terms**

The current research conceptualizes *emotional distress* as the presence of negative mood, negative feelings, feeling worried or stressed, and the inability to concentrate. This definition borrows from prior work on the measurement of depressive symptoms in the general population (Radloff, 1977).

For the present study, the conceptualization of *coping* refers to both the cognitive and behavioral effort put forth to master, tolerate, or reduce external and internal demands and conflicts among them (Folkman & Lazarus, 1980). This study considers *humor* as an emotional response of mirth in a social context that is elicited by a perception of playful incongruity (Martin, 2007).

The interplay between work and life outside of work is of particular interest in this study. Research on ability to balance work and life outside of work has been shaped by role theory and scarcity hypothesis such that competing demands from multiple roles, as well as the lack of resources to meet demands across multiple roles, leads to conflict between work and non-work domains (Good,

1960; Marks, 1977). Therefore, the present study conceptualizes *work-life conflict* as the interference between work and domains outside of work.

The present research is interested in burnout as a psychological manifestation of stress and its relationship to work-life conflict. The term, *psychological burnout*, is used in the present research to represent a negative psychological response to chronic work stress found across human and social service sectors which occurs when coping and support resources are low and work demands are excessive (Magnusson-Hanson, Theorell, Oxenstierna, Hyde & Westerlund, 2008; Maslach, Jackson, & Leiter, 1996). Burnout is often associated with feelings of hopelessness (Stamm, 2010). The three major dimensions which characterize burnout include emotional exhaustion, depersonalization or cynicism, and a decreased sense of personal accomplishment (Burke, 1993; Martinussen, Richardsen, & Burke, 2007; Maslach, 1982; Turgoose, Glover, Barker, & Maddox, 2017).

## **Literature Overview**

### **Police Stress and Wellness**

Police officers face a multitude of stressors from the context and content of their work. Additionally, external pressures from the public and personal stressors compound the stress they experience from the job. Together, police occupational stress and trauma exposure in the line of duty have a clear link with poor health outcomes for officers (Reese, 1995; Regehr et al., 2008; Slate et al., 2007; Violanti et al., 2007). Police organizational stressors come from the contextual factors associated with the job such as organizational policies, inconsistent court processes, shift work, limited or inadequate resources that hinder an officer's ability to carry out their duties effectively, organizational bureaucracy, and excessive paperwork (Shane, 2010). Comparatively, operational stressors are related to the content of the job. Examples of operational stressors include exposure to trauma, critical incident response, and the inherent dangerousness of the job. Additionally, increased public scrutiny of police work, social isolation, and interpersonal relationship problems are external stressors that impact officer health and wellness (Fagan, 2015; Violanti & Aron, 1993).

Exposure to police stress carries physical consequences for the health of officers who experience difficulty sleeping, back pain, and headaches as a result of occupational stress (Charles et al., 2007; Cross & Ashley, 2004). Repeated activation of the stress response system leads to additional health risks which include metabolic syndrome, cardiovascular disease, and certain types of cancer (Fekedulegn et al., 2017; Marmar et al., 2006; Mohr et al., 2003; Violanti et al., 2013; Wirth et al., 2014). Stress also takes a psychological toll on the mental and emotional wellbeing of officers, making them more vulnerable to depression, anxiety, compassion fatigue, burnout, and PTSD. Furthermore, police suicide rates greatly exceed the general population (Cross & Ashley, 2004; Marmar et al., 2006; Violanti et al., 2007; Violanti et al., 2013).

### **Stress and Coping**

The ways in which officers manage their stress or attempt to reduce their stress is critical for their wellness. Some police officers may utilize adaptive coping strategies such as exercise, receiving social support, or viewing stress positively. However, research has demonstrated that many officers tend to rely on maladaptive coping strategies such as disengaging, disassociating, suppression, and avoidance, as well as self-medication, substance use, sexual promiscuity, and gambling (Aaron, 2000; Atkinson-Tovar, 2003; Cross & Ashely, 2004; Leonard & Alison, 1999; Menard, Arter, & Glazer, 2013; Swatt et al., 2007).

The study of coping has been conceptualized as both a trait and a process (Lazarus & Folkman, 1991; Stone, Greenberg, Kennedy-Moore, & Newman, 1991). The transactional view of the coping process accounts for changes in responses to stress that vary by context and change over time. Further, the appraisals that individuals make about stressors or threats in a given situation and their assessment of available resources to manage the threat is integral to viewing coping as a process (Folkman & Lazarus, 1988; Lazarus & Folkman, 1987). Among the body of coping research, the transactional framework for coping has been specifically applied to prior investigation into changes in coping styles among police recruits and their levels of job confidence (McCarty & Lawrence 2016).

Therefore, a transactional framework lends itself to expanded investigation into changes in the use of humor as a coping strategy and its relationship to emotional wellness of recruits.

### **Occupational Stress Spillover**

Occupational stress can interfere with life outside of work and result in work-life conflict. Work-life conflict is a form of role conflict or strain between work and domains outside of work in which demands or pressures across multiple roles are incompatible (Greenhaus & Beutell, 1985). The interface between work and life outside of work can be viewed from a spillover perspective. Spillover refers to the way in which thoughts, behaviors, or emotions from work cascade into domains outside of work (Bolger et al., 1989; Repetti, 1989; Staines, 1980). Spillover is not inherently negative or detrimental. While role strain can occur due to limited or competing time, energy, and psychological resources between the work and family spheres, role enhancement and personal growth can accompany one's participation in multiple roles across spheres (Greenhaus & Beutell, 1985; Grzywacz & Marks, 2000; Repetti, 1989). Spillover framework has shaped previous investigations into the work-life interface for police officers with a focus on how work stress, along with officers' emotions, harshness, and control tactics transfer into their home lives, and is therefore an appropriate lens for further investigation into how the manifestation of work stress impacts the personal lives of officers outside of work (Johnson, Todd, & Subramanian, 2005; Roberts & Levenson, 2001; Zavala, E., 2013).

### **Research Questions and Hypotheses**

#### **Manuscript 1**

**Research Question 1:** Does emotional distress change among police recruits during the police academy training experience?

**Hypothesis 1:** Police recruits will report greater levels of emotional distress at training academy completion compared to their emotional distress at baseline.

**Research Question 2:** Does the use of humor as a coping strategy change among police recruits during the police academy training experience?

**Hypothesis 2:** Police recruits will report using humor as a coping strategy at greater levels upon training academy completion compared to their use of humor at baseline.

**Research Question 3:** What is the relationship between the use of humor as a coping strategy and emotional distress among police recruits at the end of their police academy training experience?

**Hypothesis 3:** Greater levels of using humor as a coping strategy among police recruits will be associated with lower levels of emotional distress among police recruits at academy completion.

**Research Question 4:** What is the relationship between perceived level of discipline in the police academy and emotional distress?

**Hypothesis 4:** Greater levels of harshness in academy discipline style reported by recruits will be associated with greater emotional distress among police recruits at training academy completion.

**Research Question 5:** How does perceived level of discipline in the police academy influence the relationship between use of humor as a coping strategy and emotional distress among police recruits?

**Hypothesis 5:** The relationship between using humor as a coping strategy and emotional distress will be contingent upon the level of disciplinary harshness reported by police recruits.

## **Manuscript 2**

**Research Question 1:** How are individual characteristics and job characteristics associated with physical stress symptoms among officers?

**Hypothesis 1A:** There will be differences in physical stress symptoms among police officers based on gender, race, age, education and marital status.

**Hypothesis 1B:** Police officers who work the night shift will report a greater level of physical stress symptoms than police officers who work the day shift.

**Hypothesis 1C:** Police officers in other/sworn assignments will report a greater level of physical stress symptoms than police officers who are assigned to specialized units.

**Hypothesis 1D:** Police officers who work in areas with high crime rates will report a greater level of physical stress symptoms than police officers who work in areas with low crime rates.

**Research Question 2:** How are individual characteristics and job characteristics associated with psychological burnout among officers?

**Hypothesis 2A:** There will be differences in psychological burnout among police officers based on gender, race, age, education and marital status.

**Hypothesis 2B:** Police officers who work nights will report greater levels of psychological burnout than police officers who work the day shift.

**Hypothesis 2C:** Police officers assigned to specialized units will report a greater level of psychological burnout than police officers assigned to other/sworn activities.

**Hypothesis 2D:** Police officers who work in areas with higher crime rates will report a greater level of psychological burnout than police officers who work in areas with low crime rates.

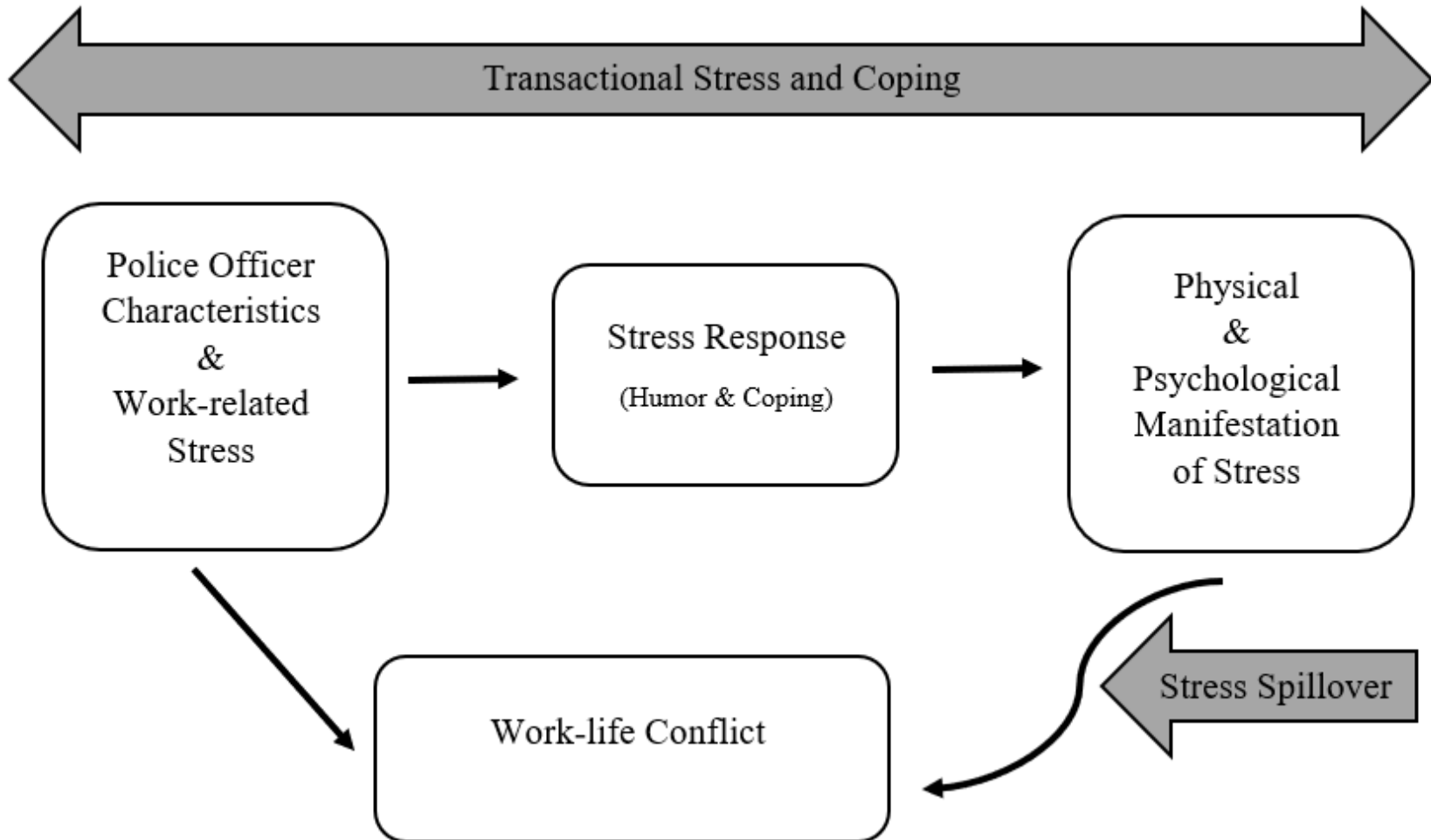
**Research Question 3:** What is the relationship between physical stress symptoms and psychological burnout on work-life conflict among officers?

**Hypothesis 3A:** Higher levels of physical stress symptoms will be associated with higher levels of work-life conflict among police officers.

**Hypothesis 3B:** Higher levels of psychological burnout will be associated with higher levels of work-life conflict among police officers.



Figure 1. Conceptual model of police stress manifestation predicting work-life conflict.



## **Methodological Approach**

### **Sample Description**

Data for this study were derived from Phase 1 of the National Police Research Platform, a National Institute of Justice funded project. The goal of the National Police Platform was to strengthen the science of policing and provide translational feedback for police agencies and policy makers. Longitudinal and topical surveys were originally collected between 2009 and 2011 from police officers across 29 agencies and 6 geographical regions in the United States. For the purposes of this study, secondary data from a longitudinal survey of police recruits representing 5 agencies will be used for Manuscript 1 while a cross-sectional, topical survey on stress and health collected from police officers as part of the National Police Research Platform will be utilized for Manuscript 2. Access to the data for this study was made available upon securing approval from the Oklahoma State University Institutional Review Board and the National Archive of Criminal Justice Data (NACJD). Information regarding the data can be found at <https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/34518>.

Data from 1,072 police recruits was used for Manuscript 1. Recruits were asked to participate in a baseline survey on their first day of police academy training and a posttest that was administered within one week of academy graduation. Surveys asked recruits about a variety of topics including their backgrounds, views on policing, wellness, and coping. Inclusion criteria for the current study was participation in both the baseline and posttest surveys. Listwise deletion was utilized to handle missing data. Based on inclusion criteria, the present study sample consisted of 101 police recruits. Respondents were approximately 14% female and 53% were minority officers with 23% identifying as Black/African American and 25% identifying as Latino. The average age of respondents was 30 with the age of recruits ranging from 24 to 43 years of age. Approximately 57% had received a college degree or higher. Regarding relationship status, approximately 31% were in a relationship, and 23% reported being married. For Manuscript 2, data from 2,078 sworn police officers who were surveyed about stress and health was utilized. A majority of respondents identified

as white (64%) and male (84%). Respondents ranged in age from 21-69 with an average age of 43 years. Minority officers represented approximately 36% percent of respondents and female officers represented 16% of the sample. The sample was highly educated with approximately 55% of respondents having completed college or graduate studies. A majority, 75%, were either married or cohabitating with a partner at the time of the study. Data was collected both in-person and online from police recruits and was collected online for sworn officers. Online surveys were collected through Qualtrics software.

### **Overview of Analyses**

The analytic plan for Manuscript 1 entailed zero-order correlations of major study variables, descriptive statistics, paired-sample t-tests, and hierarchical multiple regression analyses. Descriptive statistics were used to assess average levels of emotional distress and use of humor as a coping strategy among the sample of recruits. Paired sample t-test analyses were used to examine changes in emotional distress and use of humor over the course of the police academy experience. Then, hierarchical multiple regression analyses were used to examine how posttest humor and harshness of academy discipline style predicted posttest emotional distress while controlling for recruit characteristics. Finally, an interaction term (posttest humor\*harshness of academy discipline) was added to the final model to test for moderation between use of humor and harshness of academy discipline style in relationship to emotional distress.

The analytic plan for Manuscript 2 included descriptive statistics, zero-order correlations, and hierarchical multiple regression analyses. Descriptive and bivariate statistics were used to assess correlations between variables of interest. Hierarchical multiple regression analyses were then conducted to examine how individual officer characteristics and job characteristics are associated with physical stress symptoms and psychological burnout. Then, work-life conflict was regressed on physical stress symptoms, psychological burnout, and additional variables of interest to include shift work, job assignment, crime rate, and officer demographic characteristics through four, hierarchical regression models to examine predictors of work-life conflict in the sample of police officers

## CHAPTER II

### MANUSCRIPT 1

#### **Abstract**

Police work, beginning as early as academy training, is inherently stressful and carries risks for the wellbeing of officers. Adaptive coping reduces risks associated with police stress. Research has demonstrated the unique role of humor as a useful way for officers to deal with stressful situations of which they have little control. This study investigated the relationship between humor and emotional distress among a sample of 101 police recruits from Phase 1 of the National Police Research Platform, Longitudinal Survey of Recruits. Findings indicated that reliance on humor as a coping strategy increases among recruits between the beginning of the police academy and academy completion. Results of hierarchical regression analyses showed that greater levels of use of humor as a coping strategy in the police academy predicted a decrease in emotional distress upon academy graduation for recruits. Findings add to the body of work on police stress and coping and provide implications for addressing early career occupational stress for police officers.

## **Humor and Emotional Distress among Police Academy Recruits**

Police wellness has emerged as a central concern in modern law enforcement due to growing knowledge of police stress, police mental health, and police suicide. Additionally, increased public scrutiny of police in the aftermath of highly publicized events, such as officer involved shootings, have led to discussion about strained police-community relationships and negative impacts on officer mental health (Galovski, Peterson, & Fox-Galalis, 2018; Schaper, 2016). These emerging issues led to the federal government's guidance on improving policing in America, through the President's Task Force on 21<sup>st</sup> Century Policing, which named officer wellness as an important area of focus (President's Task Force on 21<sup>st</sup> Century Policing, 2015).

Research has demonstrated that policing is a highly stressful career characterized by acute and chronic exposure to stress and trauma (Papazoglou, 2013; Paton et al., 2009). From shift work, inadequate resources, and organizational bureaucracy to critical incident response and high-risk encounters with crime suspects, police officers are faced with a multitude of occupational stressors (Fagan, 2015; Shane, 2010; Violanti & Aron, 1993). Police stress has been linked to deleterious physical and psychological health effects such as difficulty sleeping, cardiovascular disease, burnout, post-traumatic stress disorder, and increased rates of suicide compared to the general population (Cross & Ashley, 2004; Fekedulegn et al., 2017; Habersaat, et al., 2015; Marmar et al., 2006; Miller, 2005; Violanti et al., 2013). The ways in which officers cope with stress, or seek to manage stress, is critical in reducing the negative effects of stress on their health and wellbeing. Additionally, the mental and emotional wellness of officers carries implications that extend beyond the individual officer to include their families and their job performance which ultimately impacts the citizens they serve (Smoktunowicz, et al., 2015; Tuttle, Giano, & Merten, 2018).

Extant research has investigated coping among police officers and has found that police officers tend to utilize maladaptive strategies such as self-medication, alcohol and tobacco use, and gambling to cope with stress (Atkinson-Tovar, 2003; Cross & Ashley, 2004). However, the role of humor as it relates to officers' emotional wellbeing is less understood despite evidence that humor is

an important part of the law enforcement subculture, and related subcultures, for both socialization and coping (Garrick, 2006; Godfrey, 2016; Moran & Roth, 2013; Roth & Vivona, 2010; Vivona, 2014).

Studies on the use of humor to manage stress have shown that humor is helpful in reducing stress and has been identified as a sign of resilience (Lefcourt, 2001). The study of humor among police officers has been largely focused on their use of “dark humor” or “gallows humor” which is used to disengage from troubling circumstances, often in the context of death and tragedy (Saraglou & Anciaux, 2004; Thorson, 1993). Studies on humor in police work have included samples of officers and special units, like crime scene investigators; however, the police academy training context, which is widely considered a stressful experience for recruits (McCarty & Lawrence, 2016; Violanti, 1993), has yet to be represented in humor and police work research. Police academy training exposes recruits to rigorous physical, mental, and emotional stress and includes both classroom and field experiences. The purpose of the stress inducing training environment is to prepare new officers to combat challenges encountered in the line of duty (Violanti, 1993). While new hires are subjected to extensive background checks and psychological screenings to ensure their physical and mental fitness, adverse mental health among recruits as they enter their careers has also been found (Williams, Ciarrochi, & Deane, 2010). A greater understanding of what contributes to mental and emotional health of early career officers would help practitioners and police organizations keep their healthy officers healthy.

The implications of emotional wellness extend beyond the individual health of officers to impact their police organizations and the communities they serve. Therefore, understanding changes in emotional distress during the police academy experience and how humor influences the emotional distress of recruits who are entering the field of policing upon completion of their training is essential for enhancing police wellness and policing practices. The benefits of humor on the relationship between stress and wellness, as well the unique role of humor in the law enforcement subculture, present a need to better understand the relationship between humor and emotional wellness for early

career officers. The current study will examine changes in the use of humor as a coping strategy among a sample of police recruits during their police academy experience and how coping through humor is related to their emotional distress at the conclusion of their academy training experience.

## **Literature Review**

### **Police Stress and Emotional Wellness**

The barrage of stressors encountered by police, to include exposure to trauma and the suffering of others, carries collateral consequences for the psychological and emotional wellness of officers. In addition to stress exposure, officers are faced with psychological strain from discrepancies in role demands. Officers oscillate between the role of crime fighters and social service providers while maintaining a readiness for possible danger in the line of duty (Chopko, 2011). Officers' individual, emotional reactions to stressful experiences often include guilt, anger, fear, feelings of hopelessness, and emotional numbness (Atkinson-Tovar, 2003; Cross & Ashley, 2004; Violanti et al., 2007). Stress, and subsequent reactions to stress, give rise to serious challenges to the mental health of officers in the forms of anxiety, depression, burnout, compassion fatigue, and post-traumatic stress disorder (Hayes, 2018; Miller, 2005; Violanti et al., 2013).

### **Coping among Police Officers**

Coping research deals with the management and reduction of stress. Coping is thought to be both the cognitive and behavioral effort put forth to master, tolerate, or reduce external and internal demands and conflicts among them (Folkman & Lazarus, 1980). Research on coping among police has demonstrated that some utilize adaptive coping such as exercise, receiving social support, or viewing stress positively; however, others cope through disengaging, disassociating, suppression, and avoidance, as well as self-medication, substance use, sexual promiscuity, and gambling (Aaron, 2000; Atkinson-Tovar, 2003; Cross & Ashley, 2004; Leonard & Alison, 1999; Menard et al., 2013; Swatt et al., 2007). Avoidant strategies are common in police subculture where officers avoid showing weakness and avoidant coping is especially harmful for psychological health (Pasillas et al., 2006).

Spirituality is another coping strategy which has resulted in conflicting results among police samples. For example, faith has been found to relieve the emotional impact of responding to completed suicides among officers and conversely, less religious officers have been found to utilize more adaptive coping when faced with critical incident stress compared to their more religious counterparts (Clark-Miller & Brady, 2013; Koch, 2010).

Coping among police recruits has been investigated to a lesser degree than coping among veteran police. McCarty & Lawrence (2016) examined coping styles among police recruits and found broad dimensions of coping to include task-oriented coping, avoidance coping, outreach coping, and spiritual coping. Of these four dimensions, it was found that recruits relied on task-oriented and outreach at the beginning of training and used avoidant coping strategies more frequently at the end of training. An earlier study found that recruits who used planful problem-solving and distancing strategies were able to reduce their levels of personal distress compared to recruits who used escape-avoidance and self-control to try and keep their feelings to themselves or wish the bad situation would go away (Violanti, 1992). Research suggests that officers engage in maladaptive coping as an attempt to avoid the stigma associated with seeking mental health support in the law enforcement culture and to uphold the “cop” image (Cross & Ashley, 2004; Reiser & Geiger, 1984).

### **Humor and Coping**

Humor has been conceptualized as an emotional response of mirth in a social context that is elicited by a perception of playful incongruity and is expressed through smiling and laughter (Martin, 2007). Humor is used as a coping strategy in stressful occupational contexts (Moran & Roth, 2006; Roth & Vivona, 2010). As addressed above, prior research has shown that dissociative coping by law enforcement officers is maladaptive (Aaron, 2000). However, the phenomenon of humor and its usefulness in coping for law enforcement is related to the benefits of being able to disengage from threatening or disturbing situations of which they have little to no control (Kuhlman, 1988; Roth &



Vivona, 2010). Humor also carries benefits of positive reframing and allows for an emotional break in the face of stress (Saroglou & Anciaux, 2004).

Burns et al. (2008) examined humor among officers who work cases involving crimes against children and found that humor may take the toxicity out of stressful moments. There is a consensus that the use of humor gives officers a sense of normalcy in the face of stress, reduces tension, and is useful for their emotional survival of the job (Burns et al. 2008; Moran & Roth, 2006; Roth & Vivona, 2010; Vivona, 2014). Participant observations during police ride-alongs have provided insight into the use of humor for coping with job stress where jokes were observed to be made quickly, as an attempt to “purge the internal obstacles that holds one back from danger” and were compared to the use of a bullet proof vest when confronting tragedy (Gayadeen & Phillips, 2016, pg. 51).

A majority of research on humor in policing has focused on “dark humor” or “gallows humor” styles which is unique in that it involves circumstances of death. Dark humor is protective during encounters with suffering (Dean & Gregory, 2005). These styles of humor are used to make fun of emotional threats and are considered forms of mental disengagement (Saroglou & Anciaux, 2004). Roth & Vivona (2010) assert that humor is applied in the work lives of crime scene investigators as a defense mechanism that helps protect them from the detrimental effects of their work conditions and allows them to continue to perform their work duties.

### **Transactional Theory of Stress and Coping**

Coping has been studied as both a trait and a process (Lazarus, 1991; Stone et al., 1991). A transactional framework to understand coping as a process, views coping as the activation of responses through thoughts and actions that change over time and depend on specific stressors. Appraisal is an important element in the transactional views on coping whereby individuals make initial meaning of a situation and assess whether it might cause harm to them as well as the evaluation of coping resources available to manage the stressful experience. These are referred to as primary and secondary appraisals in the process of coping (Folkman & Lazarus, 1991; Lazarus & Folkman,

1987). Furthermore, transactional views of coping maintain that coping depends on context and will change over time and change based on conditions of stress.

Given that police recruits are vetted based on psychological fitness before entering training academies and that their reactions to academy stress may change over the duration of their training, the transactional theory of coping provides a framework from which to view changes in the use of humor as a coping strategy for police recruits. Prior investigation into changes in coping styles throughout the police academy and their influence on job confidence have similarly viewed stress and coping as a transactional process based on the possible changes in primary and secondary appraisals that may take place throughout training (McCarty & Lawrence, 2016).

### **Present Study**

The present study will examine changes in emotional distress between the beginning of police academy training and police academy graduation. Changes in the use of humor as a coping strategy between the beginning of the academy and graduation will also be assessed. The relationship between use of humor as a coping strategy and police recruits' emotional distress at the end of the academy training will subsequently be assessed. Further, this study will examine the contributions of perceived harshness of academy disciplinary style on recruit emotional distress and explore possible moderating effects of academy discipline style on the relationship between humor and emotional distress. The present study will investigate the research questions and hypotheses as follows:

**Research Question 1:** Does emotional distress change among police recruits during the police academy training experience?

**Hypothesis 1:** Police recruits will report greater levels of emotional distress at training academy completion compared to their emotional distress at baseline.

**Research Question 2:** Does the use of humor as a coping strategy change among police recruits during the police academy training experience?

**Hypothesis 2:** Police recruits will report using humor as a coping strategy at greater levels upon training academy completion compared to their use of humor at baseline.

**Research Question 3:** What is the relationship between the use of humor as a coping strategy and emotional distress among police recruits at the end of their police academy training experience?

**Hypothesis 3:** Greater levels of using humor as a coping strategy among police recruits will be associated with lower levels of emotional distress among police recruits at academy completion.

**Research Question 4:** What is the relationship between perceived level of discipline in the police academy and emotional distress?

**Hypothesis 4:** Greater levels of harshness in academy discipline style reported by recruits will be associated with greater emotional distress among police recruits at training academy completion.

**Research Question 5:** How does perceived level of discipline in the police academy influence the relationship between use of humor as a coping strategy and emotional distress among police recruits?

**Hypothesis 5:** The relationship between using humor as a coping strategy and emotional distress will be contingent upon the level of disciplinary harshness reported by police recruits.

### **Methods**

Data for this study were derived from a longitudinal survey of police recruits which was conducted as part of the National Police Research Platform (<https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/34518>). The National Police Research Platform was a National Institute of Justice funded project. The goal of the National Police Platform was to strengthen the science of policing and provide translational feedback for police agencies and policy makers. Longitudinal and topical surveys were collected between 2009 and 2011 from police officers across 29 agencies and 6 geographical regions in the United States as well as a longitudinal survey of police recruits representing 5 agencies. Access to the data for this study was made available upon securing approval from the Oklahoma State University Institutional Review Board to

access restricted data housed by the National Archive of Criminal Justice Data and the Institute for Social Research.

### **Participants**

The original dataset included 1,072 police recruits from five participating agencies across the United States. Recruits were asked to participate in a baseline survey on their first day of police academy training and a posttest which was administered within one week of academy graduation. The range of time between baseline and posttest varied from five to six months. Surveys were originally collected in-person and moved to an online format to reduce data collection costs. Surveys asked recruits about a variety of topics including their backgrounds, views on policing, wellness, and coping. The present study included a subset of recruits who participated in baseline (T1) and posttest (T2) surveys. Recruits met inclusion criteria for the present study if they provided full data on key variables of interest as follows: baseline emotional distress, posttest emotional distress, baseline humor, posttest humor, and harshness of disciplinary style in the academy. Complete data on all key variables at baseline and posttest was provided by 9% of the original study sample. Listwise deletion was used to handle missing data.

Based on inclusion criteria, the final sample consisted of 101 police recruits. Respondents were 14% female and 53% minority officers with 23% identifying as Black/African American and 25% identifying as Latino. The average age of respondents was 30 with the age of recruits ranging from 24 to 43 years of age. Approximately 57% had received a college degree or higher. Regarding relationship status, approximately 31% were in a relationship, with 23% being in a marital relationship. In order to determine if the composition of the present study sample was different from the larger sample of recruits, several chi-square difference tests were conducted. Results of the chi-square tests indicate that the present study sample ( $N = 101$ ) was significantly different in terms of race/ethnicity, relationship status, and education status compared to the original sample ( $N = 1,072$ ). The present study sample was comprised of more minority officers than the original sample (53% vs.

30%), fewer were in a relationship (31% vs. 42%), and recruits in the final sample were significantly more educated (57% college degree or higher vs. 45%) than the original sample.

## Measures

**Emotional distress.** Emotional distress was measured using six items to reflect feeling depressed, stressed, and worried, as well as the inability to focus. Items are similar to an existing, widely used, validated measure of symptoms of depression that has been utilized in police samples (Darensburg et al., 2006; Radloff, 1977). Respondents were asked about their agreement with feeling depressed or blue; feeling relaxed and handling stress well; worrying a lot; being emotionally stable and not easily upset; being moody; and being easily distracted. Response options ranged from 1 = *strongly agree*, 2 = *agree*, 3 = *neutral*, 4 = *disagree*, to 5 = *strongly disagree* on a Likert-type scale. Items were coded such that higher scores reflected greater emotional distress compared to lower scores. A composite measure was created by summing the scores of the six items and dividing by the number of total items to create a mean score. Possible scores on this measure ranged from 1 to 5. The Cronbach's alpha for pretest emotional distress was .72 and the Cronbach's alpha for posttest emotional distress was .74.

**Humor.** Humor was measured using seven items to reflect use of humor as a coping strategy. Items were similar to a subset of a previously existing, widely used measure of the construct (Thorson & Powell, 1993). Respondents were asked about their agreement with using humor to ease tense situations; finding something funny in most situations; humor helps me cope; coping by humor is a way of adapting; use of humor puts me at ease; and use of wit or humor helps me adapt to many situations. Response options ranged from 1 = *strongly agree*, 2 = *agree*, 3 = *neutral*, 4 = *disagree*, to 5 = *strongly disagree* on a Likert-type scale. Items were coded such that higher scores reflected greater use of humor for coping. A composite measure was created by summing the scores of the seven items and dividing by the number of total items to create a mean score. Possible scores on this

measure ranged from 1 to 5. The Cronbach's alpha for pretest humor was .93 and the Cronbach's alpha for posttest humor was .94.

**Harshness of academy discipline style.** A single item was used to assess perceived discipline style in the academy. Respondents were asked, "How would you judge the severity of discipline at the training academy?" Response options ranged from 1 = *extremely harsh*, 2 = *harsh*, 3 = *not very harsh*, to 4 = *not at all harsh* on a Likert-type scale. This item was coded such that higher scores reflected greater levels of perceived harshness.

**Demographic variables.** Five demographic variables reflecting cadet characteristics were examined to include age, gender, race/ethnicity, education level, and relationship status. *Age* was measured as a continuous variable. *Gender* was assessed using a dichotomous measure where 0 = *male*, 1 = *female*. *Race/ethnicity* was measured using self-reports from participants. A set of three dichotomous variables (coded 0 and 1) were used to contrast race/ethnicity categories of *African American*, *Hispanic*, and *Asian*, against the reference group, *White*. The current sample did not contain recruits who identified as *Native American* or *Other*. Education level was self-reported by participants and originally measured using a 9-point Likert type scale ranging from 1 = *GED*, 2 = *high school graduate*, 3 = *some college*, 4 = *Associate degree*, 5 = *college degree*, 6 = *some college beyond bachelor's degree*, 7 = *Master's degree*, 8 = *Law degree*, to 9 = *PhD or other advanced degree*. A new *highest education* variable was created where 1 = *GED*, 2 = *high school or some college*, 3 = *Associate degree*, 4 = *college degree or some classes beyond college*, 5 = *Master's degree, law degree, PhD or other advanced degree*. *Relationship status* was assessed using a dichotomous measure where 0 = *currently in a relationship* and 1 = *not currently in a relationship*.

### **Analytic Approach**

The analytic plan for this study will include zero-order correlations of major study variables, descriptive statistics, paired-sample t-tests, and multiple regression analyses. Descriptive statistics will be used to assess average levels of emotional distress and use of humor as a coping strategy among the sample of recruits. To answer Research Questions 1-2, and test Hypotheses 1-2, paired

sample t-test analyses will be used to examine how emotional distress and use of humor change over the course of the academy experience. To answer Research Questions 3-4 and test Hypotheses 3-5, hierarchical regression analyses will be employed. Five models will be included in the analysis as follows: In Model 1 posttest emotional distress will be regressed on baseline emotional distress; baseline humor and posttest humor will be entered in Model 2 while controlling for baseline emotional distress; Model 3 will include harshness of disciplinary style; Model 4 will include recruit demographic characteristics age, gender, race, highest education level, and relationship status; and an interaction term (posttest humor\*harshness of academy discipline) will be added in Model 5 to test for moderation. This will test whether the association between humor and emotional distress is moderated by academy discipline style.

## **Results**

### **Descriptive Statistics and Zero-order Correlations**

Preliminary analyses were carried out to include descriptive statistic and zero-order correlations of major study variables. The mean emotional distress score at the beginning of the academy was 2.10 (SD = 0.57), with scores ranging from 1.00 to 4.33. Emotional distress scores at academy completion ranged from 1.00 to 3.50 with a mean of 2.20 (SD = 0.54). The mean score for use of humor as a coping strategy at the beginning of the academy was 3.66 (SD = 0.70) with a range of 2.00 to 5.00. Use of humor as a coping strategy at academy completion ranged from 2.43 to 5.00 with a mean score of 3.78 (SD = 0.65). Academy harshness of disciplinary style scores ranged from 1.00 to 4.00 with a mean of 2.47 (SD = 0.69). Descriptive statistics for major study variables are shown in Table 1.

The correlation between highest education level and race/ethnicity was negative for Hispanic/Latino ( $r = -.23, p < .01$ ). Gender and humor (T1) were positively correlated ( $r = .23, p < .05$ ). Baseline emotional distress (T1) was negatively correlated with relationship status ( $r = -.24, p < .05$ ) and academy harshness ( $r = -.22, p < .05$ ), and positively correlated with emotional distress (T2) ( $r = .42, p < .01$ ). Humor (T1) was negatively correlated with Hispanic/Latino ( $r = -.21, p < .05$ )

and positively associated with Asian ( $r = .26, p < .01$ ) and humor (T2) ( $r = .63, p < .01$ ). Humor (T2) and emotional distress (T2) were negatively correlated ( $r = -.31, p < .01$ ). Zero-order correlations are presented in Table 2.

### **Changes in Emotional Distress and Use of Humor**

Paired samples *t*-tests were conducted to compare changes in emotional distress and use of humor as a coping strategy between the beginning of the police academy and completion of the police academy. There was no statistically significant difference in emotional distress from the beginning of the academy ( $M = 2.10, SD = 0.57$ ) to completion of the academy ( $M = 2.20, SD = 0.54$ );  $t(100) = -1.62, p = .108$ . A statistically significant difference was found in use of humor as a coping strategy from the beginning of the academy ( $M = 3.66, SD = 0.70$ ) to completion of the academy ( $M = 3.78, SD = 0.65$ );  $t(100) = -2.13, p = .036$ . Results of paired samples *t*-test are provided in Table 3.

### **Predictors of Emotional Distress at Academy Completion**

Prior to examining predictors of emotional distress at academy completion, multiple regression analysis was used to explore factors associated with use of humor as a coping strategy at academy completion. Baseline humor (T1) was associated with an increase in use of posttest humor (T2) ( $B = 0.55, p < .001$ ). Greater posttest emotional distress (T2) was associated with lower posttest humor (T2) ( $B = -0.36, p < .01$ ) and identifying as Asian, compared to White recruits, was also associated with less use of humor as a coping strategy ( $B = -0.58, p < .05$ ). The linear combination of predictors accounted for 50% of the variance in posttest humor (T2),  $R^2 = 0.50$ , adjusted  $R^2 = 0.44$ .

A five model hierarchical multiple regression was conducted to determine if the use of humor as a coping strategy and level of harshness in academy discipline style predict cadet emotional distress upon academy completion while controlling for baseline emotional distress and baseline use of humor, as well as cadet demographic characteristics to include age, race, gender, education level, and relationship status. The null hypotheses tested were that  $R^2$  was equal to 0 and that the regression coefficients were equal to 0. All tests were conducted at  $\alpha = .05$ .



In Model 1, emotional distress at baseline was entered. Results showed that baseline emotional distress was associated with an increase in emotional distress at academy completion ( $B = 0.40, p < .001$ ). Emotional distress at baseline explained 18% of the variance in emotional distress at academy completion. In Model 2, baseline humor (T1) and posttest humor (T2) were entered. The addition of humor (T1) did not significantly explain additional variance in emotional distress at academy completion ( $B = 0.05, p = .57$ ). However, humor (T2) was associated with a decrease in emotional distress at academy completion ( $B = -0.32, p < .001$ ) when controlling for baseline emotional distress and baseline humor. Model 2 explained an additional 12% of variance in emotional distress at academy completion. In Model 3, harshness of academy discipline style was entered. The addition of harshness of academy discipline style was not significantly associated with emotional distress at academy completion ( $B = -0.09, p = .19$ ). In Model 4, recruit demographic characteristics were added. Recruit age ( $B = -0.01, p = .57$ ); gender ( $B = 0.22, p = .17$ ); relationship status ( $B = -0.01, p = .94$ ); and highest level of education ( $B = -0.08, p = .17$ ) were not significantly associated with emotional distress at academy completion. Likewise, recruit race/ethnicity was not significantly associated with the outcome to include: Black ( $B = 0.06, p = .68$ ), Hispanic ( $B = -0.24, p = .06$ ), and Asian ( $B = -0.04, p = .88$ ).

An interaction term was created and added in Model 5 (posttest humor\*harshness of academy discipline) to test whether the association between humor and emotional distress is moderated by harshness of academy discipline style. As results indicate in Table 3, the level of harshness of academy discipline did not significantly moderate the relationship between use of humor as a coping strategy and emotional distress upon academy completion ( $B = 0.10, p = .36$ ). The linear combination of predictors accounted for 36% of the variance in emotional distress (T2) at the end of academy training,  $R^2 = 0.36$ , adjusted  $R^2 = 0.27$ . Results of hierarchical regression analyses are provided in Table 4.

## Discussion

Results of paired samples *t*-tests suggest that the police academy training did not have a significant effect on changes in levels of emotional distress. Conversely, results indicated that when police recruits are in the academy their use of humor as a coping strategy increases. Findings suggest that recruits who report greater emotional distress upon academy completion are less reliant on humor as a coping strategy than recruits who have less emotional distress and findings further suggest that Asian recruits may be more serious than their counterparts in the academy as they rely on humor less than their peers. Overall, results of hierarchical regression analyses indicated that greater levels of use of humor as a coping strategy in the police academy predicted a decrease in emotional distress upon academy graduation for police recruits. Therefore, using humor to adapt to the police academy may be beneficial for the emotional wellness of police recruits as they graduate from the academy and enter the field of policing.

Contrary to Hypothesis 1, while levels of emotional distress slightly increased between the beginning of the academy and graduation, changes were not statistically significant. It could be that recruits experience some level of stress inoculation over the academy training process by which their threshold for the psychological strain of training increases over time. It is also possible that recruits have increased access to mental health supports after becoming affiliated with police organizations such as access to mental health professionals or chaplains which may keep their overall levels of emotional stress similar from beginning to end of academy (Braswell, Steinkopf, & Beamer, 2016).

As expected in Hypothesis 2, increases were found in use of humor as a coping strategy between the beginning of the academy and end of the police academy. Increased use of humor as a coping strategy among recruits could be attributed to the socialization and overall camaraderie among recruits throughout the academy experience. While the type of humor used is unable to be derived from the current dataset, it is possible that early introduction into the use of dark or black humor takes place as early as the training academy. Use of humor may naturally increase toward the end of the academy as recruits become more comfortable in the academy setting and bonded with their peers

(Chappell, & Lanza-Kaduce, 2010). As graduation approaches, recruits may feel that the end is in sight and be more apt to engage in banter and joking with one another. Academy training staff, along with academy training expectations, may soften to some degree once recruits have “proven” their competencies and demonstrated their commitment to the profession. This could allow for more opportunities to use humor as the academy nears completion (Chappell & Lanza-Kaduce, 2010).

Consistent with expected findings regarding Hypothesis 3, greater levels of use of humor as a coping strategy upon training completion predicted lower levels of emotional distress at the end of the academy among recruits. Possible explanations for this finding may include increase in group cohesion and group connectedness that are often associated with humor as well as the possibility that humor provides a sense of normalcy and tension reduction in stressful situations (Burns, Morley, Bradshaw, & Domene, 2008; Moran & Roth, 2006; Roth & Vivona, 2010; Vivona, 2014). While biomarkers of stress were not within the scope of the National Police Platform data collection, it is possible that the benefits of laughter on the physiological stress response system may play a part in reduction of emotional distress.

Contrary to expected findings in Hypothesis 4, no support was found for the relationship between level of harshness of academy discipline style and emotional distress among recruits. Rationale for this non-significant relationship may be that recruits experience a steeling effect, similar to stress inoculation, as a result of training-related stress (Rutter, 2012). The direction of the relationship indicates greater harshness could be a protective factor for emotional distress if tested again with a larger sample. As academy stress accumulates over the duration of the academy, to include harshness in disciplinary styles, recruits may develop a greater threshold for stress and therefore become more resilient to emotional stress. Finally, harsh discipline may coincide, or be indicative of, a highly structured training regimen. Recruits may thrive under rigid structure because of the connection between consistency and psychological safety (Newman, Donohue, & Eva, 2017). Despite intense and challenging training, high structure may attenuate academy stress.

## **Implications**

The relationship between use of humor as a coping strategy during the police academy and reduction in emotional distress among police recruits upon academy completion carries implications for recruits, police organizations, and the communities served by new police officers as they enter into field training assignments and police work following graduation. The overall psychological wellbeing of early career officers may be improved among those who rely on humor as an adaptive coping strategy when managing occupational stress. Police organizations allocate time and resources to extensive background checks, psychological evaluations of recruits, and training of recruits. When recruits are better prepared to manage early career stress through methods of coping, such as use of humor as a coping strategy, police organizations may benefit from retention of recruits. Likewise, officers who are better able to manage their emotional stress may have more favorable interactions with the public which would benefit both citizens served by the police as well as police organizations.

It is recommended that police training include psychoeducational components about stress management, healthy and unhealthy coping strategies, and the possible benefits of humor on emotional health when used adaptively. Mental health professionals who work with police recruits are similarly encouraged to educate recruits on the possible benefits of humor for their overall wellness while also addressing any potential risks humor may cause if used in maladaptive ways. Police training programs and academy training staff are encouraged to make the academy climate light by incorporating humor whenever possible and appropriate, without jeopardizing the integrity and structure of the overall training regimen. Training programs should also build in time for group camaraderie or group socialization which could lend itself to joking, laughter, and general use of humor among recruits, thereby promoting recruit mental and emotional wellness.

## **Study Limitations**

Generalization of findings are cautioned as the present study was limited in sample size and differed from the larger sample on several demographic characteristics to include race/ethnicity, education level, and relationship status. Due to the personal nature of survey questions regarding

mental and emotional stress, coupled with the stigma around mental health in the law enforcement subculture, it is possible that social desirability on survey responses masked emotional distress that may have otherwise been detected. The dataset was also limited in information obtained about characteristics of the police academy training. For example, it is unknown whether respondents participated in residential or non-residential academies. The duration of training, structure of training (educational vs. para-military), size of academy class, and access to mental health support were also unknown. Each of these training academy characteristics would have allowed for exploration into the role of academy characteristics on cadet emotional wellness.

### **Directions for Future Research**

Directions for future research on the emotional wellness of police recruits, and particularly the role of humor as an adaptive coping mechanism, should utilize validated measures of stress and other sub-clinical measures of emotional difficulties to better connect newly gained knowledge with prior knowledge that exists across other occupational sectors. Training academy characteristics should be collected which would allow for examination of organizational variables of interest. Similarly, the inclusion of measures related to family and social domains outside of work would allow for the exploration of early career stress and wellness among police officers from an ecological perspective. The potential cascading effects of use of humor into other domains of functioning is worth exploring to determine if use of humor is helpful or harmful outside of the academy. It is possible that humor used at home or within social relationships could be detrimental if used as an avoidant coping strategy when dealing with interpersonal stressors. Longitudinal studies on the role of humor in police stress would enhance understanding of the development of police stress, the development of police humor, and how both change and influence one another over time. Finally, inclusion of biomarker data on changes in stress hormones throughout the academy, coupled with observation and self-report data on humor in the police academy, could provide insight into how the physiological benefits of humor may impact police recruits.

Police work, from as early as the police training academy, is inherently stressful and carries risks for the wellbeing of officers (Cross & Ashley, 2004; McCarty & Lawrence, 2016; Violanti et al., 2013). Adaptive coping is important in reducing risks associated with the mental and emotional health of officers. Prior research has demonstrated the unique role of humor in the law enforcement subculture as a useful way for officers to disengage from threatening situations of which they have little or no control (Roth & Vivona, 2010). Therefore, the present study investigated the relationship between humor and emotional distress among a sample of police recruits and found that greater levels of use of humor as a coping strategy in the police academy predicted a decrease in emotional distress upon academy graduation for police recruits. Promotion of the use humor as a coping strategy for recruits, through training and education, opportunities for social interaction and group bonding, and from a clinical perspective could help to minimize the impact of academy stress on recruit wellbeing. Furthermore, the use of humor to adapt to work stress may benefit the mental health of early career police officers as they begin their patrol assignments and enter into the high-stress field of policing following academy graduation.

Table 1  
*Participant Demographics and Sample Descriptives*

Characteristic	Mean	SD	<i>n</i>	%
Age	29.67	4.05		
Gender				
Female			14	14.0
Male			86	86.0
Race/Ethnicity				
Black			23	23.0
Hispanic/Latino			25	25.0
White			47	47.0
Asian			5	5.0
Highest Education Level				
High school or some college			25	25.0
Associate Degree			18	18.0
College Degree/Some beyond college			51	51.0
Graduate/Advanced Degree			6	6.0
Relationship Status				
Currently in relationship			31	31.3
Not in a relationship			68	68.7
Emotional Distress (T1)	2.10	0.57		
Emotional Distress (T2)	2.20	0.54		
Humor (T1)	3.66	0.70		
Humor (T2)	3.78	0.65		
Academy Harshness	2.47	0.69		

*Note.* *N* = 101.

Table 2

*Zero-order Correlations*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	-												
2. Gender	-.02	-											
3. White	-.20*	.09	-										
4. Black	.18	-.33**	-.52**	-									
5. Latino	.08	.23*	-.54**	-.32**	-								
6. Asian	-.06	-.04	-.22*	-.13	-.13	-							
7. Highest Educ.	-.04	-.15	.13	.16	-.23**	-.05	-						
8. Relation. Status	.23*	-.10	-.03	-.05	.01	.14	.06	-					
9. Emotional Distress (T1)	-.07	.03	.11	.06	-.19	.01	-.10	-.24*	-				
10. Emotional Distress (T2)	-.04	.04	.12	-.01	-.15	.07	-.10	-.12	.42**	-			
11. Humor (T1)	-.19	.23*	-.04	.12	-.21*	.26**	.06	.04	.11	-.12	-		
12. Humor (T2)	-.13	.17	-.01	.15	-.11	-.07	-.01	-.03	.09	-.31**	.63**	-	
13. Academy Harshness	.05	.10	.10	-.06	-.12	.11	-.01	.08	-.22*	-.19	.05	.01	-

Note. \* $p < .05$ , \*\* $p < .01$ .



Table 3  
*Paired Samples Test*

Variable	Baseline		Graduation		<i>t</i> -test
	Mean	SD	Mean	SD	
Emotional Distress	2.10	0.57	2.20	0.54	-1.62
Humor	3.66	0.70	3.78	0.65	-2.13*

*Note.*  $N = 101$ , \* $p < .05$ .

Table 4

*Predictors of Emotional Distress at Academy Graduation*

Variable	Model 1			Model 2			Model 3			Model 4			Model 5		
	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$
Emotional Dist. (T1)	0.40	0.09	0.42***	0.42	0.08	0.45***	0.40	0.08	0.42***	0.34	0.09	0.36***	0.36	0.09	0.38***
Humor (T1)				0.05	0.09	0.06	0.06	0.09	0.07	0.01	0.10	0.02	0.03	0.10	0.04
Humor (T2)				-0.32	0.10	-0.38**	-0.32	0.09	-0.38**	-0.33	0.10	-0.39**	-0.37	0.10	-0.43**
Harshness							-0.09	0.07	-0.12	-0.13	0.07	-0.16	-0.14	0.08	-0.18
Age										-0.01	0.01	-0.05	-0.01	0.01	-0.06
Gender										0.22	0.16	0.14	0.22	0.16	0.15
Relationship Status										-0.01	0.11	-0.01	-0.01	0.11	-0.01
Highest Education										-0.08	0.06	-0.13	-0.08	0.06	-0.13
Black										0.06	0.13	0.04	0.05	0.13	0.04
Hispanic										-0.24	0.13	-0.20	-0.24	0.13	-0.20
Asian										-0.04	0.27	-0.02	-0.05	0.27	-0.02
Humor*Harshness													0.10	0.11	0.09
$R^2$		0.18			0.30			0.31			0.36			0.36	
Adjusted $R^2$		0.17			0.27			0.28			0.27			0.27	
$R^2$ Change		0.18***			0.12**			0.01			0.05			0.01	

Note.  $N = 101$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## CHAPTER III

### MANUSCRIPT 2

#### **Abstract**

There is an established link between police stress and negative health outcomes for officers. However, less is known about how the physical and psychological manifestation of work stress influences domains of functioning that extend beyond the individual to their family and social domains. Therefore, this study investigated the relationship between physical stress symptoms, psychological burnout and work-life conflict among a sample of 2,078 sworn law enforcement officers who participated in a stress and health survey from the National Police Research Platform. Results of hierarchical regression analyses showed that higher levels of physical stress symptoms and psychological burnout were associated with higher levels of work-life conflict for police officers. Implications for police wellness promotion are provided, given the greater understanding of how physical and psychological stress impact work-life conflict for officers.

## **Examining the Influence of Physical and Psychological Manifestations of Police Stress on Work-life Conflict for Law Enforcement Officers**

Police work is recognized as a high-stress occupation that carries negative outcomes for the health and wellbeing of officers. Police work is inherently dangerous, as evidenced by over 1,650 line of duty deaths in the United States' law enforcement community over the last ten years (Officer Down Memorial, 2019). Stressful events experienced by police officers range from responding to tragic accidents and violent crimes to domestic violence calls or crimes against children, and may involve life-threatening situations (Paton, Violanti, Burke, & Gerhke, 2009). Exposure to stress and trauma in the line of duty, combined with workplace stressors such as shift work, long hours, excessive paperwork, inadequate resources, and organizational bureaucracy takes a physical and psychological toll on officers (Charles et al., 2007; Shane, 2010). Extant research has established the connection between sources of police stress and negative outcomes for officers (Violanti et al., 2007; Violanti et al., 2013). Research has also demonstrated that officers may experience physical stress symptoms such as back pain, headaches, and difficulty sleeping as well as psychological stress manifestations in the form of compassion fatigue, burnout, anxiety, depression and post-traumatic stress disorder (PTSD; Cross & Ashley, 2004; Fekedulegn et al., 2017).

While a growing body of research delineates individual level outcomes of occupational stress on officers, less is known about how the physical and psychological manifestation of occupational stress influences domains of functioning that extend beyond the individual to include social and familial domains. Investigation into the relationship between work stress and life outside of work for police officers is necessary because work-life conflict is a critical factor associated with employee retention and employee wellness (Kar & Misra, 2013). Findings will inform targeted intervention to address physical and psychological stress based on their respective contributions to interference in life outside of work for officers. Additionally, the present research is offered in response to the federal government's recommendations to address officer wellness on the heels of concern about the balance

between public safety and public trust in the climate of highly publicized use of force incidents involving police officers in America (President's Task Force on 21<sup>st</sup> Century Policing, 2015).

The purpose of this study is to examine the relationship between physical stress symptoms and psychological burnout as manifestations of occupational stress, and work-life conflict in a law enforcement sample from a spillover perspective. Findings will contribute to the understanding of how occupational stress for police officers extends beyond the individual officer into their life outside of work. Unique contributions of physical and psychological manifestations of stress on work-life conflict for law enforcement officers will provide evidence from which to guide targeted prevention for the personal lives of officers outside of work to include their social and familial domains.

## **Literature Review**

### **Occupational Stress in Police Work**

Extant research has clearly established the link between occupational stress in policing, trauma exposure, and negative physical and psychological health outcomes (Reese, 1995; Regehr, 2008; Slate et al., 2007; Violanti et al., 2007). Police stress arises from organizational and operational stressors and is compounded by external and personal stressors. Organizational stressors include stressors related to the context of the job such as unfair organizational policies, inconsistent court processes, varying shift work, limited or inadequate resources hindering an officer's ability to carry out their duties effectively, organizational bureaucracy, and excessive paperwork. Conversely, operational stressors arise from the content of the job and include both direct and secondary exposure to trauma as well as critical incident response and the inherent danger of police work (Shane, 2010). External stressors come from outside of the direct line of work but are often associated with the profession. Examples of external stressors include public scrutiny of police and harsh media representation of police. Personal stressors come from within the officer as well as their interpersonal relationships (e.g., social isolation, financial strain, and marital discord; Fagan, 2015; Violanti & Aron, 1993).

### **Physical Manifestation of Stress**

Repeated exposure to occupational stress in policing carries consequences for the wellbeing of officers as stress manifests physically and takes a toll on their health. Difficulty sleeping, orthopedic problems such as back pain, and headaches are among the physical symptoms experienced by officers due to work stress (Charles et al., 2007; Cross & Ashley, 2004). Over time, the chronic activation of the stress response system and subsequent suppression of immune system functioning can lead to advanced health concerns. Officers are prone to metabolic syndrome, cardiovascular disease and heart health issues, as well as certain types of cancer such as kidney, colon, esophagus, male breast, testicular, and skin cancer (Cross & Ashley, 2004; Mohr et al., 2003; Wirth et al., 2014).

### **Psychological Manifestation of Stress**

Physical health outcomes of police stress are matched by the psychological outcomes experienced by officers. Police stress can manifest psychologically for officers as depression, anxiety, compassion fatigue, burnout, and PTSD (Fekedulegn et al., 2017; Marmar et al., 2006). The police community has also experienced suicide rates that greatly exceed the general population (Cross & Ashley, 2004; Violanti et al., 2007; Violanti et al., 2013)

**Burnout.** A common psychological response to chronic work stress found across human and social service sectors is burnout (Magnusson & Hanson et al., 2008; Maslach, Jackson, Leiter, & Collection, 1996). Burnout occurs when work demands are excessive and coping and support resources are low. Feelings of hopelessness often accompany burnout (Stamm, 2010). The three major dimensions which characterize burnout include emotional exhaustion, depersonalization or cynicism, and a decreases sense of personal accomplishment (Burke, 1993; Martinussen, Richardsen, & Burke, 2007; Maslach, 1982; Turgoose, Glover, Barker, & Maddox, 2017). Exhaustion is related to the feeling of emotional exhaustion from one's work and arises when situations call for emotional responses that are inauthentic and incongruent with one's felt emotions. Depersonalization is disengagement from work or enthusiasm about one's work. Depersonalization arises when workers are repeatedly exposed to negative social interactions and subsequently create distance between

themselves and others based on the interactions encountered on the job. A decreased sense of personal accomplishment refers to when one no longer feels as if they are making meaningful contributions in their work and occurs when the population being served is regularly dissatisfied with one's actions (Maslach, 1982; Schaufeli & Janczur, 1994). Among these three dimensions, exhaustion is considered the core of burnout (Maslach, Schaufeli, & Leiter, 2001).

Collectively, the occupational stress of policing places officers at risk for experiencing burnout (Burke, 1994; Hallsten, Bellaagh, & Gustafsson, 2002; Kohan & Mazmanian, 2003; McCarty & Skogan, 2013). Perceived danger has been linked to higher levels of burnout for police officers with female officers experiencing greater burnout when exposed to potentially traumatic events such as officer-involved shootings (McCarty, Zhao, & Garland, 2007; McCarty & Skogan, 2012). Conversely, frequent exposure to stressful events has also been shown to make officers feel a greater sense of personal accomplishment compared to officers who have not experienced as many stressful events (Burke, 1997). Burnout can stem from the emotional demands of police work that requires officers to engage in emotion labor to suppress felt emotions or to display emotions not actually felt (e.g. displaying empathy for a crime victim who is known to the officer as having been the perpetrator of previous violent crimes). This emotional disconnect is linked with dimensions of burnout to include exhaustion and cynicism (Bakker, Heuven, & Carlson, 2006; Hochschild, 1979, 1983; Rafaeli & Sutton, 1987; Turgoose et al., 2017).

### **Officer Characteristics and Manifestation of Stress**

Differences in physical outcomes of stress based on individual officer characteristics have been examined to some extent. Compared to their male counterparts, female law enforcement officers may be at greater risk for cardiovascular disease due to their higher levels of perceived stress (Yoo & Franke, 2011). Similarly, police stress has been connected to higher likelihood of metabolic syndrome in female officers compared to their male counterparts (Hartley et al., 2011). However, a population-based study on risk for cardiovascular disease among Quebec police officers found that male officers had higher average BMI and greater prevalence of diagnosed hypertension compared to

their female counterparts. Female officers reported more physical symptoms such as dizziness and ankle swelling than male officers (Gendron et al., 2018). The effects of marital status on stress outcomes for police officers include similar levels of anxiety among officers who are married to other officers and those married to non-officers. However, officers who are married to other officers have reported greater levels of depression and somatization (Zhao, He, & Lovrich, 2002).

Differences in the psychological manifestation of stress also vary based on individual officer characteristics. For example, a study on PTSD among police officers found that Hispanic officers have a greater number of PTSD symptoms compared to White and African American officers; however, no gender differences were found (Pole et al., 2001). Risk for burnout is also attributed to individual factors such as gender, race, and length of service in policing. Inconsistencies have been found regarding gender differences in the experience of burnout with some studies showing higher rates of burnout among females and others finding no significant gender differences in burnout (Johnson, 1991; Kop et al., 1999; McCarty, Zhao & Garland, 2007; Schaufeli & Enzmann, 1998). Burnout is experienced less by African American police officers compared to White officers; however, race and gender together have been associated with higher levels of burnout for African American female officers (McCarty et al., 2007).

### **Work-life Conflict in Policing**

Stress from police work can impact life outside of work for officers to include their relationships with others (Brodie & Eppler, 2012; Kirschman, 1997; Miller, 2007; Roberts, Leonard, Butler, Levenson, & Kanter, 2013; Roberts & Levenson, 2001). The strain on family and day-to-day activities, communication, and emotional regulation have been cited as common issues for law enforcement families (Burke, 1993; Burke, 1994; Fagan, 2015; Roberts & Levenson, 2001). The stressors of policing such as varying shift work, long hours, and job demands present challenges for spending time outside of work with family and friends, preventing officers from being present for many family events, routines, and rituals such as holidays or children's sports games and recitals.



Spouses of police officers have reported that missing family events and officers choosing work over family are among their greatest concerns for their relationships (Karaffa et al., 2015).

In addition to aspects of the job that directly impact an officers' friends and families, the individual manifestation of work stress and officers' reactions to stress may influence their work-life relationship. For example, the ways in which officers cope with physical and psychological stress can be detrimental to their relationships. Drug and alcohol use, gambling, sexual promiscuity, withdrawal, and social isolation have been cited as unhealthy coping habits common among police officers (Atkinson-Tovar, 2003; Cross & Ashley, 2004; Gilmartin, 2002; Paton et al., 2009). Furthermore, discrepancies in communication patterns among law enforcement couples as well as emotional disconnect between spouses also negatively impact relationships (Brodie & Eppler, 2012; Roberts et al., 2013; Roberts & Levenson, 2001). The emotional labor required of police in the line of duty limits the availability of emotional resources for relationships and social encounters outside of work. These types of social and emotional demands from work have been associated with negative marital functioning in law enforcement couples (Tuttle, Giano, & Merten, 2018).

### **Spillover Theory**

The interface between work and life outside of work, to include the family, has often been studied from the perspective of role conflict (Stevanovic & Rupert, 2009). From this vein of research, in combination with ecological systems theory, the concept of spillover has emerged as a common model from which to view the work-life interface (Barnett, Marshall, & Sayer, 1992; Crouter, 1984; Staines, 1980). Spillover refers to the cascade of occupational stress into domains outside of the work environment and this phenomenon occurs when thoughts, emotions, and behaviors in the work environment transfer over into the home environment (Bolger et al., 1989, Hansen, Hammer & Colton, 2006; Repetti, 1989). Spillover is two dimensional such that the source of strain from work results in work-to-family conflict or the strain from family results in family-to-work conflict (Frone, Yardley, & Market, 1997; Netemeyer, Boles, & McMurrian, 1996). The spillover of stress can also be negative or positive. For example, strain can occur due to limited or competing time, energy, and

psychological resources between work and spheres outside of work, while role enhancement and personal growth can occur when individuals have the opportunity to participate in multiple roles across spheres (Greenhaus & Beutell, 1985; Grzywacz, 2000; Repetti, 1989). Spillover has been linked to marital and parent-child relationships, involvement in household activities, family disagreements, as well as family satisfaction and wellbeing (Grzywacz & Marks, 2000; Hansen et al., 2006; Kinnunen et al., 2006; Small & Riley, 1990).

### **Police Stress from a Spillover Perspective**

While certain job stressors such as rotating shifts and dangerousness of the job can directly impact officers lives outside of the job, other aspects of the job such as organizational stressors, inadequate resources, exposure to repeated stress and trauma, and ongoing emotional labor required on the job may be indirectly effecting officers' social and familial domains through the manifestation of stress on the officer. Spillover framework has been applied to work-life issues for police officers with an emphasis on how work stress, along with officers' emotions, harshness, and control tactics transfer into their home lives (Johnson et al., 2005; Roberts & Levenson, 2001; Tuttle et al., 2018; Zavala, E., 2013). However, it is less clear whether the physical manifestation of stress through symptoms of fatigue, aches and pains, and difficulty sleeping, or the psychological manifestation of stress, such as officer burnout, explains work-life strain for officers. Therefore, this study will examine the contributions of physical and psychological manifestations of stress on officers' reports of work-life conflict from a spillover perspective.

### **Present Study**

The present study will examine the factors associated with physical stress symptoms and psychological burnout. Further, this study will examine the relationship between physical stress and psychological burnout and work-life conflict. The present study will investigate the research questions and hypotheses as follows:

**Research Question 1:** How are individual characteristics and job characteristics associated with physical stress symptoms among officers?

**Hypothesis 1A:** There will be differences in physical stress symptoms among police officers based on gender, race, age, education and marital status.

**Hypothesis 1B:** Police officers who work the night shift will report a greater level of physical stress symptoms than police officers who work the day shift.

**Hypothesis 1C:** Police officers in other/sworn assignments will report a greater level of physical stress symptoms than police officers who are assigned to specialized units.

**Hypothesis 1D:** Police officers who work in areas with high crime rates will report a greater level of physical stress symptoms than police officers who work in areas with low crime rates.

**Research Question 2:** How are individual characteristics and job characteristics associated with psychological burnout among officers?

**Hypothesis 2A:** There will be differences in psychological burnout among police officers based on gender, race, age, education and marital status.

**Hypothesis 2B:** Police officers who work nights will report greater levels of psychological burnout than police officers who work the day shift.

**Hypothesis 2C:** Police officers assigned to specialized units will report a greater level of psychological burnout than police officers assigned to other/sworn activities.

**Hypothesis 2D:** Police officers who work in areas with higher crime rates will report a greater level of psychological burnout than police officers who work in areas with low crime rates.

**Research Question 3:** What is the relationship between physical stress symptoms and psychological burnout on work-life conflict among officers?

**Hypothesis 3A:** Higher levels of physical stress symptoms will be associated with higher levels of work-life conflict among police officers.

**Hypothesis 3B:** Higher levels of psychological burnout will be associated with higher levels of work-life conflict among police officers.

### **Methods**

Data for this study were derived from the Law Enforcement Stress and Health Survey conducted as part of the National Police Research Platform (<https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/34518>). Access to the data for this study was made available upon securing approval from the Oklahoma State University's Institutional Review Board to access restricted data housed by the National Archive of Criminal Justice Data and the Institute for Social Research at the University of Michigan. The National Police Research Platform was a National Institute of Justice funded project which surveyed 28 law enforcement agencies drawn from six, large geographic bands. The current study utilizes data from 12 law enforcement agencies who participated in a law enforcement stress and health survey between April 2010 and January 2011. Surveys were collected online through Qualtrics software. Participation was voluntary and procedures for survey administration varied across agencies with larger agencies offering the survey to a random sample of employees and smaller agencies offering the survey to all employees.

### **Participants**

Participants in this study included 2,078 sworn law enforcement personnel from six, large geographic bands in the United States who participated in a survey about stress and health. Officers represented both small and large agencies with approximately 72% of participants serving populations of 500,000 residents or larger. Participants varied in rank with a majority, 63%, identifying as a police officer and the remaining participants ranking at sergeant or above. Approximately 15% of respondents reported working midnight shifts. The majority of respondents identified as white and male. Minority officers represented approximately 36% percent of respondents and female officers represented 16% of the sample. Respondents ranged in age from 21-69, with an average age of 43 years. A majority of respondents, 75%, were married or cohabitating

with a partner. The sample was highly educated with less than 7% having a high school diploma or less and approximately 55% of respondents having completed college or graduate studies.

Demographic variables are presented in Table 5.

## Measures

**Work-life conflict.** The outcome of interest for this study is work-life conflict. Work-life conflict was measured using two, single items about how work affects relationships and time spent with family and friends. Possible scores range from 1-5. Respondents were asked about their agreement with the statement “My family and friends don’t see me enough because of this job,” and “This job has a negative effect on personal relationships.” Response options ranged from 1=*strongly agree*, 2=*agree*, 3=*neutral*, 4=*disagree*, to 5=*strongly disagree* on a Likert-type scale. Items were reverse coded such that higher composite scores reflected greater levels of work-life conflict.

**Physical stress symptoms.** Physical stress symptoms were assessed using five items to reflect physical manifestation of stress. Respondents were asked how often they experienced trouble sleeping, upset stomach or nausea, backaches, headaches, and tiredness or fatigue. Response options ranged from 1=*never/rarely*, 2=*sometimes*, 3=*often* to 4=*very often* on a Likert-type scale. A composite measure was created by summing the scores of the five items and dividing by the number of total items to create a mean score. Possible scores on this measure range from 1-5. Higher composite scores reflected greater levels of physical stress symptoms. The Cronbach’s alpha for this physical stress symptoms measure was .81.

**Psychological burnout.** Burnout was assessed using a four-item composite measure. Items were a subset from Maslach’s Burnout Inventory (MBI), a widely used measure of the construct (McCarty & Skogan, 2012; Cooper et al., 2001). The four items reflect emotion exhaustion, which is one of the major components of burnout. Respondents were asked how often they felt used up at the end of the day, burned out from their work, frustrated by their job, and emotionally drained from their work. Response options ranged from 1=*never*, 2=*a few times a year*, 3=*monthly*, 4=*a few times a*

*month*, 5=*every week*, 6=*a few times a week*, to 7=*daily* on a Likert-type scale. A composite measure was created by summing the scores of the four items and dividing by the number of total items to create a mean score. Possible scores on this measure range from 1-7. Higher composite scores reflected greater levels of burnout. The Cronbach's alpha for this psychological burnout measure was .90.

**Job characteristics.** *Shift work* was measured by asking respondents whether they worked mornings, afternoons, or midnights. A dichotomous variable was created to compare those who worked the midnight shift to those who worked the morning or afternoon (day) shift. The item was coded so that 0=*midnight shift* and 1=*morning or afternoon (day) shift*. *Police officer assignment* was measured by a single item asking officers to indicate their specific work assignment. Participants who indicated that they were detectives, worked narcotics or vice, youth gang or tactical unit were coded as 1=*special units*. Participants who had duties in patrol, community policing, administration or command staff, communication, tech support, or other field assignment were coded as 0=*other/sworn assignment*. Respondents were categorized by their assignment in a special unit versus a general, sworn police assignment due to differences in job demands of the two groups (Maupin et al., 2018). *Crime rate* in the area where respondents worked was assessed using a 5-point Likert-type scale ranging from 1=*very high crime rate*, 2=*moderately high crime rate*, 3=*average crime rate*, 4=*moderately low crime rate*, 5=*very low*, 6=*no regular geographic assignment*. All respondents who answered 6=*no regular geographic assignment* were recoded as 3=*average crime rate*. Crime rate was reverse coded such that higher scores reflected higher levels of crime.

**Demographic variables.** Five demographic variables were examined in the analysis to include gender, race, age, education, and marital status. *Gender* was assessed using a dichotomous measure where 0=*male*, 1=*female*. *Race* was measured using self-reports from participants. A set of four dichotomous variables (coded 0 and 1) were used to contrast *race/ethnicity* categories of African American, Hispanic, Asian, and Other against the reference group, White. Participants self-reported their age in years. *Education* was measured using a 5-point Likert-type scale ranging from 1=*high*

*school/GED, 2=some college, 3=Associate degree, 4=Bachelor's degree, and 5=graduate studies.*

*Marital status* was assessed using a dichotomous measure, 1=*married/cohabitating with a partner*; 0=*single, divorced, or widowed*.

### **Analytic Approach**

The analytic plan for this study included descriptive statistics, zero-order correlations, and hierarchical multiple regression analyses. Descriptive and bivariate statistics were computed to assess correlations between key variables of interest. Hierarchical multiple regression analysis was then employed to examine Research Questions 1-3. To answer Research Question 1 and subsequent Hypotheses 1-4, a two model hierarchical multiple regression was utilized. In Model 1, physical stress symptoms were regressed on individual officer characteristics followed by job characteristics in Model 2 to determine predictors of physical stress symptoms. Similarly, to answer Research Question 2 and test Hypotheses 5-8, a two model hierarchical multiple regression was utilized. In Model 1, psychological burnout was regressed on individual officer characteristics while Model 2 included job characteristics to determine predictors of burnout. To answer Research Question 3 and subsequent Hypotheses 9-10, a four model hierarchical regression was used to examine predictors of work-life conflict. In Model 1, work-life conflict was regressed on physical stress symptoms; Model 2 introduced psychological burnout; Model 3 added job characteristics to include shift work, assignment, and crime rate; and Model 4 added officer demographic characteristics to include age, gender, race/ethnicity, education level, and marital status.

## **Results**

### **Descriptive Statistics and Zero-order Correlations**

Preliminary analyses were carried out to include descriptive statistic and zero-order correlations of major study variables. Descriptive statistics for major study variables are shown in Table 5. Regarding job characteristics, a majority of officers (84.8%) reported working day shift while 15.2% reported working midnight shift. Similarly, 71.3% of officers reported working

other/sworn assignments compared to 28.7% who reported working in special unit assignments. The mean crime rate in areas worked was 3.46 (SD = 0.95), with scores ranging from 1 to 5. Physical stress symptoms scores ranged from 1 to 5 with a mean of 2.03 (SD = 0.73). The mean psychological burnout score was 3.76 (SD = 1.72) with a range of 1-7. Finally, work-life conflict scores ranged from 1 to 5 with a mean score of 2.97 (SD = 1.02).

The correlation between shift work and assignment was negative ( $r = -.17, p < .01$ ). Crime rate was positively correlated with assignment ( $r = .17, p < .001$ ) and shift work ( $r = .06, p < .001$ ). Physical stress symptoms were positively correlated with gender ( $r = .07, p < .01$ ), White ( $r = .09, p < .01$ ), and shift work ( $r = .08, p < .01$ ). Conversely, physical stress symptoms were negatively correlated with Black ( $r = -.09, p < .01$ ), Latino ( $r = -.05, p < .05$ ), and assignment ( $r = -.05, p < .05$ ). Psychological burnout was positively correlated with White ( $r = .16, p < .01$ ) and physical stress symptoms ( $r = .54, p < .01$ ). Negative correlations were found between psychological burnout and Black ( $r = -.13, p < .05$ ), Latino ( $r = -.11, p < .05$ ), and assignment ( $r = -.05, p < .05$ ). Work-life conflict was positively correlated with White ( $r = .09, p < .01$ ); marital status ( $r = .15, p < .01$ ); shift work ( $r = .12, p < .01$ ); crime rate ( $r = .09, p < .001$ ); physical stress symptoms ( $r = .40, p < .01$ ); and psychological burnout ( $r = .46, p < .01$ ). Work-life conflict was negatively correlated with gender ( $r = -.07, p < .01$ ), Black ( $r = -.07, p < .01$ ), and Latino ( $r = -.06, p < .01$ ). Zero-order correlations are presented in Table 6.

### **Physical and Psychological Stress**

A two model hierarchical multiple regression was conducted to determine if individual and job characteristics were associated with physical stress symptoms among officers. The null hypotheses tested were that  $R^2$  was equal to 0 and that the regression coefficients were equal to 0. All tests were conducted at  $\alpha = .05$ . In Model 1, officer characteristics were entered to include age, gender, race/ethnicity, education level, and marital status. Results showed that gender was associated with higher physical stress, specifically, females had higher levels of physical stress compared to



males ( $B = 0.17, p < .01$ ). Regarding race/ethnicity, Black officers reported lower physical stress than White officers ( $B = -0.26, p < .001$ ). Similarly, identifying as a Latino officer was associated with lower physical stress compared to White officers ( $B = -0.12, p < .05$ ). Age ( $B = 0.01, p = .45$ ), identifying as Asian ( $B = -0.01, p = .90$ ) or Other minority ( $B = -0.02, p = .88$ ), education level ( $B = -0.03, p = .07$ ), and marital status ( $B = 0.04, p = .41$ ) were not significantly associated with physical stress. Officer characteristics explained 2% of the variance in physical stress. In Model 2, job characteristics to include shift work, assignment, and crime rate were entered. Day shift was associated with greater physical stress symptoms ( $B = 0.14, p < .01$ ). Assignment was not significantly associated with physical stress ( $B = -0.07, p = .08$ ). Crime rate was also not significantly associated with physical stress ( $B = 0.02, p = .29$ ). Even while controlling for job characteristics in Model 2, identifying as female, Black, and Latino remained significant predictors of physical stress symptoms. Overall, the addition of job characteristics explained an additional 1% of variance in physical stress beyond officer characteristics. The linear combination of predictors accounted for 3% of the variance in physical stress symptoms,  $R^2 = 0.03$ , adjusted  $R^2 = 0.02$ . Results of hierarchical regression analyses are provided in Table 7 for predictors of physical stress symptoms.

In order to examine the contributions of officer and job characteristics on psychological burnout, a separate, two model hierarchical multiple regression was conducted. The null hypotheses tested were that  $R^2$  was equal to 0 and that the regression coefficients were equal to 0. All tests were conducted at  $\alpha = .05$ . In Model 1, officer characteristics were entered to include age, gender, race/ethnicity, education level, and marital status. Results showed that race/ethnicity was significantly associated with lower psychological burnout for Black officers ( $B = -0.83, p < .001$ ), Latino officers ( $B = -0.49, p < .001$ ), and Asian officers ( $B = -0.60, p < .01$ ) compared to their White counterparts. For Other minority officers, race/ethnicity was not associated with psychological burnout ( $B = 0.25, p = .26$ ). All other officer characteristics included in the model were not significantly associated with psychological burnout to include: age ( $B = 0.01, p = .70$ ), gender ( $B =$

0.14,  $p = .22$ ), educational level ( $B = 0.01$ ,  $p = .87$ ), and marital status ( $B = 0.06$ ,  $p = .52$ ). Officer characteristics explained 3% of the variance in psychological burnout. In Model 2, job characteristics to include shift work, assignment, and crime rate were entered. Shift work was not significantly associated with psychological burnout ( $B = 0.01$ ,  $p = .91$ ). Assignment ( $B = -0.24$ ,  $p < .05$ ) and crime rate ( $B = 0.09$ ,  $p < .05$ ) were significantly associated with psychological burnout. In Model 2, even while controlling for job characteristics, race/ethnicity remained significant for Black, Latino, and Asian officers. Overall, the addition of job characteristics explained an additional 1% of variance in psychological burnout beyond officer characteristics. The linear combination of predictors accounted for 4% of the variance in psychological burnout,  $R^2 = 0.04$ , adjusted  $R^2 = 0.03$ . Results of hierarchical regression analyses are provided in Table 8 for predictors of psychological burnout.

### **Work-life Conflict**

A four model hierarchical multiple regression was carried out to examine the relationship between physical stress symptoms and psychological burnout on work-life conflict among officers. The null hypotheses tested were that  $R^2$  was equal to 0 and that the regression coefficients were equal to 0. All tests were conducted at  $\alpha = .05$ . In Model 1, work-life conflict was regressed on physical stress symptoms. Results showed that physical stress symptoms were significantly associated with higher work-life conflict ( $B = 0.59$ ,  $p < .001$ ) and explained 17% of the variance in work-life conflict. In Model 2, psychological burnout was added as a predictor. Similarly, results showed that psychological burnout was significantly associated with higher levels of work-life conflict ( $B = 0.19$ ,  $p < .001$ ) while controlling for physical stress symptoms. Model 2 explained an additional 8% of variance in work-life conflict. In Model 3, job characteristics were included, and results showed that shift work was significantly associated with work-life conflict ( $B = 0.26$ ,  $p < .001$ ) such that working day shift was associated with higher work-life conflict compared to working the midnight shift. Assignment was not significantly associated with work-life conflict ( $B = 0.06$ ,  $p = .20$ ). Higher crime rate in the area where officers work was associated with higher levels of work-life conflict ( $B = 0.09$ ,

$p < .001$ ). Both physical stress symptoms and psychological stress symptoms remained significant predictors of work-life conflict after controlling for job characteristics. Model 3 explained an additional 2% of variance in work-life conflict. Officer characteristics were added in Model 4 to serve as control variables. Race/ethnicity was not significantly associated with work-life conflict as follows: Black ( $B = -0.05, p = .50$ ), Latino ( $B = -0.09, p = .14$ ), Asian ( $B = -0.04, p = .74$ ), Other ( $B = -0.05, p = .67$ ). Age ( $B = -0.01, p = .67$ ) and education ( $B = 0.02, p = .38$ ) were also not significantly associated with work-life conflict. However, being female was associated with lower work-life conflict compared to males ( $B = -0.40, p < .001$ ), and being married or cohabitating with a partner was associated with higher work-life conflict compared to being single, divorced, or widowed ( $B = 0.39, p < .001$ ). Physical stress, psychological burnout, shift, and crime rate remained significant predictors of work-life conflict even while controlling for the inclusion of officer characteristics in Model 4. Model 4 explained an additional 4% of variance in work-life conflict. Overall, the linear combination of predictors accounted for 31% of the variance in work-life conflict,  $R^2 = 0.31$ , adjusted  $R^2 = 0.30$ . Results of hierarchical regression analyses are provided in Table 9 for predictors of work-life conflict.

## Discussion

The examination of officer characteristics and job characteristics related to physical stress symptoms and psychological burnout reported by officers revealed both expected and unexpected findings. The association between being female and higher levels of physical stress symptoms was consistent with prior research by Gendron et al. (2018) which found that female officers report more physical symptoms of stress compared to their male officer counterparts. Black and Latino officers had less physical stress symptoms and psychological burnout compared to their White counterparts while identifying as Asian was similarly related to lower levels of psychological burnout compared to White officers. The relationship between minority officer status and lower levels of psychological burnout is supported from prior research by McCarty et al. (2007) which indicated that African American officers experience less burnout.

In contrast to expected findings, working day shift was associated with higher levels of physical stress symptoms and working midnight shift was not related to psychological burnout. These findings are inconsistent with prior research on the relationship between shift and stress found in occupational health literature (Ma et al., 2013; Cheng & Cheng, 2017). Findings did not support the hypothesis that other/sworn assignment would be associated with greater physical stress symptoms. Contrary to expected findings that special unit assignment would be associated with psychological burnout, the current study showed that, compared to officers in other/sworn assignments, assignment in a special unit was associated with lower levels of psychological burnout. Consistent with prior research and expected findings, working in areas with greater crime rate was associated with greater psychological burnout. This is in line with findings from McCarty et al. (2007) which previously linked perceived danger to burnout among officers. However, in the current study, greater crime rates in areas worked was not found to be associated with greater physical stress symptoms.

Findings supported the spillover hypotheses that higher levels of physical stress symptoms and psychological burnout would be associated with higher levels of work-life conflict among officers. Physical stress symptoms accounted for the largest percentage of explained variance in work-life conflict; however, even while controlling for physical stress symptoms, psychological burnout explained an additional 8% of variance in work-life conflict. This suggests that the physical toll of stress on officers in the form of fatigue, headaches, backaches, nausea, and trouble sleeping, as well as the psychological burnout and emotional exhaustion from police work, carries implications beyond officers' individual wellness to include their social and familial domains. Interestingly, compared to officers who work midnight shift, day shift was associated with higher work-life conflict. It is possible that officers who work days and evenings are unable to be involved in day-to-day family activities compared to their night shift counterparts. Working the day shift may cause officers to miss out on routine activities or daily family rituals such as school drop-off, children's sporting events or school activities. Their absence at family events due to their schedule may be a

driving factor in their work-life conflict. This strain on opportunities to engage in family or social activities would be consistent with findings from Karaffa et al. (2015) regarding police spouses' primary concern being their officers' absence from family events.

The relationship between crime rate within the area worked by officers and their reports of work-life conflict may be explained by the possibility of increased frequency of stressful interactions with the public, increased job demands in high crime areas, and elevated concern among family and friends for the safety of officers who work in high crime areas. Together, these factors may impact how, and when, officers socialize outside of work. The relationship between gender and work-life conflict demonstrated that compared to males, females experienced lower levels of work-life conflict. One possible reason for this finding could be that female officers have been socialized to take on multiple roles across family, social, and professional spheres and may be more accustomed to navigating multiple roles. While prior research has provided evidence that women's involvement in multiple roles presents challenges such as emotional conflict about one's work life and home life (Kanzler, McCorkindale, & Kanzler, 2011; Wharton & Blair-Loy, 2006), evidence of improved quality of life resulting from participation in multiple roles among women in the workforce has also been found (Barnett, 2004). Present study findings may be suggestive of protective effects of involvement in multiple roles for females in police work. Furthermore, it is possible that female officers' threshold for work-life conflict, or their perception of work-life conflict, may be uniquely different than their male counterparts. Overall, these gender differences in work-life conflict may be explained by role enhancement (Grzywacz & Marks, 2000).

Consistent with expected findings, being married was associated with higher levels of work-life conflict which demonstrates the risks that work-related stress presents for law enforcement families. Marital status was associated with greater work-life conflict in terms of time spent in relationships outside of work and quality of those relationships. Relationship research has promoted the health benefits of marriage as marital relationships are known to provide access to resources such as social support which carry positive implications for health (Umberson & Montez, 2010; Waite &

Gallagher, 2000). Current study findings merit further investigation into why married officers may not be experiencing the same social health benefits as other married men outside of the police force. It may be possible that police officers rely on, and receive, social health benefits from close bonds with coworkers that married men in non-law enforcement occupations obtain from marital relationships, resulting in strain on committed or romantic partnerships outside of work for police officers.

### **Implications**

The link between the physical and psychological manifestation of stress on work-life conflict for police officers carries implications for officers, police organizations and the communities they serve, as well as police families. Officers who experience greater physical stress symptoms and psychological burnout from police work are at-risk for experiencing the negative spillover of stress manifestations into their lives outside of work. Efforts to reduce and manage work stress may ultimately prevent damage to the family and social connections of police officers.

Elevated physical symptoms of stress among female officers and officers who work the day shift call for expanded health promotion within police organizations. Access to nutritious food while on-duty, access to fitness equipment or the availability of individual or group training, could reduce the physical effects of stress on the job. Additionally, opportunities to engage in psychoeducational classes as part of regular police training could enhance the stress management and coping skills of officers. Targeted, holistic programming, on the connection between stress, and physical and mental health are recommended at the organizational level. Access to targeted programming or mental health supports could help reduce stress experienced by officers and equip them to better manage their work-related stress. This carries positive consequences for the communities they serve. Officers who have reduced stress, or who are better equipped to manage the inherent stress of their jobs, will likely receive fewer complaints from citizens. Improved police-community relations, along with officer retention, are examples of how police agencies may benefit when occupational stress is mitigated among their officers.

The impact of work stress among police, through both physical stress symptoms and psychological burnout, can lead to work-life conflict. Relationships with family and friends, and time spent with family and friends, may be particularly at-risk for police officers who experience the physical and psychological strain of police work. Educating officers and their loved ones about these risks, as well as equipping them with ways to maintain healthy relationships, are important in helping build resilience among law enforcement families. Police organizations are encouraged to incorporate family supports into their existing employee wellness practices (e.g. family liaisons, facilitation of agency-wide family-friendly functions, access to clinicians who are trained or experienced in working with families and children of police officers). As early as police recruitment and academy training, police organizations are encouraged to be transparent and forthcoming with families about challenges associated with police work. However, police administration, training staff, chaplains, and clinicians who work to support police families are encouraged to focus on the strengths of police families in order to build resilience in police families.

### **Study Limitations**

Limitations presented by cross-sectional data accompany the present study. The possibility of temporal bias should be considered. Predictors of work-life conflict, physical and psychological burnout, were selected based on spillover theory framework; however, the possibility of work-life conflict contributing to the manifestation of stress among police should not be discounted.

Additionally, the present study is limited to self-report data from police officers. There is a widely known stigma within the police subculture about mental health, and an ethos in policing around masculinity and appearing strong in the face of stress (Miller, 2004; Wester, Arndt, Sedivy & Arndt, 2010). Therefore, social desirability may have influenced responses by study participants.

Measurement limitations associated with secondary data also accompanied the present study such that work-life conflict was measured using two, single item questions. A more comprehensive measure of

work-life conflict that utilizes reports from multiple sources, such as spousal reports, would enhance content validity of work-life conflict in future studies.

### **Directions for Future Research**

Future studies on police stress spillover and work-life conflict for officers could be further strengthened by incorporation of biomarker data, such as saliva collection to test cortisol levels, to triangulate self-reports of perceived stress. This would provide a more complete picture of the physiological stress experienced in police work. As previously mentioned, dyadic data from spousal or family reports would enhance the measurement of work-life conflict and allow for data triangulation. Additional measures of family stress and family resilience would allow for a deeper understanding of how police stress impacts the family domain and would provide an avenue for the examination of bidirectional effects of family stress on work-life for police officers. Gender differences in work-life conflict demonstrated by present study findings merit further inquiry. Specifically, future studies should explore why women, who traditionally assume multiple roles across spheres that potentially conflict with one another (e.g. police officer, wife, mother, caregiver), may experience less work-life conflict than males. There could be gender specific protective factors which influence how female police officers balance work and life outside of work and could provide insight into the nuances of resilience for females in police work.

This study examined job characteristics and officer characteristics as predictors of the physical and psychological manifestations of police stress. Taken together, these factors significantly predicted the physical and psychological manifestation of stress. The present study also examined the contributions of physical stress symptoms and psychological burnout on work-life conflict to better understand how the manifestation of occupational stress impacts life outside of work for officers.

Findings highlight the significant contributions of both physical stress symptoms and psychological burnout on work-life conflict for officers. Findings of the current study can be used toward police stress reduction and wellness promotion, given our greater understanding of how



physical and psychological stress impacts work-life conflict for law enforcement officers who are sworn to protect and serve.

Table 5  
*Participant Demographics and Sample Descriptives*

Characteristic	Mean	SD	<i>n</i>	%
Age	42.60	8.76		
Gender				
Female			330	16.0
Male			1727	84.0
Race/Ethnicity				
Black			221	11.0
Hispanic/Latino			345	17.0
White			1299	64.0
Asian			79	4.0
Other			79	4.0
Highest Education Level				
High school			122	6.2
Some college			526	26.6
Associate degree			226	11.4
Bachelor's degree			696	35.2
Graduate study			410	20.6
Marital Status				
Married/cohabitating			1519	75.0
Single/widowed/divorced			515	25.0
Shift				
Morning/afternoon (Day)			1736	84.8
Midnights			310	15.2
Assignment				
Other/sworn			1397	71.3
Special Assignment			561	28.7
Crime rate	3.46	0.95		
Physical stress symptoms	2.03	0.73		
Psychological burnout	3.76	1.72		
Work-life conflict	2.97	1.02		

*Note.* The total number of responses for each item ranged from 1,958 to 2,078.

Table 6  
Zero-order Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	-														
2. Gender	-.08**	-													
3. White	.06**	-.09**	-												
4. Black	.04	.13**	-.47**	-											
5. Latino	-.07**	.02	-.61**	-.16**	-										
6. Asian	-.09**	-.02	-.27**	-.07**	-.09**	-									
7. Other	-.01	-.01	-.27**	-.07**	-.09**	-.04	-								
8. Educ. level	-.01	.11**	.03	.08**	-.14**	.05*	.01	-							
9. Marital status	-.10**	.16**	-.10**	.10**	.01	.04	.04	.02	-						
10. Shift work	-.17**	-.04	-.01	-.01	.02	-.01	-.01	-.01	.03	-					
11. Assign.	.10**	-.02	.03	-.04	.02	-.01	-.02	-.04	-.01	-.17**	-				
12. Crime rate	-.13**	.01	-.10**	.03	.09**	-.02	.03	-.06**	.06*	.06**	.17**	-			
13. Phys. stress	.01	.07**	.09**	-.09**	-.05*	.01	.01	-.02	.01	.08**	-.05*	.01	-		
14. Psych. burnout	-.02	.02	.16**	-.13**	-.11**	-.03	.05*	.03	.01	.04	-.05*	.02	.54**	-	
15. Work- life conflict	-.04	-.07**	.09**	-.07**	-.06**	-.02	.03	-.01	.15**	.12**	-.01	.09**	.40**	.46**	-

Note. \* $p < .05$ , \*\* $p < .01$ .

Table 7  
*Predictors of Physical Stress*

Variable	Model 1			Model 2		
	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$
<b>Officer Characteristics</b>						
Age	0.01	0.01	0.02	0.01	0.01	0.04
Gender	0.17	0.05	0.08**	0.18	0.05	0.09***
Black	-0.26	0.06	-0.11***	-0.27	0.06	-0.11***
Latino	-0.12	0.05	-0.06*	-0.12	0.05	-0.06*
Asian	-0.01	0.10	-0.01	0.01	0.10	0.01
Other	-0.02	0.10	-0.01	-0.02	0.10	-0.01
Education	-0.03	0.02	-0.05	-0.03	0.02	-0.05
Marital Status	0.04	0.04	0.02	0.03	0.04	0.02
<b>Job Characteristics</b>						
Shift				0.14	0.05	0.07**
Assignment				-0.07	0.04	-0.05
Crime Rate				0.02	0.02	0.03
$R^2$		0.02			0.03	
Adjusted $R^2$		0.02			0.02	
$R^2$ Change		0.02***			0.01**	

Note.  $N=1,609$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 8  
*Predictors of Psychological Burnout*

Variable	Model 1			Model 2		
	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$
Officer Characteristics						
Age	-0.01	0.01	-0.01	0.01	0.01	0.01
Gender	0.14	0.12	0.03	0.15	0.18	0.03
Black	-0.83	0.14	-0.15***	-0.86	0.14	-0.16***
Latino	-0.49	0.12	-0.11***	-0.50	0.11	-0.11***
Asian	-0.60	0.22	-0.07**	-0.58	0.22	-0.07**
Other	0.25	0.22	0.03	0.22	0.22	0.03
Education	0.01	0.03	0.01	0.01	0.03	0.01
Marital Status	0.06	0.10	0.02	0.06	0.10	0.02
Job Characteristics						
Shift				0.01	0.12	0.01
Assignment				-0.24	0.10	-0.06*
Crime Rate				0.09	0.05	0.05*
<i>R</i> <sup>2</sup>		0.03			0.04	
Adjusted <i>R</i> <sup>2</sup>		0.03			0.03	
<i>R</i> <sup>2</sup> Change		0.03***			0.01*	

Note. *N*=1,586, \**p*< .05, \*\**p*<.01, \*\*\**p*<.001.

Table 9  
*Predictors of Work-life Conflict*

Variable	Model 1			Model 2			Model 3			Model 4		
	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$	<i>b</i>	<i>SE(B)</i>	$\beta$
Physical Stress	0.59	0.03	0.42***	0.35	0.04	0.25***	0.34	0.04	0.24***	0.36	0.04	0.25***
Psychological Burnout				0.19	0.02	0.32***	0.20	0.02	0.33***	0.19	0.02	0.32***
Shift							0.26	0.06	0.09***	0.21	0.06	0.07**
Assignment							0.06	0.05	0.03	0.06	0.05	0.03
Crime Rate							0.09	0.02	0.08***	0.08	0.02	0.07**
Age										-0.01	0.01	-0.01
Gender										-0.40	0.06	-0.15***
Black										-0.05	0.07	-0.02
Latino										-0.09	0.06	-0.03
Asian										-0.04	0.11	-0.01
Other										-0.05	0.11	-0.01
Education										0.02	0.02	0.02
Marital Status										0.38	0.05	0.16***
$R^2$		0.17			0.25			0.27			0.31	
Adjusted $R^2$		0.17			0.25			0.27			0.30	
$R^2$ Change		0.17***			0.08***			0.02***			0.04***	

Note.  $N=1,584$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## CHAPTER IV

### CONCLUSION

#### **Summary of Major Findings**

The goal of the present research was two-fold. First, the present research sought to understand how early stress in the police academy, specifically emotional stress, is influenced by the use of humor as a coping strategy among a sample of police recruits. Previous work has demonstrated that officers often rely on maladaptive coping strategies to manage stress as early as their police academy training (McCarty & Lawrence, 2016). Existing work has also shed light on the unique role of humor in police subculture (Roth & Vivona, 2010; Vivona, 2014). The present work adds to existing knowledge of police stress and coping by linking humor with emotional distress among police recruits during academy training, thereby providing evidence that humor used during the stressful academy experience can be adaptive for police recruits and their emotional wellness.

Secondly, the present research aimed to understand how both the physical and psychological manifestation of stress in police officers contributes to their work-life conflict by adding to extant work on occupational stress spillover in policing (Karaffa et al., 2015; Tuttle et al., 2018). Findings from the present work clearly established a relationship between physical stress symptoms experienced by officers, psychological burnout, and their influence on officers' relationships with family and friends outside of work, lending support for the stress spillover hypotheses. Findings from the two studies contained in this dissertation are outlined below with their corresponding research

questions and hypotheses:

### **Manuscript 1**

**Research Question 1:** Does emotional distress change among police recruits during the police academy training experience?

**Hypothesis 1:** Police recruits will report greater levels of emotional distress at training academy completion compared to their emotional distress at baseline.

Results indicated that there was no statistically significant difference in levels of emotional distress from the beginning of the academy to completion of the academy. This hypothesis was not supported.

**Research Question 2:** Does the use of humor as a coping strategy change among police recruits during the police academy training experience?

**Hypothesis 2:** Police recruits will report using humor as a coping strategy at greater levels upon training academy completion compared to their use of humor at baseline.

Results found a statistically significant difference in use of humor as a coping strategy with recruits using humor at higher levels at the end of their police academy training compared to the beginning of the academy training. This hypothesis was supported, indicating that recruits in the study sample relied more heavily on humor as a strategy to cope with stress as they progressed through the training academy.

**Research Question 3:** What is the relationship between the use of humor as a coping strategy and emotional distress among police recruits at the end of their police academy training experience?

**Hypothesis 3:** Greater levels of using humor as a coping strategy among police recruits will be associated with lower levels of emotional distress among police recruits at academy completion.

Results showed that while controlling for baseline emotional distress and baseline use of humor as a coping strategy, recruits' use of humor at academy completion was associated with a decrease in emotional distress at academy completion. This hypothesis was supported, concluding



that use of humor is an adaptive coping response to stress for police recruits and attenuates emotional distress among the current study sample.

**Research Question 4:** What is the relationship between perceived level of discipline in the police academy and emotional distress?

**Hypothesis 4:** Greater levels of harshness in academy discipline style reported by recruits will be associated with greater emotional distress among police recruits at training academy completion.

Findings did not yield a significant relationship between harshness of academy discipline style and emotional distress and academy completion for police recruits. This hypothesis was not supported, and future studies should include additional measures of academy stress beyond discipline style to capture the breadth of possible academy stressors.

**Research Question 5:** How does perceived level of discipline in the police academy influence the relationship between use of humor as a coping strategy and emotional distress among police recruits?

**Hypothesis 5:** The relationship between using humor as a coping strategy and emotional distress will be contingent upon the level of disciplinary harshness reported by police recruits.

Results of moderation analysis did not support this hypothesis as findings showed that the level of harshness of academy discipline did not significantly interact with use of humor to explain variation in emotional distress upon academy completion.

## **Manuscript 2**

**Research Question 1:** How are individual characteristics and job characteristics associated with physical stress symptoms among officers?

**Hypothesis 1A:** There will be differences in physical stress symptoms among police officers based on gender, race, age, education and marital status.

Results showed that gender was associated with higher physical stress such that female officers had higher levels of physical stress symptoms compared to males. Regarding race/ethnicity,

identifying as a Black officer or Latino officer was associated with lower physical stress compared to White officers; however, identifying as Asian or Other minority was not significantly associated with physical stress symptoms. Education level and marital status were also not significantly associated with physical stress symptoms. This hypothesis was partially supported.

**Hypothesis 1B:** Police officers who work the night shift will report a greater level of physical stress symptoms than police officers who work the day shift.

Findings showed that working day shift was associated with higher physical stress symptoms compared to working night shift. This finding is contrary to the hypothesis.

**Hypothesis 1C:** Police officers in other/sworn assignments will report a greater level of physical stress symptoms than police officers who are assigned to specialized units.

Results did not find a significant association between work assignment and physical stress symptoms. This hypothesis was not supported.

**Hypothesis 1D:** Police officers who work in areas with high crime rates will report a greater level of physical stress symptoms than police officers who work in areas with low crime rates.

Results did not yield a significant association between crime rate in areas worked and physical stress symptoms. This hypothesis was not supported.

**Research Question 2:** How are individual characteristics and job characteristics associated with psychological burnout among officers?

**Hypothesis 2A:** There will be differences in psychological burnout among police officers based on gender, race, age, education and marital status.

Findings showed that race/ethnicity was significantly associated with lower psychological burnout for Black, Latino, and Asian officers compared to their White counterparts but not for other minority officers. Age, gender, education level, and marital status were not significantly associated with psychological burnout. This hypothesis was partially supported.

**Hypothesis 2B:** Police officers who work nights will report greater levels of psychological burnout than police officers who work the day shift.

Results did not show a significant association with shift work and psychological burnout. This hypothesis was not supported.

**Hypothesis 2C:** Police officers assigned to specialized units will report a greater level of psychological burnout than police officers assigned to other/sworn activities.

Results found that compared to officers in other/sworn assignments, assignment in a special unit was associated with lower levels of psychological burnout. This finding was contrary to the original hypothesis.

**Hypothesis 2D:** Police officers who work in areas with higher crime rates will report a greater level of psychological burnout than police officers who work in areas with low crime rates.

Results found that higher crime rate was associated with higher levels of psychological burnout among officers. This hypothesis was supported.

**Research Question 3:** What is the relationship between physical stress symptoms and psychological burnout on work-life conflict among officers?

**Hypothesis 3A:** Higher levels of physical stress symptoms will be associated with higher levels of work-life conflict among police officers.

Findings showed that greater physical stress symptoms were significantly associated with higher work-life conflict and explained 17% of the variance in work-life conflict. This hypothesis was supported, concluding that a substantial amount of variance in work-life conflict among the study sample of police officers was accounted for by their physical stress symptoms such as headaches, backaches, and difficulty sleeping which collectively impeded their life outside of work.

**Hypothesis 3B:** Higher levels of psychological burnout will be associated with higher levels of work-life conflict among police officers.

Findings revealed that higher levels of psychological burnout were significantly associated with higher levels of work-life conflict and explained an additional 8% of the variance in work-life conflict beyond that accounted for by physical stress symptoms. This hypothesis was supported and indicates that the psychological stress officers' experience negatively impacts their relationships with

others outside of work in terms of time spent with friends and family and quality of their social and familial relationships.

### **Discussion**

As evidenced by the present work, manifestation of occupational stress among police officers and the ways they respond to, and manage stress, influences their individual wellbeing and relationships with others. Beginning as early as police academy training, officers experience the psychological, and specifically emotional, strain of job stress. Despite levels of emotional distress reported by recruits in the current study sample being slightly below average and remaining consistent from the beginning of the academy to academy graduation, police academy training is accepted as inherently stressful (Violanti, 1997). Rationale for lack of change in emotional distress from the beginning to end of the academy may be attributed to the rigorous psychological fitness screenings that are part of the police background check process or access to chaplaincy or mental health support offered during training (Braswell et al., 2016). While significant changes were not found in emotional distress during the police academy, use of humor as a coping strategy did change throughout the academy such that humor was used at higher levels as recruits completed the academy compared to when they entered the academy. While extant research has highlighted the unique role of humor in the police subculture, the present study demonstrates that humor has adaptive benefits for officers early in their careers as demonstrated by the reduction in recruits' emotional distress during police academy training. This may be attributed to their reliance on humor as a coping strategy during the academy.

The reasons for increased use of humor in response to academy stress are unable to be determined by the current work; however, future inquiry in this direction should consider aspects of police training that lend themselves to increased use of humor in the face of stress. Factors such as group cohesion and social support should be considered in relationship to changes in coping strategies, particularly changes in use of humor, in order to delineate possible pathways to early career stress and wellness outcomes for recruits.

The management of stress associated with police academy training is important for early career officers and their wellbeing; however, police stress accumulates over the course of an officer's career. Present work found support for the spillover hypotheses of occupational stress for police officers and the negative impact on their work-life interface. The ways in which officers experience physical symptoms of stress, such as headaches, backaches, and fatigue, is significantly linked to detrimental work-life outcomes. Likewise, their psychological stress, specifically burnout, is also associated with negative relationships and spending less time with family and friends.

Gender differences in work-life conflict were found as well, with females experiencing lower work-life conflict compared to the male officers. This finding could be explained by the idea of role enhancement (Grzywacz & Marks, 2000) and calls for future investigation into role management and the possible protective effects of participating in multiple roles at home, work, and beyond for female officers. The finding that working day shift was associated with higher work-life conflict is likely due to limited availability to participate in social activities with family and friends. While day shift may be less assuming as a predictor of work-life conflict compared to night shift work, officers' day shift schedules may not be typical Monday through Friday scheduling. Working weekends, or rotating shifts, was not captured in the present study but the presence of both schedule rotation and non-typical days off may explain the higher work-life conflict among officers working day shifts. Not surprisingly, officers who reported working in higher crime rate areas experienced greater work-life conflict than those in areas with lower perceived crime rates. In high crime rate areas, it is plausible that officers are faced with workload demands that exceed resources, combined with the possibility of greater frequency of exposure to potentially traumatic events. Relationships with family and friends may be strained due to elevated safety concerns, and emotional exhaustion from working in a higher stress environment may impede healthy relationships with others. While not captured in the present study, hypervigilance may be more pronounced among those working high-crime areas which has also been shown to negatively impact interpersonal relationships for officers (Gilmartin, 2002).

The current association between marital status and work-life conflict deserves further investigation into additional health implications for married officers who may not be accessing the same social health benefits obtained from relationship quality as other married men outside of the police force despite the known health benefits of marriage that are attributed to social support (Umberson & Montez, 2010; Waite & Gallagher, 2000). It may be possible that police officers rely on, and receive, social support from close bonds with coworkers that married men in non-law enforcement occupations obtain from marital relationships, resulting in strain on committed or romantic partnerships for police officers.

### **Strengths and Limitations**

This work builds upon a body of research on police stress by first examining emotional distress and coping during police academy training, adding to the understanding of early career stress and stress responses among police. A strength of this research was the analytic approach used to study changes in humor and its relationship with emotional distress which utilized baseline and posttest measures of humor and emotional distress to better understand changes among recruits. No known studies on police stress or the role of humor in police work have been directed toward use of humor to manage stress among police recruits in a police academy context. Secondly, the application of spillover framework to the examination of stress manifestation and work-life conflict among police expands the current understanding of ramifications of police stress by looking beyond individual health and wellness outcomes to include outcomes for officers' interpersonal relationships across social and family domains.

The present work posed several limitations that warrant attention. First, the nature of secondary data posed measurement limitations as the operationalization of key study variables was constrained by the survey items and their respective wording which were asked of police recruits and officers by the National Police Research Platform project. This limitation was apparent in the operationalization of work-life conflict in Manuscript 2. The present work would be strengthened by

a more comprehensive measure of work-life conflict. Notwithstanding, meaningful findings about work-life conflict were demonstrated by the current work.

Reliance on self-report data which asked recruits and officers to provide information about their perceived stress and wellness gives rise to the potential for social desirability which may mask the authenticity of responses. Perpetuation of mental health stigma in police subculture (Cross & Ashley, 2004), along with the ethos in policing to appear strong (Addis & Mahalik, 2003) may have influenced survey respondents. Dyadic data from peer or family respondents in future work could safeguard against this possibility.

Together, the studies presented in this dissertation broadly investigated occupational stress and its impact on officers, as well as their work-life conflict, using available data measured at the individual-level. The present work could be strengthened by incorporation of additional ecological variables to include organizational and academy training factors, as well as family and community characteristics which lend themselves to multi-level analyses and may explain additional variance in the outcomes associated with police stress.

### **Implications**

Results from the present research carry various implications for police officers, police organizations, the families of police officers, and the communities they serve. When recruits are able to manage academy stress, they experience personal wellness benefits and police organizations may benefit from subsequent police graduation and retention rates. Stress management, through adaptive coping, is important across the span of a career in policing and could influence how stress manifests physically and psychologically within officers. Subsequent effects of police stress on officers' work-life interface depend heavily on prevention and intervention efforts. Ultimately, when officers are healthier and better equipped to manage job-related stress, the communities they serve may benefit from increased positive interactions with police as they carry out their duties to protect and serve.

The present study emphasizes the connection between occupational stress, officer wellness, and work-life conflict. Prevention and intervention approaches to promote officer wellness and

resilience have been provided in response to findings. Psychoeducation on police stress and wellness, access to mental health supports through clinicians with expertise in working with law enforcement officers or first responders, and family supports that focus on the strengths of police officers and police families have been suggested as practical and clinical implications of the present work.

### **Future Research**

The present study fills gaps in existing research on police stress by investigating the role of humor as a coping strategy and recruit emotional distress in an academy context, thereby providing insights about the adaptive benefits of humor for the emotional wellness of police recruits. This study also demonstrates stress spillover in the relationship between physical and psychological stress manifestation and the work-life interface for police officers. Future studies could build upon this work through longitudinal methods designed to follow recruits from the beginning of the academy, through field training, and across the duration of their careers to examine stress, coping, and spillover.

From a measurement perspective, future studies should utilize more comprehensive measures of work-life conflict and incorporate peer or spousal reports of work-life conflict. Additionally, bi-directional effects of spillover from family and social domains into work domains should be examined in order to understand how stress outside of work affects occupational stress and work performance for officers. This vein of research would be further strengthened by inclusion of organizational, family, and community factors, which are part of the mosaic of police stress. Officers are nested within police units, agencies, and geographic regions; therefore, multi-level analyses could uncover within-officer variations in stress as well as within-unit/agency variations in stress and related outcomes. Findings from such analyses could direct practical implications for training and shape policy for police organizations.



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## APPENDICES

### APPENDIX A

#### Extended Literature Review

##### Police Stress and Wellness

Policing is widely accepted as a highly stressful occupation marked by acute and chronic exposure to stress and trauma (Papazoglou, 2013; Paton et al., 2009). Police officers face a range of stressors from the context and content of their work which includes exposure to traumatic and potentially traumatic events while on the job. Additionally, external pressures from the public and personal stressors compound the stress they experience from the job. Together, police occupational stress and trauma exposure have been clearly linked with and poor health outcomes for officers (Reese, 1995; Regehr, 2008; Slate et al., 2007; Violanti et al., 2007).

Police wellness has recently been at the forefront of concern in modern law enforcement due to growing knowledge of police stress, police mental health, and police suicide. Additionally, increased scrutiny of police in the aftermath of widely publicized officer involved shootings has been an impetus for public conversation about how the wellness of officers impacts their ability to perform effectively in the line of duty. These emerging issues led to the federal government's guidance on improving policing in America, through the President's Task Force on 21<sup>st</sup> Century Policing, which named officer wellness as an important area of focus (President's Task Force on 21<sup>st</sup> Century Policing, 2015).



**Occupational stress in police work.** Sources of occupational stress for police officers are found in organizational, or contextual factors, as well as operational factors that arise from the content of police work (McCreary & Thompson, 2006). Police organizational stressors include organizational policies, inconsistent court processes, rotating shift work, limited or inadequate resources that hinder an officer's ability to carry out their duties effectively, organizational bureaucracy, and excessive paperwork (Charles et al., 2007; Shane, 2010). Operational stressors broadly include exposure to trauma, critical incident response, and the inherent dangerousness of the job. Specific examples of operational stress range from responding to tragic accidents, violent crimes, domestic violence, crimes against children, and may involve life-threatening stress such as active shooter situations or domestic terrorism (Paton et al., 2009). Additionally, heightened media scrutiny of police work, social isolation, interpersonal relationship problems, financial strain, and marital discord are some external stressors that influence the stress and wellness of officers (Fagan, 2015; Violanti & Aron, 1993).

The multitude of occupational stressors in policing are coupled with balancing the competing roles of crime fighter and social service provider in the line of duty (Chopko, 2011). This strain of role balance adds to occupational stress and trauma exposure, placing physical and psychological strain on officers and their wellbeing. A growing body of research has established the connection between police stress and detrimental physical and psychological health outcomes for officers (Reese, 1995; Regehr, 2008; Slate et al., 2007; Violanti et al., 2007; Violanti et al., 2013).

### **Physical and Psychological Outcomes of Police Stress**

**Physical health.** Police stress has been connected to deleterious physical and psychological outcomes for officers such as sleep disorders, cardiovascular disease, burnout, post-traumatic stress disorder (PTSD), and increased rates of suicide compared to the general population (Cross & Ashley, 2004; Fekedulegn et al., 2017; Marmar et al., 2006; Miller, 2005; Violanti et al., 2013). Physical manifestation of stress among police officers is demonstrated by

symptoms of back pain, headaches, difficulty sleeping, and high blood pressure (Cross & Ashley, 2004; Fekedulegn et al., 2017). Repeated activation of the stress response system over the course of the police career, along with environmental exposure to pollutants, such as traffic pollution, leads to poor health (Andrew et al., 2012; Mauer, Cummings, & Hoen, 2010; Patil, Chetlapally, & Bagavandas, 2014). Common health risks for officers include metabolic syndrome, cardiovascular disease, and certain types of cancer such as kidney, colon, esophagus, male breast, testicular, and skin cancer (Fekedulegn et al., 2017; Marmar et al., 2006; Mohr et al., 2003; Violanti et al., 2013; Wirth et al., 2014).

Variation in physical outcomes of stress based on individual officer characteristics have been examined in extant work. Conflicting findings regarding gender differences and risk for cardiovascular health issues exist. A population-based study on Quebec police officers found male officers to have higher average BMI and greater prevalence of hypertension (Gendron, Lajoie, Laurencelle, & Trudeau, 2018); whereas research from Hartley et al. (2011) and Yoo & Franke (2011) found female officers to be at greater risk for cardiovascular disease and metabolic syndrome compared to male officers.

**Psychological health.** Police occupational stress carries collateral consequences for the psychological wellness of officers in the forms of anxiety, depression, compassion fatigue, moral injury, burnout, PTSD, and risk for suicide (Fekedulegn et al., 2017; Hayes, 2018; Miller, 2005; Papazoglou, 2013; Violanti et al., 2013). Negative emotional reactions to stressful events are common among officers and often include feelings of guilt, anger, fear, feelings of hopelessness, and emotional numbness (Atkinson-Tovar, 2003; Cross & Ashley, 2004; Violanti et al., 2007).

**Compassion fatigue and moral injury.** There are many emotional demands found in the dual roles that police serve as crime fighters and social service providers (Chopko, 2011). For example, officers must show compassion when aiding victims while simultaneously remaining assertive during their response to thwart potential threats or apprehend a victim's perpetrator. This emotional cost of caring associated with police work has been described as compassion

fatigue (Figley, 1995). Compassion fatigue is a form of indirect trauma and ranges from exposure to graphic imagery of child exploitation among investigators and working with sexual assault victims (Brady, 2017) to witnessing police shootings, and may result from frequency of trauma exposure (Gehrke & Violanti, 2006). The experience of compassion fatigue can lead to additional mental health concerns such as depression, burnout, and destructive coping (Bride, Radey, & Figley, 2007; Cicognani, Pietrantonio, Palestini & Prati, 2009; Tehrani, 2010).

In addition to the emotional labor required of police work, the nature of police work gives rise to moral injury (Blumberg, Papazoglou, & Creighton, 2018). Moral injury is defined as, “Perpetrating, failing to prevent, bearing witness to, or learning of acts that transgress deeply held moral beliefs and expectations” (Litz et al., 2009, p. 700). Largely studied in samples of soldiers and veterans, examples of moral injury may include witnessing atrocities, viewing human remains at a gruesome crime scene, or being unable to stop an imminent attack on innocent civilians. Moral injury brings about internal conflict, feelings of guilt, shame, and anger (Bryan et al., 2016; Tangey, Stuewif, & Mashek, 2007).

***Burnout.*** The occupational stress of policing places officers at risk for experiencing burnout (Hallsten, Bellaagh, & Gustafsson, 2002; Kohan & Mazmanian, 2003; McCarty & Skogan, 2013). Burnout is a psychological response to chronic work stress which is commonly found across occupational sectors (Magnusson & Hanson et al., 2008; Maslach, Jackson, & Leiter, 1996). Burnout is prevalent in human and social services professions and occurs when work demands exceed one’s coping and support resources. Negative emotions, and particularly feelings of hopelessness, often accompany burnout (Stamm, 2010). There are three major dimensions which characterize burnout, and these include emotional exhaustion, depersonalization or cynicism, and a decreased sense of personal accomplishment (Burke, 1993; Martinussen et al., 2007; Maslach, 1982; Turgoose et al., 2017).

Among the dimensions of burnout, the central dimension is emotional exhaustion. Exhaustion arises when situations at work call for emotional responses that are inauthentic and

incongruent with one's felt emotions. Depersonalization is disengagement from work or enthusiasm about one's work and occurs when workers are repeatedly exposed to negative social interactions and subsequently create distance between themselves and others based on the interactions encountered on the job. A decreased sense of personal accomplishment refers to when one no longer feels as if they are making meaningful contributions in their work and can occur when the population being served is regularly dissatisfied with one's actions (Maslach, 1982; Schaufeli & Janczur, 1994).

Antecedents to burnout found in extant research include perceived dangerousness of the job and exposure to negative events, such as officer-involved shootings (McCarty et al., 2007; McCarty & Skogan, 2012). The emotional demands of police work which require officers to engage in emotion labor to suppress felt emotions or to display emotions not actually felt (e.g. displaying empathy for a crime victim who is known to the officer as having been the perpetrator of previous violent crimes) creates emotional disconnect. This emotional disconnect has been linked with dimensions of burnout to include exhaustion and cynicism (Bakker & Heuven, 2006; Hochschild, 1979, 1983; Rafaeli & Sutton, 1987; Turgoose et al., 2017).

Similar to differences in physical outcomes of police stress, psychological outcomes of stress also differ based on officer characteristics. Differences based on officer race and ethnicity have been found for some mental health outcomes with Hispanic officers reporting greater number of PTSD symptoms compared to White and African American officers (Pole et al., 2001), and decreased rates of burnout among African American officers compared to their White counterparts (McCarty et al., 2007). However, when gender is taken into consideration with race, African American, female officers experience greater burnout than their peers in the police force (McCarty et al., 2007). Contradictory findings on the relationship between gender and burnout among police have been found with some studies showing higher rates of burnout among female officers and other studies showing no significant differences in burnout (Johnson, 1991; Kop, Euwema, & Schaufeli, 1999; McCarty et al., 2007; Schaufeli & Enzmann, 1998).

## **Stress and Coping**

Stress has been conceptualized in many ways to include stress as a stimulus, stress as a response, and stress as a transactional process between an individual and their environment. Holmes and Rahe (1967) viewed stress as a stimulus whereby life events demand a level of adjustment from individuals and change is inherently stressful. Early conceptualization of stress as a response described stress as primarily a physiological response through the general adaptation syndrome model (Selye, 1956). This conceptualization of stress as a response is rooted in the idea of fight or flight reactions to stressors. Later work attempted to describe the complexities of psychological stress by offering a transactional theory of stress and coping whereby stress and stress responses are presented as a product of the transaction between an individual and their environment (Lazarus, 1999; Lazarus & Folkman, 1984).

The body of research on coping focuses on stress management and stress reduction. Coping is thought to be both the cognitive and behavioral effort put forth to master, tolerate, or reduce external and internal demands and conflicts among them (Folkman & Lazarus, 1980). Like stress, coping has been conceptualized in multiple ways. Coping has been considered as a trait, or an inherent ability, and as a process (Lazarus, 1991; Stone et al., 1991). Coping has been broadly categorized into emotion-focused (passive) and problem-focused (active) styles (Folkman & Lazarus, 1980; Jex, Bliese, Buzell, & Primeau, 2001; Lazarus & Folkman, 1984). Problem-focused coping is thought to be the response to stress when one perceives they have the resources and ability to manage the stress. Making plans for problem-solving and acting on those plans are examples of problem-focused coping. Conversely, emotion-focused coping is thought to result from the perception that one's resources are inadequate to respond to the stress or from feelings of lack of control over a stressful situation. Distancing, or trying to forget the stress, is an example of emotion-focused coping as well as positive reframing of the stress (Lazarus & Folkman, 1987).

**Transactional theory of stress and coping.** The transactional model takes the cognitive, physiological, affective, psychological, and environmental complexities of stress and response to stress into account, suggesting that stress is a product of the transaction between an individual and their environment. A transactional framework seeks to understand coping as a process and views coping as the activation of responses through thoughts and actions that change over time and depend on specific stressors. Appraisal is an important element in the transactional views on coping whereby individuals make initial meaning of a situation and assess whether it might cause harm to them. Appraisals also include an evaluation of available coping resources to manage the stressful experience. These are referred to as primary and secondary appraisals in the process of coping, respectively (Folkman & Lazarus, 1991; Lazarus & Folkman, 1987). Furthermore, the transactional perspective of stress and coping argues that coping depends on context and will change over time and change based on stressful conditions.

**Coping among police officers.** Responses to occupational stress, through utilization of coping strategies, are important to officer wellness. Research on coping among police has shown that officers use both healthy, adaptive strategies, as well as unhealthy, or maladaptive, strategies to manage stress. The prevalence of maladaptive coping among police has been attributed to the stigma within police subculture surrounding mental health and research suggests that officers engage in maladaptive coping in order to uphold the “cop” image (Cross & Ashley, 2004; Reiser & Geiger, 1984). Strategies such as exercise, reliance on social support, and viewing stress in a positive way have been adaptive for officers; whereas, disengaging, disassociating, suppression, avoidance, self-medication, substance use, sexual promiscuity, and gambling are maladaptive coping strategies often used by police (Aaron, 2000; Atkinson-Tovar, 2003; Cross & Ashely, 2004; Leonard & Alison, 1999; Swatt et al., 2007).

Among the most common unhealthy coping strategies utilized by police officers are avoidant strategies in which officers avoid showing weakness. Avoidant coping is especially harmful for psychological health (Pasillas, Follette, & Perumean-Chaney, 2006). Contradictory

findings on the use of spirituality as a coping strategy among police exist in prior research. On one hand, faith has been found to relieve the emotional impact of police stress and conversely, less religious officers have been found to utilize more adaptive coping when faced with critical incident stress compared to their more religious counterparts (Clark-Miller & Brady, 2013; Koch, 2010).

Few studies have examined coping among police recruits; however, evidence has shown that early in police training recruits use more task-oriented and outreach strategies compared to increased use of avoidant coping strategies near the end of their training (McCarty & Lawrence, 2016). Problem solving coping and distancing strategies have been found to reduce personal distress among police recruits compared to avoidance and self-control strategies such as keeping feelings to themselves or wishing stress would go away (Violanti, 1993).

**The role of humor in coping and adaptation.** Humor is a social phenomenon that is created, produced, and appraised by humans in social contexts. Humor generates positive emotional responses and is therefore known to be helpful in reducing stress and is also a marker of positive mental health and resilience (Lefcourt, 2001; Martin, 2007; Martin, Kuiper, Olinge, & Dance, 1993). Generally, humor has been conceptualized as an emotional response of mirth in a social context that is elicited by a perception of playful incongruity and is expressed through smiling and laughter (Martin, 2007).

Researchers differ in their views on whether humor is a state that varies in innate, trait-like ways or whether humor is an aptitude, or social skill. Those who view humor as a trait carry the perspective that individuals are either innately more cheerful and playful or innately more serious. This perspective on humor is closely tied to personality research (Leventhal & Safer, 1977; Ruch, Kohler, & Van Thriel, 1996). Comparatively, the view that humor is an aptitude suggests that humor is greater in those who perform well cognitively, are able to self-monitor, and who are keenly aware of social or environmental cues (Feingold & Mazzella, 1993; Turner, 1980).

Humor takes many forms and serves multiple functions. There are intentional forms of humor such as jokes and storytelling as well as spontaneous forms of humor through satire, sarcasm and witty comments (Martin & Kuiper, 1999). Humor may also be unintentional and occur through mishaps or accidents (Martin, 2007). Individuals process humor cognitively to try and understand the stimulus, make appraisals about the stimulus, and express positive feelings associated with humor through the behavior of laughing. The positive feelings associated with humor are closely related to feelings of joy, amusement, cheerfulness, and mirth. These positive feelings associated with humor result in positive affect and positive mood (Szabo, 2003).

In this vein, humor serves a psychological function of coping and adaptation (Martin, 2007). Positive feelings generated by humor replace negative emotions like fear and anxiety (Fredrickson, 2001) and make stressful situations easier due to the cognitive reappraisal process in response to a stimulus which allows for change in perspective about difficult situations (Martin et al., 1993). Humor also serves social functions, such as increasing group cohesion or exclusion, facilitating cooperation, and can be used to communicate agreement or aggression and exert social influence (Kane, Suls, & Tedeschi, 1977; Keltner, Capps, Kring, Young, & Heerey, 2001).

**Humor and police work.** Use of humor as an adaptive coping strategy is seen in stressful occupational contexts (Kerkkanen, Kuiper, & Martin, 2004; Moran & Roth, 2006; Roth & Vivona, 2010). Humor is an important part of the law enforcement subculture, and related subcultures, for both socialization and coping (Garrick, 2006; Godfrey, 2016; Moran & Roth, 2006; Roth & Vivona, 2010; Vivona, 2014). Research has established that police officers often utilize “dark humor” or “gallows humor” to disengage from troubling circumstances, often in the context of death and tragedy (Saraglou & Anciaux, 2004; Thorson, 1993). Dark humor styles are used to make fun of emotional threats and are considered forms of mental disengagement (Saraglou & Anciaux, 2004). The use of dark humor is thought to have a protective effect during encounters with suffering (Dean & Gregory, 2005) and has been shown as especially protective



when applied in the work lives of crime scene investigators by serving as a defense mechanism that allows them to carry out work duties in the face of stress (Roth & Vivona, 2010).

The psychological benefits of humor for coping and adaptation have been investigated to some degree in the law enforcement subculture. The phenomenon of humor and its usefulness in coping for law enforcement is related to the benefits of being able to disengage from threatening or disturbing situations of which officers feel they have low control (Kuhlman, 1988; Roth & Vivona, 2010) and is especially helpful for officers who have been assigned to work on crimes against children (Burns et al., 2008). Benefits of using humor to disengage run contrary to findings about dissociative coping among police officers being maladaptive (Aaron, 2000). Other benefits of humor that are important for police work include positive reframing, providing a sense of normalcy during stress, and tension reduction (Moran & Roth, 2006; Vivona, 2014). Humor has been cited as an emotional break in the face of stress for police officers (Saroglou & Anciaux, 2004). Observational research conducted through police ride-alongs has further revealed that officers make quick jokes in response to stress which serve as emotional bullet proof vests when confronting tragedy (Gayadeen & Phillips, 2016).

### **Occupational Stress Spillover**

The sizeable body of research on occupational stress in police work, coping among police, and outcomes of police stress for the wellbeing of officers, is augmented by research on the interface between work and life outside of work for police officers. This interface is commonly referred to as work-life conflict. Work-life conflict occurs when demands across multiple roles are incongruent or incompatible with one another, resulting in role conflict and strain (Greenhaus & Beutell, 1985) which can be viewed from the theoretical perspective of spillover (Grzywacz & Carlson, 2007).

**Work-life conflict and policing.** The balance between work life and non-work life has garnered increasing attention since the 1960's as women entered the workforce in growing

numbers and began navigating multiple roles across occupational, family, and social spheres. Work-life conflict is central to understanding work-life balance. Early research brought attention to the idea that work and family were no longer separate spheres due to increased participation by women across spheres, placing tension on work and family life (Kanter, 1977). Over time, the study of the interface between work and life outside of work has found resonance across demographic groups and occupational sectors (Burke, 1993; Dierdorff & Ellington, 2008). The idea of work-life balance emerged and has commonly been conceptualized as role engagement in multiple roles as well as minimal conflict between work and non-work life (Clark, 2000; Greenhaus, Collins, & Shaw, 2003; Kirchmeyer, 2000; Marks, 1977). Some researchers have considered work-life balance as equal involvement, or equal time spent, across roles (Greenhaus et al., 2003; Kirchmeyer, 2000); being fully engaged in multiple roles (Marks 1977); and satisfaction and enrichment across multiple roles with little role conflict (Allen, Herst, Bruck, & Sutton, 2000, Clark, 2000; Greenhaus & Allen, 2011). Conflict between roles occurs when pressure from respective roles are incompatible. Furthermore, when participation in one role causes difficulty in participating in alternate roles across other life domains, role conflict is experienced (Greenhaus & Beutell, 1985). Studies have shown that negative work outcomes and personal outcomes are associated with stress and overall low satisfaction with role participation (Frone, 2003; Greenhaus, Parasuraman, & Collins, 2001).

Stress from police work has repercussions for officers' interpersonal relationships (Brodie & Eppler, 2012; Kirschman, 1997; Miller, 2007; Roberts et al., 2013; Roberts & Levenson, 2001). The organizational and operational stressors of policing, combined with role management in police work when responding to crime and the suffering of others, present challenges for social and familial relationships. Data gathered from police spouses has shown that missing family events and officers' choosing work over family are among their greatest concerns for their relationships (Karaffa et al., 2015). The strain on family time spent together, family communication, and poor emotion regulation, have been cited as common issues for law

enforcement families (Burke, 1993; Fagan, 2015; Roberts & Levenson, 2001). Emotional disconnect between spouses and negative communication patterns have been found among law enforcement marriages (Brodie & Eppler, 2012; Roberts et al., 2013; Roberts & Levenson, 2001). Emotional exhaustion from police work places strain on the emotional health of officers' relationships outside of work. Social and emotional demands from work have been linked with negative marital functioning in law enforcement couples (Tuttle, Giano, & Merten, 2018).

While certain aspects of police stress may directly impact the social lives of officers, such as missing family events and social gatherings due to shift work or rotating schedules, the ways in which officers seek to manage their stress can compound work-life conflict. Substance use, gambling, sexual promiscuity, and social isolation are examples of maladaptive coping strategies known to be prevalent among police officers which could be detrimental to healthy relationship functioning (Atkinson-Tovar, 2003; Cross & Ashley, 2004; Gilmartin, 2002; Menard et al., 2013; Paton et al., 2009).

**Spillover framework.** The interface between work and life outside of work, to include the family, has often been studied from the perspective of role conflict (Stevanovic & Rupert, 2009). From this vein of research, in combination with ecological systems theory, the concept of spillover has emerged as a common model from which to view the work-life interface (Barnett, Marshall, & Sayer, 1992; Crouter, 1984; Staines, 1980). Spillover is generally conceptualized as the way in which thoughts, behaviors, or emotions from work cascade into domains outside of work (Bolger et al., 1989; Repetti, 1989; Staines, 1980). Extant work on police stress spillover has demonstrated how work stress, along with officers' emotions, negative mood, harshness, and control tactics transfer into their home lives (Johnson et al., 2005; Roberts & Levenson, 2001; Tuttle, et al., 2018; Zavala, E., 2013).

As previously discussed by Tuttle et al. (2018) in their review of spillover, spillover is two dimensional such that the source of strain from work results in work to family conflict or the strain from family results in family to work conflict (Frone et al., 1997; Netemeyer et al., 1996).

The spillover of stress can also be negative or positive. For example, strain can occur due to limited or competing time, energy, and psychological resources between work and spheres outside of work, while role enhancement and personal growth can occur when individuals have the opportunity to participate in multiple roles across spheres (Greenhaus & Beutell, 1985; Grzywacz, 2000; Grzywacz & Marks, 2000; Repetti, 1989). Spillover has been linked to marital and parent-child relationships, involvement in household activities and family disagreements, as well as family satisfaction and wellbeing (Grzywacz & Marks, 2000; Hansen et al., 2006; Kinnunen et al., 2006; Small & Riley, 1990).

A growing body of research is concerned with occupational stress in police work and subsequent impacts on the wellbeing of officers and interference with life outside of work, with social and family implications. The ways in which officers respond to stress, or attempt to manage their stress, is important in the connection between stress and wellbeing. Use of humor as a coping strategy has psychological implications for officers but has yet to be studied in the context of police academy training in relation to emotional distress. Through the lens of transactional stress and coping, as well as spillover framework, the current investigation into stress, coping, and work-life conflict among police recruits and police officers will build upon the current understanding of the complexities of police stress and associated risks.

## **APPENDIX B**

### **Data Acknowledgment**

This research uses data from the National Police Research Platform- Phase 1, a project funded by the United States Department of Justice, Office of Justice Programs, and the National Institute of Justice. Information on how to obtain the National Police Research Platform data is available at <https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/34518>. No direct support was received for this analysis.

## APPENDIX C

### Institutional Review Board Approval



Oklahoma State University Institutional Review Board

Date: 05/08/2018  
Application Number: HS-18-25  
Proposal Title: Examining Risk and Resilience among Police Recruits and Police Officers

Principal Investigator: MICHAEL MERTEN  
Co-Investigator(s): Brooke Tuttle  
Faculty Adviser:  
Project Coordinator:  
Research Assistant(s):

Processed as: Not Human Subjects Research

**Status Recommended by Reviewer(s): Closed**

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Based on the information provided in this application, the OSU-Stillwater IRB has determined that your project does not qualify as human subject research as defined in 45 CFR 46.102 (d) and (f) and is not subject to oversight by the OSU IRB. Should you have any questions or concerns, please do not hesitate to contact the IRB office at 405-744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu).

Sincerely,

A handwritten signature in black ink, appearing to read 'Hugh Crethar'.

Hugh Crethar, Chair Institutional  
Review Board

## VITA

Brooke McQuerrey Tuttle

Candidate for the Degree of

Doctor of Philosophy

**Dissertation:** OCCUPATIONAL STRESS AND WORK-LIFE CONFLICT AMONG  
POLICE OFFICERS

**Major Field:** Human Sciences

### **Biographical:**

#### **Education:**

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Completed the requirements for the Master of Science in Criminal Justice at the University of Central Missouri, Warrensburg, Missouri in 2010.

Completed the requirements for the Bachelor of Science in Criminal Justice at the University of Central Missouri, Warrensburg, Missouri in 2008.

#### **Selected Publications:**

Tuttle, B.M., Stancel, K., Russo, C.W., Koskelainen, M., & Papazoglou, K. (2019). Police moral injury and compassion satisfaction: A brief report. *Salus Journal: A Journal of Law Enforcement, National Security, and Emergency Management*, 7(1), 42-57.

Tuttle, B.M., Giano, Z., & Merten, M. (2018). Stress spillover in policing and negative relationship functioning for law enforcement marriages. *The Family Journal*, 26(2), 246-252.

#### **Professional Memberships:**

Academy of Criminal Justice Sciences, National Council on Family Relations