USING THE JOB DEMANDS-RESOURCES MODEL TO UNDERSTAND BURNOUT IN POLICE OFFICERS IN THE UK AND THE US

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ABSTRACT

Rates of burnout among police officers vary between countries and types of officers, which necessitates further exploration of the workplace conditions that impact how and why officers experience burnout. I examined data from two samples of police officers from the United Kingdom (N=356) and the United States (N=118). I found support for the general JD-R model of burnout, where high demands and few resources correlate with more burnout. I also looked at the patterns of demands and resources that significantly predicted burnout for each sample separately, and found that there are nuanced differences in which work conditions are salient in different samples of officers. Lastly, I examined the role of perceived community support in the US sample and found that officers' perceptions of community respect for and confidence in police were associated with all three dimensions of burnout. Officers who perceived stronger community support and respect had significantly less burnout.

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LIST OF ABBREVIATIONS

US, United States

UK, United Kingdom

EE, Emotional exhaustion

DP, Depersonalization

PA, Reduced personal accomplishment

JD-R model, Job Demands-Resources model

CWB, Counterproductive work behaviors

HSE, Health and Safety Executive

MSIT, Management Standards Indicator Tool

MBI, Maslach burnout inventory

PSI, Physical symptoms index

MASH, Multi-agency support hub

LIST OF SYMBOLS

N, number of participants

SD, standard deviation

t, t-value

p, p-value

d, Cohen's d, a measure of effect size

r, Pearson's r for correlations

M, mean

SE, standard error of the mean

B, unstandardized coefficient in a regression

η_p^2, partial eta squared, a measure of effect size

SE B, standard error of the unstandardized regression coefficient

95% CI, 95% confidence interval

sr^2, semi-partial correlation squared, indexing the unique variance predicted by that variable in a regression

Beta, standardized coefficient in a regression

R^2, Multiple correlation squared, indexing the proportion of variance in the dependent variable that is predicted in a regression

F, F statistic

*, Statistically significant at a $p < .05$ level

**, Statistically significant at a $p < .01$ level

CHAPTER I

INTRODUCTION

Feeling stress associated with work is a common occurrence. In the American Psychological Association's 2020 edition of the Stress in America report, 70% of adults surveyed listed work as a significant source of stress in their life. Chronic exposure to stress can lead to negative consequences for both the employee and employer. Employees can experience burnout, which is feeling worn out or depleted, as a result of prolonged exposure to stress (Maslach & Jackson, 1981). Burnout is particularly common in, but not exclusive to, jobs that require a lot of interaction with other people (Maslach & Jackson, 1981). Police work is a profession that involves a high level of interaction with others, which could lead to elevated rates of burnout among officers (Bakker & Heuven, 2006). However, studies on burnout in police forces have found that rates of burnout among officers can vary widely between samples from different countries.

The purpose of this study was to understand the working conditions that are associated with burnout in police officers, determine if burnout is associated with any negative health outcomes, explore whether there are differences in the workplace conditions that predict burnout between different samples of officers, and to explore whether the relationship between police and the general public has any impact on officers' experiences at work or their likelihood of developing burnout. I examined these relationships using data from two samples of police officers that are from different countries and work in different types of law enforcement work.

The first sample is of Public Protection Unit officers (a subset of law enforcement that deals with sexual violence and violence against women, children, and vulnerable populations) from the UK. The second sample is of police officers from a municipal police department in the southeastern US, which contains several subsets of police work within the department. In both samples, I used the Job Demands-Resources model to examine the relationship between burnout and various elements of the profession, while the research on the relationship between police and the public was conducted only in the US sample. In the following literature review that informs my study hypotheses, I first define burnout and report prevalence statistics for burnout among police officers. Then, I discuss how burnout is theorized to occur and outcomes associated with burnout. Finally, I examine the cultural context around police work in America and how that might impact burnout in American officers.

Burnout

Burnout is the result of prolonged exposure to stress at work, characterized by three dimensions described by Maslach and Jackson (1981). The emotional exhaustion dimension refers to depleted emotional resources available for interacting with others while at work. The depersonalization dimension refers to a cynical and callous attitude towards clients or customers. The last dimension is reduced feelings of personal accomplishment or effectiveness at work. Maslach and Jackson (1981) developed the Maslach Burnout Inventory (MBI) to measure burnout and each of its three dimensions.

Burnout is pervasive enough that the World Health Organization recognizes burnout as a factor that can impact health and as a reason that someone might contact a healthcare provider (World Health Organization, 2019). Estimates of the prevalence of burnout among police

samples have varied, often by country or type of officer. Using the phase model of burnout developed by Golembiewski and Kim (1990) which classifies individuals based on their combination of scores from the three dimensions of the MBI, a study of Spanish police officers found that 55% of officers in the study had low levels of burnout, 12.5% had moderate levels, and 32% had high levels (De La Fuente Solana et al., 2013). Also using the Golembiewski and Kim (1990) phase model, Loo (1994) found that 25.2% of their Canadian police sample had high levels of burnout, while 5.1% had moderate levels, and 69.7% had low levels. Among police officers from North America, 23.8% had high levels of emotional exhaustion, 40.7% had low personal accomplishment, 42.6% had high depersonalization, and 17.7% had overall burnout (high emotional exhaustion and high depersonalization; Peterson et al., 2019). However, some studies have found lower rates of burnout. Kop et al. (1999) found among a sample of Dutch police officers that 6.3% scored high for emotional exhaustion scores, 33% for depersonalization, and 26.4% for reduced personal accomplishment. In a study of Norwegian police, rates of burnout were actually lower than the reference group of other professions (Martinussen et al., 2007).

Houdmont (2013) found higher rates of burnout among UK custody officers (a subgroup of officers responsible for detaining prisoners) compared to normative data for the MBI. Half of custody officers in the sample had scores above the cutoff for high scores on the emotional exhaustion and depersonalization dimensions, and two-thirds scored above the cutoff for reduced personal accomplishment. In comparison, in normative data gathered for the MBI, only one-third tend to score above the cutoffs of each dimension. Additionally, Houdmont (2013) found that this sample of custody officers had similar rates of burnout as other types of police officers in the

UK (Houdmont, 2012), suggesting that rates of burnout might be relatively homogenous among those with various law enforcement roles within a single country.

The Job Demands-Resources Model

The Job Demands-Resources model (JD-R model; Demerouti et al., 2001) was designed to explain how burnout tends to occur among employees in any occupation. In this model, demands are aspects of a job that take effort to deal with, like a heavy workload or work that involves experiencing negative emotions. Resources are things that help reduce demands or accomplish work tasks, such as social support and useful technology. This model predicts that high demands and few resources can lead to burnout. The JD-R model theorizes in particular that high demands are related to the exhaustion dimension of burnout and a lack of resources is related to the depersonalization dimension (Demerouti et al., 2001).

Bakker and Demerouti (2017) reviewed work that has been done in support of the JD-R model in the years since Demerouti et al. (2001) first developed it, and they identified eight key findings that now make up JD-R theory. They found that all job characteristics can be classified as either a resources or a demand, and that resources and demands initiate two separate processes. Demands lead to a health impairment process while resources impact a motivational process. Research has also found that having resources buffers the impact of high demands, and that resources have the greatest impact on motivation when demands are high. Personal resources (e.g. personality, locus of control), which differ between individuals, can function like job resources within the JD-R model. The JD-R model also accounts for performance, as motivation positively impacts job performance while strain negatively impacts it. Additionally, there are two positive feedback loops that can be set into motion within the JD-R model, one helpful and one

harmful. Motivated employees are more likely to engage in job crafting, which leads to even more personal and job resources, which aids future motivation. In contrast, strained employees are more likely to engage in self-undermining behaviors, which then leads to more demands and more strain.

Work stressors, which operate as demands within the JD-R model, can be broadly categorized into operational stressors, things that are inherent in the nature of the work, and organizational stressors, things that arise out of how to work is structured and carried out (Symonds, 1970). Applied to policework, operational stressors, which include exposure to violence and crime, may seem more obvious in their potential to impact health, and they are the reason why law enforcement is considered a high-risk occupation. However, police officers often rate the organizational stressors (e.g. poor communication, bad management styles, under-staffing, time pressures, and work overloads) as the more common causes of their stress (Biggam et al., 1997; Morash et al., 2016; Violanti & Aron, 1995). Violanti and Aron (1993) found that among their sample of police officers from New York, organizational stressors had a total effect on psychological distress of approximately 6.3 times that of operational police stressors. Operational stressors were even associated with slight positive effects on job satisfaction and less negative effects on psychological distress. Violanti and Aron (1993) did not comment on possible reasons for the association between operational stressors, job satisfaction, and psychological distress. Perhaps operational stressors, which could be anticipated when choosing this occupation, are viewed as challenges instead of hindrances (Crawford et al., 2010) and officers find meaning and satisfaction in dealing with these types of stressors. There is little that can be done to remove operational stressors like violence or crime from police work because they are inherent to the job, though there are certainly mechanisms for reducing the likelihood of

harm (Engel et al., 2020). Still, research and intervention efforts can benefit from understanding organizational stressors as predictors of burnout, so that they might be altered in order to reduce the amount of stress they cause.

In applying the JD-R model to police work, research has focused more on demands than it has on resources, but several resources have been found to be relevant in police work (Wolter et al., 2018). Martinussen et al. (2007) found in a sample of Norwegian police officers that job resources (autonomy in their work and social support from coworkers) were significantly negatively correlated with emotional exhaustion and depersonalization, and significantly positively correlated with personal accomplishment. Additionally, while leadership responsibilities were included in the study as a demand, they found that those who had leadership responsibilities actually scored lower on depersonalization than those who did not have leadership roles. Wolter et al. (2018) found that team support, shared values, and perceived fairness were positively associated with officer well-being and negatively associated with the emotional exhaustion dimension of burnout.

I hypothesized that rates of burnout in both studies would follow the main principles of the JD-R model, where high organizational demands and few resources will be associated with higher levels of burnout. However, given the discrepancies in the two types of law enforcement officers in the studies and the variety in rates of burnout among different countries, I expected that the exact patterns of demands and resources that predict burnout in each country will differ.

Hypothesis 1a: High demands and few resources will correlate with higher levels of burnout among the UK sample.

Hypothesis 1b: High demands and few resources will correlate with higher levels of burnout among the US sample.

Hypothesis 1c (exploratory): The combination of demands and resources that predict burnout will differ between the two samples.

Individual and Organizational Outcomes of Burnout

Health Outcomes

Burnout has been associated with negative mental and physical health outcomes for those experiencing it (Bakker et al., 2014), including more sick absences from work, psychological distress, suicide, alcohol abuse, depression, cardiovascular disease, and sleep disorders (Ahola, Honkonen, Isometsä, et al., 2006; Ahola, Honkonen, Kivimäki, et al., 2006; Bryan et al., 2017; Maslach & Jackson, 1981; Sonneck & Wagner, 1996; Stearns & Moore, 1993; Virtanen et al., 2015).

The links between work stress, burnout, health behaviors, and health outcomes are complex and intertwined. For example, the long hours and shift work in law enforcement have been rated as stressful by officers (Ma et al., 2015; Violanti & Aron, 1994) and have been found to be associated with sleep disorders (Drake et al., 2004), which have been linked to a variety of physical and mental health risks (Gu et al., 2012; Rajaratnam, 2011; Violanti et al., 2009), as well as worse job performance (Rajaratnam, 2011). This example illustrates that work conditions that are stressful can harm health and these health effects can further harm performance, which is likely experienced as stressful.

Burnout may be particularly concerning for police officers, who already tend to have a number of health and safety risks related to both work and non-work factors. Health statistics for

police indicate that they have a higher all-cause mortality rate compared to the general population (Violanti et al., 1998). While police are at risk of fatal injuries in the line of duty due to the nature of the job, they are also at an increased risk of death from certain illnesses compared to the general population (Violanti et al., 1998). For instance, law enforcement officials die more frequently from cancers of the esophagus, colon, and kidneys, Hodgkin's disease, cirrhosis of the liver, and suicide than the general population (Violanti et al., 1998). Franke et al. (2002) found that police had similar rates of cardiovascular disease (CVD) as the general population. However, officers in the study were younger on average than the general population group, but had higher rates of hypertension, hypercholesterolemia, tobacco use, and increased BMI which are all risk factors for CVD. Officers' levels of perceived work stress was directly associated with the prevalence of cardiovascular disease. Additionally, Franke et al. (1998) discovered that 38% of retired law enforcement officers felt that their profession had put them at additional risk of developing CVD, citing stress, poor eating habits on the job, and shiftwork as reasons why. These increased health risks associated with stress, nutrition, and scheduling, among other factors, could potentially be linked to high rates of injury, burnout, and stress in police work; however, no causal links can be made based on the current state of the literature.

While causal links have yet to be established, there is substantial evidence that burnout and negative mental and physical health outcomes are connected. Thus, in this study I expected to see the same trend of higher levels of burnout associated with increased rates of health concerns in both samples. Health concerns are assessed in terms of sickness absences (in both samples) as well as physical health symptoms in the US sample. I predicted that home country would moderate the relationship between burnout and health outcomes (i.e. sick days) due to

differences between the two countries, including the types of workplace stressors, cultural factors, and healthcare systems. Additionally, health outcomes in general tend to differ between the US and the UK, even when other circumstances are relatively similar. In a study of military personnel that had been deployed to Iraq, soldiers from the US and UK showed differences in mental health outcomes, even after controlling for different types of combat exposure (Sundin et al., 2014). Among wealthy and developed nations (including the UK), the United States has the shortest life expectancy among almost all age groups, a higher infant mortality rate, and higher rates of both prevalence and mortality for several diseases, risk factors, and injuries (Woolf & Aron, 2013). Therefore, the US sample may also be more likely to experience health effects associated with burnout; however, the differences in the relationship between burnout and health by country is still largely an exploratory question.

Hypothesis 2a: High levels of burnout will be associated with worse health outcomes in the UK sample.

Hypothesis 2b: High levels of burnout will be associated with worse health outcomes in the US sample.

Hypothesis 2c: Home country will moderate the relationship between burnout and health outcomes.

Organizational Outcomes

While the focus of my study is on health-related outcomes, it is important to acknowledge that worker burnout can also be associated with negative outcomes for the employing organization, including increased turnover, poor performance, and counterproductive work behaviors. In a meta-analytic study, Lee and Ashforth (1996) found that the emotional

exhaustion dimension of burnout was positively correlated with employees' intentions to quit, and that both emotional exhaustion and depersonalization were negatively correlated with organizational commitment. In their original study developing the MBI, Maslach and Jackson (1981) administered a preliminary form of the MBI to a sample of police officers, finding that officers' scores on the MBI predicted intentions to quit. Turnover is known to be a costly outcome to police departments, as replacing officers involves expenses for background checks, psychological evaluations, and training (Hilal & Litsey, 2019).

Burnout is also linked to worse performance on the job (Maslach et al., 2001), which could be disastrous for a profession that handles high-stakes situations. In-role performance (tasks that are part of an employee's job) is associated with the amount of demands, while extra-role performance (going above and beyond one's assigned job duties) is associated with the amount of resources (Bakker et al., 2004). Bakker and Heuven (2006) found that burnout functions as a mediator of the relationship between emotional dissonance (presenting emotions that are different from what one actually feels) and job performance among police but not nurses in their sample. Counterproductive work behaviors (CWBs), which are acts of deviance that employees voluntarily commit that harm the organization or people associated with it (i.e. theft, sabotage, withdrawal, and interpersonal violence) (Bennett & Robinson, 2000; Robinson & Bennett, 1995; Spector et al., 2006) have also been linked to burnout. The health impairment path associated with job demands was found to be related to the interpersonal abuse form of CWB (Balducci et al., 2011). Smoktunowicz et al. (2015) found that overall rates of CWBs were low among their sample of Polish police officers, but that job burnout mediated the positive relationship between job demands and CWBs. Additionally, the depersonalization dimension of

burnout has been associated with more positive attitudes towards and more actual use of violence while on duty (Kop et al., 1999).

In sum, while measures of organizational outcomes are not included in this study, the impacts of burnout on organizational outcomes underscore why understanding how burnout occurs is so important. Citizens also have a vested interest in the prevalence of burnout among officers in their communities, because of the links between burnout and worse job performance (Maslach et al., 2001), the depersonalization of the people they serve (Maslach & Jackson, 1981), and greater acceptance of violence (Kop et al., 1999).

Officer Perceptions of Community Support

In the United States, police misconduct has received significant public and media attention in recent years (The Washington Post, 2020), likely creating additional stress for police officers as the occupation receives more and more public attention. Civilian attitudes towards police vary considerably among Americans, particularly across demographic groups (Reynolds, Estrada-Reynolds, & Nunez, 2018). A Gallup poll from 2015 showed that public confidence in police as an institution was at its lowest point since data collection began in 1993, with 52% of people surveyed having at least some degree of confidence (Jones, 2015). It should be noted that both low points occurred after major protests condemning police misconduct against people of color. In 1992 riots broke out in Los Angeles after officers were acquitted of using excessive force against Rodney King (Sastry, 2017), and in 2014 protests were held after police fatally shot 18 year old Michael Brown in Ferguson, Missouri (Davey, 2014).

Additional incidents of police violence have made headlines since 2015. A Pew Research Center (2020) poll shows that public opinion of police has worsened since 2016. Participants

were asked to evaluate how good police were at protecting people from crime, using the correct amount of force, treating racial and ethnic groups equally, and holding officers accountable for misconduct. In 2016, the responses were fairly evenly split between positive and negative responses, but the percentage of participants that answered positively has decreased by 10-13% since 2016 for all questions except the question regarding protection from crime. For the three questions that did change, the split is now less evenly divided, with only 31-35% of respondents answering positively. When looking at this data broken down by racial group, the drop in positive opinions on those three questions held true for both white and black participants, though white respondents were still more likely than black respondents to hold a favorable view (34-42% compared to 9-12% in 2020).

The recent attention to the role of police in American society could significantly impact the way that American police officers experience their work. A study conducted in 2016 using a representative sample of almost 8,000 officers found that 86% of participants felt that their job was now more difficult because of high-profile incidents involving police (Morin, 2017). Barbier et al. (2013) found that perceiving social stigma towards one's profession is associated with higher levels of burnout, as the stigma functions like a social demand within the JD-R model. Additionally, equity theory (Adams, 1965) has been used to explain burnout. According to equity theory, people evaluate the inputs and outputs of their relationships with others to determine if the relationship is balanced. van Dierendonck et al. (2001) found that uneven interpersonal relationships between employees and those who receive their services is associated with emotional exhaustion. Many of the work interactions that police officers have with the public are inherently unbalanced because police officers contribute significant inputs to the relationship as they are supposed to "protect and serve" the general public. If the public has negative

perceptions of the police, those relationships could become perceived as even more unbalanced as untrusting civilians contribute even fewer inputs (e.g. appreciation, recognition) to the relationship.

The relationship between police and the public is an important one in the study of burnout among law enforcement officers. In their review of studies conducted using the JD-R model, Bakker and Demerouti (2017) found that strained employees are more likely to engage in self undermining behaviors, which then leads to more demands and more strain, creating a feedback loop of negative outcomes. To apply this feedback loop to police officers, burnout leads to negative organizational outcomes, including CWB (Balducci et al., 2011; Smoktunowicz et al., 2015), more acceptance of violence (Kop et al., 1999), and worse job performance (Maslach et al., 2001). Job performance mistakes and the inappropriate use of force could lead to an unjust or violent encounter for a civilian, which sparks public outcry and tarnishes the relationship between police and their communities. Negative perceptions of police may then become an additional demand for officers and contribute to more burnout in the future, continuing the cycle. This theoretical cycle is depicted in Figure 1.

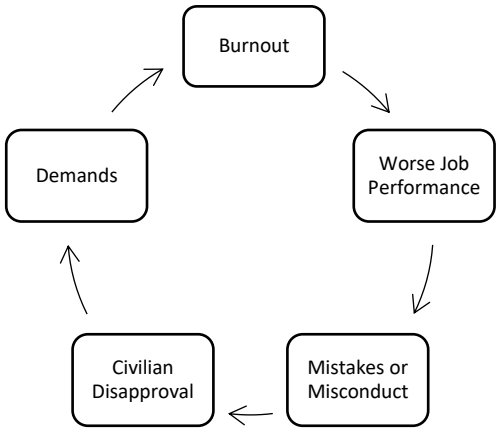

Figure 1 Theoretical positive feedback loop between demands, burnout, and civilian disapproval

Thus, one of the aims of this study was to conduct exploratory research to determine how officers in the American sample think civilians perceive them, and if and how that impacts the way that they experience work. In addition, I examined how public perceptions relate to the three dimensions of burnout. I measured perceptions of community support both quantitatively and qualitatively, with open-ended questions that asked officers to describe the relationship between police and civilians and the impact that those perceptions have had on their experience at work. I expected that how an officer thinks they are perceived by civilians will impact their experience of their job and function as either a resource or a demand depending on how favorable they think civilian perceptions are.

Hypothesis 3a: Positive perceptions of civilian support will function as a resource and be associated with lower levels of burnout in the US sample.

Hypothesis 3b: Negative perceptions of civilian support will function as a demand and be associated with higher levels of burnout in the US sample.

Countries around the world utilize police forces for crime prevention and punishment (United Nations Office of Drugs and Crime, 2010), but there are vast discrepancies in the prevalence of burnout between law enforcement officers from different countries. In sum, the purpose of the present study was to assess rates of burnout and associated predictors of burnout using the JD-R model in samples from two different countries, the UK and the US. In doing this, I compared the amount of burnout reported between countries and explored whether there are nuances in which demands and resources are predictive of burnout. Few studies on police burnout have included samples with officers from more than one country. Those that do tend to

combine samples rather than looking at nuances between countries, as was the case with a study of officers from all of North America conducted by Peterson et al. (2019). Thus, this study will have unique value by using samples from two countries. Additionally, I included exploratory research on whether societal perceptions of police could function as either demands or resources within the JD-R model using the American sample. Civilian perceptions of police officers could ultimately be a cultural difference between countries that explains a portion of the variance in rates of burnout worldwide.

CHAPTER II

METHODOLOGY

This study was in collaboration with Dr. Jonathan Houdmont from University of Nottingham. Dr. Houdmont collected data from a sample of police officers in the UK, and I collected data from a sample of US police officers. In order to have comparable data, I used similar measures from the UK survey for the US sample with some additional items as well. See Appendix B for the UK version of the survey and Appendix D for the US version.

Participants

UK sample data (n=356) was collected in 2014 from Public Protection Unit officers, which are police officers that deal with crimes against children, hate crimes, domestic and sexual violence, etc.[1] This sample was comprised of 60.7% women and 39.3% men, ranging in age from 25 to 59 years old, with an average age of 39.36 (*SD* = 6.70) years old. Participants had been involved in police work for an average of 14.15 years (*SD* = 6.30), with an average of 3.42 (*SD* = 2.83) years in their current role. At the time of the survey, 35.7% of respondents worked in domestic abuse, 33.1% worked in child abuse, 18.3% worked in adult abuse, 6.5% worked in sex

[1] The UK dataset used in this study was not the one that I originally intended to use. This change was made because of issues obtaining some of the copyrighted measures in the original UK dataset for use in the American survey. This change caused there to be some discrepancy in the types of policing units surveyed in each country and the wording of certain questions and is described in further detail in the limitations sections.

offender management, 3.1% worked in vulnerable adults, 2.5% worked in the central referral unit, and .8% worked in the Multi-agency Support Hub (MASH).

The US sample data (n=118) were collected in 2021 from city police from a southeastern police department. This sample was comprised of 90.7% men and 8.5% women, ranging in age from 23 to 59 years old, with an average age of 40.05 (*SD* = 9.82). Participants had served in their current police department for 13.31 years on average (*SD* = 8.31). At the time of the survey, 47.4% of respondents worked in neighborhood policing, 29.7% worked in investigations, 13.6% worked in special operations, 2.5% worked as professional staff, and 6.8% worked in other capacities.

Procedures

The study was approved by the University of Tennessee at Chattanooga Institutional Review Board prior to data collection. I worked with leadership at the Police Department to refine and administer this survey. Officers were sent a QuestionPro link by their Chief of Police, which included a brief description of the purpose of the survey. When they clicked on the survey link, participants had to complete an informed consent question before they could move on to the survey questions. Participants were entered into a drawing to win one of 23 $20 Amazon gift cards as an incentive for participating.

Measures

Job Demands and Resources

Management Standards Indicator Tool. I used the 34 item HSE Management Standards Indicator Tool (MSIT) (Health and Safety Executive, 2007) to measure job demands

and resources. The MSIT has 7 subscales (demands, control, manager support, peer support, interpersonal stressors, role ambiguity, and change), though the change subscale was not used because I had insufficient contextual information about what, if any, changes were happening in each sample at the time the survey was administered. Responses to these subscales were given on a five-point scale, where 1=never, 2=seldom, 3=sometimes, 4=often, 5=always. Reliability estimates were sufficient for all subscales in both samples. Cronbach's alpha was .71 (US) and .86 (UK) for the demands subscale, .82 (US) and .78 (UK) for control, .83 (US) and .80 (UK) for manager support, .83 (US) and .78 (UK) for peer support, .72 (US) and .67 (UK) for interpersonal stressors, and .83 (US) and .84 (UK) for role ambiguity. Items can be viewed in appendices B and D.

Practical Resources There were seven items regarding practical job resources answered on a five-point scale (1=never, 2 =seldom, 3=sometimes, 4=often, 5= always). Job resource questions asked about administrative support, access to sufficient equipment, and communication, and are specifically tailored to the context of police work. Reliability estimates for the practical resources scale were sufficient for both the US (.84) and UK (.76) samples.

Burnout

To measure burnout I used the Human Services version of the Maslach Burnout Inventory (MBI) (Maslach et al., 2016), which consisted of 22 questions answered on a seven point scale (0 = never, 1 = a few times a year or less, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, 6 = every day). The inventory covered three subscales, for the three dimensions of burnout [emotional exhaustion (EE), depersonalization

(DP), and reduced personal accomplishment (PA)]. Reliability estimates for the three subscales were sufficient for both the US (EE= .92, DP=.77, PA=.77) and UK samples (EE=.93, DP=.88, PA=.79). Sample items can be viewed in appendices C and E, though the full scale cannot be listed for copyright reasons.

Health Outcomes

Sick Absences. The survey for both samples included one item asking participants about the number of sick absences taken from work because of health concerns. The US sample asks for participants to report sick absences over the past 6 months, while the UK sample is over the past 12 months. This discrepancy was due to the change in UK data sets noted in the earlier footnote.

Physical Symptoms Inventory (PSI). Though not included in the UK data, I included the physical symptoms inventory (Spector & Jex, 1998) in the survey for the US sample to gain a more nuanced understanding of the types and frequency of symptoms experienced by officers. This inventory consists of 13 physical health symptoms, and participants rate the frequency that they experience each symptom from “not at all” to “every day.”

Background Information

Demographics The surveys asked participants in both samples about their age, sex, tenure in their current department in years, and unit assignment. The demographic question regarding unit assignment was altered from the original wording in the UK survey to better fit the structure of the US police department being surveyed.

Overtime Hours Both samples include questions about typical hours worked and additional overtime hours.

Perceptions of Community Support

I included open-ended questions about the participants' perception of civilian views of police work in the US sample only. These questions assessed how the officers perceive the status of their profession among US civilians at this moment in time, such as "How do you think the general public views police work in America?", "How do you think public perceptions of police work affect officers in general?", "How do you personally feel perceived by individuals in your community?", and "Do civilian perceptions impact how you experience your job? Provide two or three examples."

I also included two Likert-scale questions ("I feel respected by the community that I serve" and "I feel that the community has a great deal of confidence in the police as an institution.") to numerically assess how favorable officers think civilian perceptions are of them (Jones, 2015; Reynolds et al., 2018). The items were positively correlated with each other (r=.71, p<.01). Finally, I pulled relevant items from the Police Stress Survey (Spielberger et al., 1981), and participants were asked to rate how frequently they experience each cultural stressor (1=never, 2=seldom, 3=sometimes, 4=often, 5=always) and how stressful they find that experience on a scale from 0 to 100. Examples of the cultural stressors listed were lack of recognition for good work, public criticism of police, racial pressures at work, and negative press coverage of policework.

CHAPTER III

RESULTS

To gain an initial understanding of potential differences between the US and UK samples, I ran a series of independent t-tests to compare job demands, resources, and burnout between the two samples. The results of these comparisons are summarized in Table 1. There were three types of demands measured in this study: organizational demands, interpersonal stressors, and role ambiguity. On average, the US sample reported lower demands than the UK sample, $t(472) = -16.40$, $p < .001$, d = -1.67. The homogeneity of variance assumption was violated for organizational demands, so the results are presented not assuming equal variances. The US sample also reported lower role ambiguity than the UK sample, $t(472) = -4.94$, $p < .001$, d = -0.52. In contrast, the US sample reported slightly lower interpersonal stressors than the UK sample, but the difference was not significant, $t(472) = -.99$, $p =. 32$, d = -0.11.

There were four types of resources measured in this sample: manager support, peer support, control, and practical resources. On average, the US sample reported higher manager support than the UK sample, $t(472) = 5.17$, $p < .001$, d = 0.55. The US sample also reported higher peer support than the UK sample, $t(472) =3.85$, $p < .001$, d = 0.44. The homogeneity of variance assumption was violated for peer support, so the results are presented as not assuming equal variances. US officers reported having more control than the UK sample, $t(472) =10.61$, $p < .001$, d = 1.13. Finally, officers in the US sample also reported having more sufficient practical resources than officers in the UK sample, $t(472) = 14.65$, $p < .001$, d = 1.56.

The MBI measured three dimensions of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment. The US sample reported lower emotional exhaustion than the UK sample, t (472) = -5.51, p < .001, d = -0.59. The US sample also reported less reduced personal accomplishment than the UK sample, t (472) = -3.73, p < .001, d = -0.40. In contrast, the US sample reported slightly higher depersonalization than the UK sample, however the difference was not significant, t (472) = 1.84, p =.07, d = 0.18. The homogeneity of variance assumption was violated for depersonalization, so the results are presented as not assuming equal variances.

Table 1 Independent samples t-tests comparing job demands, resources, and burnout between UK and US samples

		UK		US			
		M	SE	M	SE	*t*	*p*
Demands	Demands	3.60	.04	2.64	.05	-16.40	<.001
	Interpersonal Stressors	2.45	.04	2.37	.07	-0.99	0.32
	Role Ambiguity	2.09	.03	1.75	.06	-4.94	<.001
Resources	Manager Support	3.11	.04	3.52	.07	5.17	<.001
	Peer Support	3.61	.04	3.89	.06	3.85	<.001
	Control	2.77	.03	3.54	.07	10.61	<.001
	Practical Resources	2.52	.03	3.50	.07	14.65	<.001
Burnout	Emotional Exhaustion	4.28	.08	3.46	.12	-5.51	<.001
	Depersonalization	2.99	.08	3.27	.13	1.84	0.07
	Reduced Personal Accomplishment	3.30	.05	2.90	.09	-3.73	<.001

I began testing hypotheses by looking at overall correlations between job demands, resources, and burnout, which are reported below in Table 2. Overall, these correlations follow

the patterns that I expected in my hypotheses. The three types of demands (organizational demands, interpersonal stressors, and role ambiguity) were generally positively correlated with the three dimensions of burnout (emotional exhaustion, depersonalization, and reduced personal accomplishment) and the four kinds of resources (control, manager support, peer support, and practical resources) were negatively correlated to the three dimensions of burnout. However, there were some exceptions to this. In the UK sample, interpersonal stressors were negatively correlated with burnout, and negatively correlated with the other two types of demands. These surprising correlations could be due to the nature of the UK sample, which was a personal protection unit dealing with many demands of an interpersonal nature.

Table 2 Correlations between job demands, resources, and burnout

	1	2	3	4	5	6	7	8	9	10
1. Organizational Demands	--	.49**	.33**	-.44**	-.42**	-.34**	-.38**	.55**	.32**	0.05
2. Interpersonal Stressors	-.32**	--	.50**	-.33**	-.55**	-.49**	-.56**	.46**	.44**	0.17
3. Role Ambiguity	.20**	-.41**	--	-.32**	-.50**	-.40**	-.58**	.28**	.45**	.24**
4. Control	-.55**	.47**	-.27**	--	.35**	.31**	.49**	-.42**	-.44**	-.30**
5. Manager Support	-.23**	.52**	-.38**	.35**	--	.50**	.57**	-.48**	-.45**	-.20*
6. Peer Support	-.25**	.34**	-.34**	.31**	.53**	--	.46**	-.40**	-0.18	-.27**
7. Practical Resources	-.36**	.47**	-.35**	.33**	.28**	.28**	--	-.38**	-.43**	-.22*
8. Emotional Exhaustion	.64**	-.35**	.33**	-.49**	-.35**	-.35**	-.31**	--	.64**	.20*
9. Depersonalization	.35**	-.32**	.31**	-.33**	-.24**	-.16**	-.27**	.54**	--	.19*
10. Reduced Personal Accomplishment	.10*	-.25**	.36**	-.20**	-.28**	-.23**	-.17**	.31**	.36**	--

The US sample is represented above the diagonal and the UK sample is below

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

To test the study hypotheses regarding the unique relationships between demands, resources, and burnout, I conducted a series of multiple regression analyses. The results are summarized in Tables 3-5. In a multiple regression analysis, I found organizational demands, control, manager support, peer support, role ambiguity, and country to be significant predictors of emotional exhaustion. Demands (b = 1.07, p <.001) and role ambiguity (b = 0.22, p = .01) were positively related to emotional exhaustion, while control (b= -0.25, p =.01), manager support (b = -0.23, p = .01), and peer support (b = -0.22, p = .02), were negatively related. Neither practical resources nor interpersonal stressors were significant predictors of emotional exhaustion. Country (b = -0.61, p < .001) was negatively related to emotional exhaustion, where the US sample (coded as 0) has lower levels of exhaustion compared to the UK sample (coded as 1) when demands and resources are held constant. Thus, while the US sample reported significantly lower overall emotional exhaustion in the independent t-tests, they actually appear to experience a higher level of emotional exhaustion than the UK sample, when also accounting for their demands and resources. I conducted a univariate linear model that allowed for nominal by continuous interactions between country and the various job demands and resources in relation to emotional exhaustion. I found that the only significant interaction was for role ambiguity and country, F (1, 474) = 4.83, p = .03, η_p^2 = .01. Examining the simple slopes by country, role ambiguity was not a significant predictor of emotional exhaustion for the US sample (b = -0.19, t (110) = -0.94, p = .35), but was significant for the UK sample (b = .30, t (348) = 3.15, p < .01).

Table 3 Multiple regression analysis of the relationships between demands, resources and emotional exhaustion

Variable	*B*	*SE B*	95% CI	*Beta*	*t*	*p*	sr^2
Constant	2.66	.69					
Demands	1.07	.09	[0.89, 1.25]	.56	11.77	<.001	.15
Control	-0.25	.09	[-0.43, -0.08]	-.13	-2.84	.01	.01
Manager Support	-0.23	.08	[-0.38, -0.07]	-.12	-2.82	.01	.01
Peer Support	-0.22	.09	[-0.39, -0.04]	-.10	-2.43	.02	.01
Interpersonal Stressors	0.01	.06	[-0.12, 0.13]	.003	0.09	.93	<.001
Role Ambiguity	0.22	.09	[0.05, 0.39]	.10	2.54	.01	.01
Practical Resources	0.03	.09	[-0.15, 0.21]	.02	0.31	.76	<.001
Country	-0.61	.14	[-0.89, -0.32]	-.18	-4.22	<.001	.15

Notes. N = 474. R^2 = .498.

In a multiple regression analysis, I found demands, control, manager support, peer support, role ambiguity, and country to be significant predictors of depersonalization. Demands (b = 0.45, p < .001), role ambiguity (b = 0.48, p < .001), and peer support (b = 0.24, p =.04) were positively related to depersonalization while control (b = -0.35, p< .001) and manager support (b = -0.26, p = .02) were negatively related. Practical resources and interpersonal stressors were not significant predictors of depersonalization. Country (b = -1.26, p < .001) was negatively related to depersonalization, where the US sample (coded as 0) reported higher levels of depersonalization compared to the UK sample (coded as 1). When considering nominal by continuous interactions between country and the various job demands and resources in relation to depersonalization, I found that the only significant interaction was for interpersonal stressors and country, F (1, 474) = 5.12, p = .02 , η_p^2 = .01. Examining the simple slopes by country, interpersonal stressors were a positive, significant predictor of depersonalization for the US

sample (*b* = 0.36, *t*(110) = 2.07, *p* = .04), but was not a significant predictor for the UK sample (*b* = -.20, *t*(348) = -1.52, *p* =.13).

Table 4 Multiple regression analysis of the relationships between demands, resources and depersonalization

Variable	*B*	*SE B*	95% CI	*Beta*	*t*	*p*	sr^2
Constant	3.18	0.91					
Demands	0.45	0.12	[0.22, 0.69]	0.22	3.75	<.001	0.02
Control	-0.35	0.12	[-0.57, -0.12]	-0.17	-2.95	.003	0.01
Manager Support	-0.26	0.11	[-0.46, -0.05]	-0.13	-2.43	.02	0.01
Peer Support	0.24	0.12	[0.01, 0.47]	0.10	2.06	.04	0.01
Interpersonal Stressors	-0.01	0.08	[-0.18, 0.15]	-0.01	-0.17	.87	<.001
Role Ambiguity	0.48	0.11	[0.26, 0.71]	0.21	4.25	<.001	0.03
Practical Resources	-0.21	0.12	[-0.44, 0.03]	-0.10	-1.75	.08	0.01
Country	-1.38	0.19	[-1.75, -1.01]	-0.39	-7.25	<.001	0.02

Notes. N = 474. R^2 = .236.

In a multiple regression analysis, I found control and role ambiguity to be significant predictors of reduced personal accomplishment. Role ambiguity (*b* = .39, *p* < .001) was positively related to reduced personal accomplishment, while control (*b* = -.19, *p* = .02) was negatively related. None of the other demands or resources were significant predictors of reduced personal accomplishment. Country (*b* = 0.18, *p* =.18) was not significantly related to reduced

personal accomplishment. I conducted a univariate model that allowed for nominal by continuous interactions between country and the various job demands and resources in relation to exhaustion, and I found that there were no significant interactions

Table 5 Multiple regression analysis of the relationships between demands, resources and reduced personal accomplishment

Variable	*B*	*SE B*	95% CI	*Beta*	*t*	*p*	sr^2
Constant	4.28	.64					
Demands	-0.12	.08	[-0.29, 0.04]	-.09	-1.46	.15	.004
Control	-0.19	.08	[-0.35, -0.02]	-.13	-2.26	.02	.01
Manager Support	-0.10	.07	[-0.25, 0.04]	-.08	-1.38	.17	.003
Peer Support	-0.14	.08	[-0.31, 0.02]	-.09	-1.75	.08	.01
Interpersonal Stressors	-0.07	.06	[-0.19, 0.04]	-.05	-1.21	.23	.003
Role Ambiguity	0.39	.08	[0.23, 0.54]	.25	4.84	<.001	.04
Practical Resources	0.004	.08	[-0.16, 0.17]	.003	0.05	.96	<.001
Country	0.18	.13	[-0.08, 0.44]	.08	1.35	.18	.003

Notes. N = 474. R^2 = .173.

To test for nuances in which demands and resources predicted burnout in each sample that may have not met the threshold for a significant interaction, I ran multiple regressions for each dimension of burnout separately for each country. For emotional exhaustion, demands (b = 0.82, p = .001) and manager support (b = -0.34, p = .04) were the significant predictors in the American sample, while demands (b = 1.11, p < .001), control (b = -0.22, p =.04), peer support (b = -0.21, p = .05), and role ambiguity (b = 0.30, p < .01) were the significant predictors in the

UK sample. For depersonalization, control (b = -0.60, p <. 01), manager support (b =-0.39, p = .03), peer support (b = 0.43, p =.02), interpersonal stressors (b = 0.36, p =.04), and role ambiguity (b = 0.48, p =.03) were the significant predictors in the American sample, while only demands (b =0.53, p <.001) and role ambiguity (b =0.44, p =.001) predicted depersonalization in the UK sample. For reduced personal accomplishment, control (b = -0.44, p <.01) was the only significant predictor for American officers, and role ambiguity (b = 0.43, p < .001) was the only significant predictor for the UK officers.

The next set of analyses concerned how burnout can affect officer health, using sick absences from work as an indicator of health. These analyses were conducted separately because there was a discrepancy in the wording of this question between the two samples because of the change in the UK sample. Specifically, the US sample referenced sick days in the past six months, while the UK sample referenced sick days in the past year. The distribution of results for both the US and UK sick days questions were substantially skewed, so I dichotomized the results into zero absences and one or more absences. I ran independent samples t-tests to compare the average amount of burnout between these dichotomized groups. In the UK sample, there were significant differences in both emotional exhaustion and depersonalization between officers who reported zero and one or more absences from work. In the US sample, there were only significant differences in emotional exhaustion between the two groups. Additionally, in a multiple regression analysis using the three dimensions of burnout to predict scores on the Physical Symptoms Inventory (PSI; Spector & Jex, 1998) in the US sample, emotional exhaustion (b = 0.61, p < .001) was a significant predictor of scores on the PSI.

Table 6 Independent samples t-test comparing levels of burnout between US officers who reported zero and one or more sick days

	Zero Sick days		One or more sick days				
Variable	*M*	*SE*	*M*	*SE*	*t*	*p*	*d*
Emotional Exhaustion	3.25	.12	4.13	.25	-3.29	<.01	-.70
Depersonalization	3.24	.16	3.54	.22	-1.01	.32	-.21
Reduced Personal Accomplishment	2.89	.12	3.01	.16	-0.57	.57	-.12

Table 7 Independent samples t-test comparing levels of burnout between UK officers who reported zero and one or more sick days

	Zero Sick days		One or more sick days				
Variable	*M*	*SE*	*M*	*SE*	*t*	*p*	*d*
Emotional Exhaustion	4.18	.08	5.02	.22	-3.58	<.01	-.59
Depersonalization	2.91	.09	3.58	.30	-2.14	.04	-.42
Reduced Personal Accomplishment	3.28	.06	3.47	.18	-1.10	.27	-.18

Table 8 Multiple regression analysis of the relationships between the three dimensions of burnout and Physical Symptoms Index in the US sample

Variable	*B*	*SE B*	95% CI	*Beta*	*t*	*p*	sr^2
Constant	10.35	2.37					
Emotional Exhaustion	3.80	0.63	[2.56, 5.05]	0.58	6.05	<.001	0.19
Depersonalization	0.35	0.60	[-0.84, 1.54]	0.06	0.58	0.56	0.002
Reduced Personal Accomplishment	0.62	0.64	[-0.65, 1.90]	0.07	0.97	0.34	0.005

Notes. N = 118. R^2 = .399.

The final set of analyses were conducted on the questions regarding officer perceptions of civilian support in the US sample. My exploratory hypotheses were supported, as there were significant correlations between officers' perceptions of community views and all three dimensions of burnout (reported below in Table 9). Officers who reported thinking that their community had higher levels of respect for and confidence in police reported lower levels of emotional exhaustion, depersonalization, and reduced personal accomplishment.

Table 9 Correlations between officers' perceptions of public respect and confidence and the three dimensions of burnout

	M	SD	EE	DP	PA
I feel respected by the community that I serve	3.24	1.027	-.425**	-.403**	-.274**
I feel that the community has a great deal of confidence in the police as an institution.	2.85	1.083	-.380**	-.348**	-.243**

** Correlation is significant at the 0.01 level (2-tailed). EE = Emotional Exhaustion; DP = Depersonalization; PA = Reduced Personal Accomplishment.

Additionally, respondents were asked to respond to eight relevant items from the Police Stress Survey (Spielberger et al., 1981) with how stressful they would rate each stressor and the frequency at which they experience each item. The item that officers found to be the least stressful and the least frequent was strained relationships with non-police friends. The two items found to be both the most stressful and the most common were distorted or negative press coverage of police work and public criticisms of police. The remaining five items had less agreement between respondents, and showed multi-modal distributions in responses. These results are consistent with the themes found in the responses to the qualitative questions about how they feel perceived by the public, which are described more next.

For coding the qualitative responses, two undergraduate research assistants independently coded each of the responses for key themes. Whenever the two raters did not agree on the codes, I acted as a third rater to resolve the discrepancy and assign a final code. For the questions asking about public views on police (Q1 and Q3), all responses were coded with a main code of negative, positive, mixed, or neutral. Coders then added sub-codes to responses if applicable. For questions asking about the impact that public perceptions have on officers (Q2 and Q4), responders gave each answer a main code of either does not impact or does impact. For answers coded as does impact, raters added two layers of sub-codes as appropriate. See Appendix E for a summary of the coding guide used for each question.

For the first question ("How do you think the general public views police work in America?") there was 82% rater agreement. Codes for this question are summarized in Table 10. Officers most commonly reported that the general public holds a mix of positive and negative views (58%) or strictly negative views (32%). For the mixed views responses, some described a general variety of views while others described a more polarized situation between two opposing views. Media portrayals of police and the public lacking understanding of the actual work were often mentioned as factors that officers think contribute to civilians' opinions.

Table 10 Responses to qualitative question 1, "How do you think the general public views police work in America?"

Code	F (%)	Sample Quote
1= Strictly Negative	37 (32%)	"The general public hates the police."
2= Mixed	67 (58%)	"Some positive, some negative."
3= Strictly Positive	10 (9%)	"Most appreciate their police officers."
4= Neutral	2 (2%)	"In general, I feel it is a neutral opinion. And outside of that, I believe there are as many people that support police as oppose them."
Sub-codes		
1a= racial	6 (5%)	"They believe we are racist and power hungry"
1b= lack of understanding	10 (9%)	"People in America do not understand police procedures, and are also uneducated on our own local, state, and federal laws. People are also quick to pass judgement without understanding how or why a police did what they did… I don't think views on police officers will change for the better unless everyone can shallow their pride and try to understand one another."
1c= media portrayal	10 (9%)	"I think the views of the public have changed greatly over the last year. Police are no longer respected as they used to be. The media has played a huge role in making police look like the 'bad guys'."
2a = mixed general	38 (33%)	"I think about 10% absolutely hate police authority and would abolish all police. I think 20 to 30% would rather not have proactive policing and disagree with current policing methods (but have no viable alternative solutions to policing methods). I believe about 50% of the public approve of police most of the time and about 10% of the public always give the police the benefit of the doubt regardless of the situation."
2b= mixed polarized	15 (13%)	"I feel like America is spilt in its take on police work in America right now. Some believe that police work is essential to the American population and safety, however there is the other side that believes police work is involved in too much of the American population and is actually contributing to the unsafe feeling a lot of Americans are feeling within these uncertain times."
2c= mixed feelings	5 (4%)	"I believe the general public is grateful for police work, although it does need some reform."
No sub-codes applicable	39 (34%)	

For the second question ("How do you think public perceptions of police work affect officers in general?) there was 91% rater agreement. Codes for this question are summarized in Table 11. Of these responses, 93% of respondents indicated that how civilians perceive and interact with them does impact officers. The majority of effects described were negative (69%). Responses shared many similar themes about what kinds of effects public perceptions have on them, including motivation to do the job, how they approach certain scenarios at work, their mental and emotional wellbeing, and larger societal or systemic effects. Sixty-nine percent of responses touched on at least one of these themes, with 19% of responses mentioning two or more.

Table 11 Responses to qualitative question 2, "How do you think public perceptions of police work affect officers in general?"

Code		**f (%)**	**Sample Quote**
1 = Does not affect		8 (7%)	"Minimal as long as Officers maintain discipline and follow laws and policies."
2= Does affect		108 (93%)	"I think perceptions affect officers a lot."
Sub-codes	**How are they affected?**		
	2a= negatively	80 (69%)	"It has a negative effect on police and makes officer second guess the job and situations and slower to act."
	2b= positively	1 (1%)	"They are glad we as officers step up and want to do the job correctly."
	2c= mixed	7 (6%)	"It gets depressing when we encounter negativity and it's elating when we're applauded."
	2d= neutral	3 (3%)	"It all depends on the officer"
	No sub-code applicable	25 (22%)	
	What is affected?		
	Z= Motivation	37 (32%)	"It has a huge effect on officers. The majority of officers got into this job to help people but when we feel like everyone hates us and we can never do anything right, we don't have much motivation to get up and go to work because no one cares anyways."

	Y= Procedure	29 (25%)	"Police officers are laying down. Proactive policing is a thing of the past. There is no point in being proactive, attempting to curve violent crime in neighborhoods who make it clear the police are not wanted."
	X= Well-being	26 (22%)	"If you believe the media, public perception is terrible and it affects an officer's mental, physical and emotional well-being greatly."
	W= Systemic	12 (10%)	"I feel the perception that the majority of the public has a negative option on police work and officers…That has a negative effect on morale, hiring, and retention. Most cops are unaware of the lives they save and have a positive impact on during their careers. When officers feel they are not valued and unaware of their impact, then it damages the profession."
	No sub-code applicable	36 (31%)	

For the third question ("How do you personally feel perceived by individuals in your community?") there was 81% rater agreement. Responses to this question are summarized in Table 12. Strictly positive was the most common responses (40%), though a mix of both positive and negative (34%) and strictly negative (21%) were also common. The most common sub-code identified in responses was officers feeling that civilians have a variety of opinions about them.

Table 12 Responses to qualitative question 3, "How do you personally feel perceived by individuals in your community?"

Code	**f (%)**	**Sample Quote**
1= Strictly Negative	24 (21%)	"I personally feel that some people who don't know me, look at me with distrust and sometimes disgust when I am in uniform…This issue is extremely demoralizing to good police officers and has caused me to question my career choice on many occasions."
2= Mixed	39 (34%%)	"I am aware of many people who appreciate and trust me and many who do not. I know many see me as a hero and servant and many see me as an enemy, a racist or a threat to them or their family. So how I personally feel perceived is situational, not consistent.'
3= Strictly Positive	46 (40%)	"I feel I am valued personally within the department and in the community. I feel I am personally trusted in the community."
4= Neutral	7 (6%)	"Mostly neutral"
Sub-codes		

1a= racial	3 (3%)	"I work in a predominantly black neighborhood. As a white police officer, I am called racist for arresting people or pulling someone over."
1b= lack of understanding	1 (1%)	"We will get quiet small bits of support, and large, loud sweeping movements of criticism, mostly based on ignorance."
1c= media portrayal	4 (3%)	"It would be much more achievable for local police departments to build trust in their respective communities if they only had to address local problems and conflicts with police that occur in their community alone. Unfortunately, because the media is constantly bombarding the public about police conflicts from around the country, local Police are viewed as constantly being in conflicting situations with the citizenry. Local authorities cannot resolve conflicts that occur in other communities, yet are perceived to somehow be contributing to the conflict."
2a = mixed general	23 (20%)	"Again, it varies with who you are dealing with and what areas you work in."
2b= mixed polarized	9 (8%)	"50% good 50% evil"
2c= mixed feelings	3 (3%)	"Individuals I work directly with see me as a good person, but some have difficulty reconciling their ideological commitments about police to the reality that we are in fact people."
No sub-codes applicable	78 (67%)	

For the final question ("Do civilian perceptions impact how you experience your job? Provide two or three examples."), there was 92% rater agreement. Responses to this question are summarized in Table 13. Of these responses, 60% of respondents indicated that how civilians perceive and interact with them does impact them. Of the responses indicating no impact, a common theme was that they personally do not let public perceptions impact them because of their own sense of morality or duty. Out of responses that indicated they were affected, the most common sub-code regarding how they described the impact was negative (34%). Officers most commonly described civilian perceptions impacting how they approach their job (27%) and their motivation (24%).

Table 13 Responses to qualitative question 4, "Do civilian perceptions impact how you experience your job? Provide two or three examples."

Code		f (%)	Sample Quote
1 = Does not affect		44 (40%)	"No, I didn't become an officer to worry about the public perception of police."
2= Does affect		66 (60%)	"Very much so... Always under a microscope."
Sub-codes	**How are they affected?**		
	2a= negatively	37 (34%)	"Absolutely. When dealing with the protests this past summer I hated my job every day and wished that I could quit. I continue to get scoffs or sharp looks if I am out in public in uniform."
	2b= positively	6 (5%)	"Yes, I can tell when the people I serve appreciate me and it feels good. One of the best parts of the job. I often go out of my way on a daily basis to make my community feel good and have faith in the department and law enforcement as a whole."
	2c= mixed	15 (14%)	"YES. When people you are trying to help believe you are evil or racist because of the uniform you wear or color of your skin (white), it greatly strains the human aspect, mental/emotional status, and empathy possible in very tense, violent situations. AND on the contrary, when you experience gratitude that is real and meaningful, it is a massive motivator to continue on no matter the obstacle."
	2d= neutral	3 (3%)	"Depends on the individual."
	No sub-code applicable	49 (45%)	
	What is affected?		
	Z= Motivation	26 (24%)	"Yes, during the protests morale was low but at the same time when people randomly thank you just for being an officer it is a little boost in morale"
	Y= Procedure	30 (27%)	"We will be called to a shooting where there is little to no evidence of who the suspect is. As we attempt to ask community members, their response is often, 'it's your job, don't ask me.' And then we are blamed for being unable to arrest a suspect even though we know the community members know who the suspect is."
	X= Wellbeing	10 (9%)	"I think social media posts from people that used to be close friends talking about how racist police are has the biggest impact… It is mentally exhausting to see this often…"
	W= Systemic	6 (5%)	"Yes. We feel like people in higher power making decisions over our jobs and livelihoods is a clear example of misunderstanding what we do every day. I have never seen a city council member do

			a ride-along or have to watch body camera to see what we go through. They only ever see the negative parts and don't see us as human beings or see that we make a difference and work hard in the majority of our calls. We are just badge numbers and names to them and they have ultimate power over our future. It's very disheartening and impersonal and brings all of us down that none of us have a say."
	No sub-code applicable	52 (47%)	

CHAPTER IV

DISCUSSION AND CONCLUSION

Burnout has been studied as an experience affecting police forces around the world. Rates of burnout vary widely from country to country, yet some studies suggest that burnout appears to be relatively similar among different types of law enforcement officers within the same country (Houdmont, 2012, 2013). In this study, I evaluated two samples of law enforcement officers from two different countries in order to determine whether they had similar rates of burnout. I also used the JD-R model (Demerouti et al., 2001), not only to determine if both samples followed the expected pattern of high demands and few resources being associated with burnout, but also to see if there were nuances in *which types* of demands and resources were significant predictors of burnout in each sample.

I predicted that both samples in this study would follow the JD-R model, wherein high demands would be positively related to burnout while resources would be negatively related to burnout, also considering whether these relationships would be moderated by country. Hypotheses 1a and 1b were tested using correlations and regression analyses and both hypotheses were generally supported, with a few exceptions. In the initial correlations for the UK sample (H1a), higher levels of burnout were associated with more demands and fewer resources as predicted. For resources, all four measures were significantly negatively correlated with all three dimensions of burnout. All three dimensions of burnout were significantly correlated with organizational demands and role ambiguity. Interpersonal stressors in the UK sample was the

one variable that did not function as predicted in the correlations, as it was significantly negatively associated with all three dimensions of burnout. Violanti and Aron (1993) found that operational stressors, or those inherent to the work, were associated with more job satisfaction and less psychological distress, so perhaps officers in a Public Protection Unit role consider interpersonal stressors to be inherent to their work. Dealing with interpersonal stressors may even be what some of these officers find meaningful, if they have elected to serve in these sorts of roles.

In the initial correlations for the US sample (H1b), higher levels of burnout were associated with more demands and fewer resources as predicted. Of the three dimensions of burnout, both emotional exhaustion and depersonalization were significantly positively correlated with all three types of demands. While reduced personal accomplishment was positively correlated with all three demands, the correlation was only significant for role ambiguity. For resources, all correlations between the four resources and three dimensions of burnout were negative, and all were significant except for the correlation between depersonalization and peer support. The potential connection between peer support and more depersonalization is discussed more in the following paragraph.

In the multiple regression analyses, combining the two samples, emotional exhaustion and depersonalization were more strongly impacted by demands and resources than reduced personal accomplishment. All of the measures of demands and resources except interpersonal stressors and practical resources were significant predictors for both emotional exhaustion and depersonalization, and this followed the high demands and lack of resources trend that we would expect in the JD-R model, with one exception. Peer support (a resource) was associated with *more* depersonalization instead of less. One possible explanation for this is that officers could be

creating a negative culture within their workplace in which they support each other, but also collectively detach from their work. Only control and role ambiguity were significant predictors of reduced personal accomplishment. This may indicate that this dimension of burnout is less related to demands and resources in general, and instead related to the relationship between the individual and their job.

Demerouti et al. (2001) theorized that within the JD-R model, high demands would be specifically related to emotional exhaustion, while a lack of resources would be related to the depersonalization dimension. This pattern was not supported by my findings, as emotional exhaustion and depersonalization shared all of the same significant predictors in the regressions. Instead, demands were the strongest predictor of both emotional exhaustion and depersonalization, with organizational demands and role ambiguity (the two significant demands in the models) having the most uniquely explained variance in both models.

Another interesting note about these results is the amount of variance predicted in the regressions for each dimension of burnout. Emotional exhaustion had the largest amount of variance predicted ($R^2 = .50$), followed by depersonalization ($R^2 = .24$), and finally reduced personal accomplishment ($R^2 = .17$). This may suggest that demands and resources in the workplace are more likely to impact exhaustion, while depersonalization and reduced personal accomplishment may be more strongly predicted by individual differences.

In hypothesis 1c, I expected that burnout would be moderated by home country and that the demands and resources that predict burnout would differ by country. This was tested using multiple regressions, and was partially minimally supported. While only two interaction effects reached significance, analyses of the nuanced relationships showed that there are differences in predictors. Initial independent samples t-tests indicated that there were significant differences

between the two samples for emotional exhaustion and reduced personal accomplishment, with the US sample having lower levels of both. The US sample reported similar levels of depersonalization.

In the regressions, controlling for demands and resources, country was a significant predictor of emotional exhaustion and depersonalization, but not reduced personal accomplishment. Notably, country was negatively related to emotional exhaustion in the regression, which contradicted the results of the t-tests. Thus, while the US sample reported lower levels of emotional exhaustion compared to the UK sample overall, they actually had higher levels when demands and resources were held constant. Additionally, there were variables that showed interaction effects. For emotional exhaustion, role ambiguity interacted with country, where role ambiguity was only a significant predictor in the UK sample. For depersonalization, interpersonal stressors interacted with country, where interpersonal stressors was only a significant predictor in the US sample. These interactions are consistent with my findings in the next set of analyses, where I ran regressions for the three dimensions of burnout separately for each country to look for nuances in which demands and resources were salient for each sample. I found that there were in fact nuances in the predictors of burnout for each sample. For each dimension of burnout, the UK and US samples had different combinations of demands and resources as significant predictors. This suggests that within the JD-R model of burnout, there are differences between groups in terms of which demands and resources are most salient and impactful, and thus which would be most efficient to target for interventions.

In my next set of hypotheses, I predicted that high levels of burnout would be associated with worse health outcomes, as measured in sick absences from work, in both samples, and that this relationship would be moderated by country. Hypotheses 2a and 2b were partially supported.

In the UK sample, there were significant differences in emotional exhaustion and depersonalization between officers who reported no absences and those who reported one or more absences from work. The only dimension of burnout that had significant differences between US officers who reported no sick absences from work and those that reported one or more was emotional exhaustion. In the US sample, I also included the Physical Symptoms Inventory (Spector & Jex, 1998) to measure the frequency at which participants experienced specific symptoms, and emotional exhaustion was the only significant predictor. Hypothesis 2c could not be formally tested because of the discrepancy in the wording of the question between the two samples, with each sample reporting absences over different time periods. Additionally, the US sample data was collected during the Covid-19 pandemic, which could have impacted the number of sick days taken by American participants. However, in comparing the effect sizes of the t-tests in both samples, the effect sizes were similar between the US and UK (moderate for emotional exhaustion, small for depersonalization, and negligible for reduced personal accomplishment). In sum, it appears that emotional exhaustion is the burnout dimension with the greatest impact on officer health. Though we were unable to test for moderating effects, it is likely the case that exhaustion relates to sick absences at a similar rate across these two countries.

In my final set of hypotheses, I predicted that how officers perceive the support they receive from their community could contribute to burnout, with positive perceptions functioning as a resource (H3a) and negative perception functioning like a demand (H3b). These hypotheses were tested with correlations and both were supported. The two Likert-scale items asking about the community's respect for and confidence in police officers were both significantly negatively correlated with all three dimensions of burnout, indicating that officers who perceived more

positive community support had lower levels of burnout than those with more negative perceptions.

In the exploratory qualitative questions, I found that officers perceived that the general American public held predominantly negative or a mix of both positive and negative views of the police. Very few responses described perceiving strictly positive views from civilians (9%). Some of the common themes within these responses included racial tensions, media portrayals of police impacting civilians, and a lack of understanding about the true nature of the job. However, when asked more specifically about how they think their local community perceives them, the proportion of strictly positive responses increased to 40%, and the rate of strictly negative responses decreased somewhat. Mixed perceptions was still a common response. An interesting conclusion from these data is that officers may consider views of policing broadly as more negative than what they experience in their actual community. This could be a function of the specific department that participated in our study, or it could be a more common phenomenon that individuals perceive attitudes as more negative than what they truly experience. Another possible explanation could be the demographic makeup of specific communities, as attitudes towards law enforcement have been shown to vary along demographic lines (Pew Research Center, 2020). This sample was collected from a police department in a predominately white city, and white people are more likely to hold positive views towards law enforcement than other racial groups (Pew Research Center, 2020).

In the two questions asking about whether civilian perceptions impact officers in general and them personally, a majority of responses indicated that yes, officers are impacted. However, while only 8% of responses to the more general question said civilian opinions were not impactful, 40% of officers reported not feeling personally impacted within their own community.

Similarly to the questions on civilian perceptions, when asked more generally, positive responses were less common than when asked about their personal experiences. However, still more responses described negative effects than positive. Again, these differences between the general and personal community questions may be indicative of a general pattern of perceiving the broader situation as more negative than their personal experiences, or could be an artifact of the particular department sampled in this study. The most common impact described in the responses was an impact on motivation, both positively and negatively. Other themes that emerged were an impact on how officers approach their jobs and on individual officer's mental or emotional health. It must be noted that this data was collected in early 2021, and was likely impacted by recent events, including the protests against police brutality during the summer of 2020 and the insurrection at the capitol building that occurred on January 6th of 2021. Both events were mentioned directly in some responses.

Finally, respondents were asked to respond to eight relevant items from the Police Stress Survey (Spielberger et al., 1981) with how stressful they would rate each stressor and the frequency at which they experience each item. The results of this measure were consistent with the responses given to the qualitative questions. Officers ranked distorted or negative press coverage of police work and public criticisms of police as the two most stressful and most common stressors on the list, which ties in to many of comments officers made about media portrayals and negative civilian opinions of police making it harder for them to do their job and decreasing their motivation. The item rated as least common and least stressful was strained relationships with non-police friends, which also seems consistent with the qualitative responses. Officers reported feeling more appreciated and having more positive interactions personally with their community than they thought were common for police generally in the US.

From the correlations and the qualitative responses, this exploratory research supports the incorporation of relationships with the public into the JD-R model for predicting burnout in police officers. Perceptions of support and respect are significantly correlated with all three dimensions of burnout, and participants describe feeling the impacts of the interactions that they have with the public, particularly on their motivation to do the job, their own emotional and mental well-being, and on how they approach certain scenarios at work. These results lend support to the possibility of a detrimental positive feedback loop occurring, wherein demands lead to burnout, which leads to worse job performance, which leads to mistakes or misconduct, which leads to civilian dissatisfaction, which then becomes an additional demand on officers and perpetuates the cycle.

Practical Implications

The nuanced relationships within the JD-R model of burnout suggest the value of more precisely targeted interventions to prevent burnout. Depending on the level at which these nuances are found to differ (nationally, regionally, departmentally, etc.), organizations that want to reduce burnout would have a better idea of which demands and which resources should be targeted for interventions in order to have the most impact on the different dimensions of burnout. Alternatively, interventions can also account for which demands and resources are not significant predictors of burnout for their officers, and thus would not be a good use of resources to target. Our findings do suggest that organizational demands, control, and role ambiguity would be good targets to consider in most all intervention efforts. These three demands are consistent predictors of burnout across both samples and account for the most unique variance in all three dimensions of burnout in both the combined and separate regression analyses. Unique

approaches may be needed to address unique relationships, such as interpersonal stressors relating to less burnout in the UK public protection unit or peer support relating to more depersonalization in the US department. The nuanced approach to the JD-R model could be used to find instances such as these ones where certain demands and resources appear to function differently than one would expect.

Additionally, these results indicated that absences from work and experiencing physical health symptoms are predominantly associated with the emotional exhaustion dimension of burnout, which was also the dimension with the most variability explained by job demands and resources. It appears that emotional exhaustion is the dimension of burnout that is most strongly influenced by the workplace conditions measured in this study and the dimension that is most associated with officers needing to take time off of work, which suggests that emotional exhaustion is the key dimension to address with interventions.

The results of my exploratory questions on officer perceptions of civilian support do suggest that community perceptions impact officers, and that the relationship between police and the community could be a possible focus of interventions to prevent burnout. My findings support the possibility of a harmful positive feedback loop (demands lead to burnout, burnout is linked to worse organizational outcomes, which leads to civilian dissatisfaction, which then becomes an additional demand), which demonstrates why reducing officer burnout is important for the community as well as the individual officers involved. Based on research about why communities lose trust in and form negative opinions about police, the President's Task Force on 21st Century Policing under President Obama recommended building community feelings of legitimacy and trust in police as the foundational tenants of community building and police reforms (Meares, 2017). Additionally, my findings could be instrumental in the current national

conversation about the role of police in the US by providing empirical data about this relationship between police and communities and underscoring the importance of finding solutions that work for both communities and law enforcement.

Limitations

One limitation of this study was the inability to formally test hypothesis 2c because of the discrepancy in the wording (i.e., different time frames for sickness absences) of the work absences survey item between the two samples. This wording discrepancy was because of the change from the original UK dataset that I intended to use to the dataset that was actually used in this study. To further complicate the issue, the US sample was surveyed during the Covid-19 pandemic while the UK sample was not, which could possibly have impacted the number of sick days that American officers had taken during the past 6 months. Particularly, some sick days may have been less a result of experienced symptoms and more as a result of required quarantine periods.

Another limitation to this study were the different types of officers represented in the sample and the demographic differences of the two samples. The UK sample consisted of officers only from the Public Protection Unit, which deals with crimes involving abuse, violence, and sexual violence against children and vulnerable populations. In contrast, the US sample surveyed officers from an entire police department, which resulted in more types of police work being represented. However, because UK and US police forces are structured differently, there is no unit within the US sample that is directly comparable to the UK Public Protection Unit because there is no designated unit for dealing specifically with those types of crimes. Additionally, while the samples were similar demographically in terms of age and years of police

service, the American sample was 91% male, while the UK sample was 61% female. Still, the results of the study can provide insight into the varying experiences of officers within different countries and within different lines of work. Future studies with more comparable units would be needed to clarify whether any differences we observed were more a function of country or unit.

Finally, there was no data collected on officer perceptions of civilian support in the UK sample because that data collection predated the US sample. This prevented me from being able to compare the two samples on this dimension of their experiences as police officers. Because the results from the US sample seem to support the inclusion of relationships with the public in the JD-R model of predicting burnout, it would have been beneficial to conduct those analyses in both samples to see if this was supported in another sample of officers.

Future Directions

This study was designed to close a gap in the literature and account for why rates of burnout in law enforcement officers vary so much around the world. To do this, I looked for nuances in which demands and resources were significant predictors of burnout for samples of officers from two different countries, and I found that each country did have some similar and dissimilar significant predictors for each of the three dimensions of burnout. I have not been able to find another study that has attempted this approach to the JD-R model, and thus, future studies are needed to see if my results can be replicated. Future studies are also needed to determine at what level these nuances occur. In this study, the predictors of each dimension of burnout do differ between the two samples at the country level, but additional research needs to be done within each of these countries to see if other regions or departments have similar or distinct patterns of demands and resources to predict burnout.

Additionally, more research is needed to understand the link between civilian support and officer burnout, and to see if these results can be replicated in other police departments, both within the US and in other countries. Given the events that have occurred in the US over the past year regarding police, longitudinal research would help clarify whether the results of this study are indicative of a larger pattern or are the temporary effects of recent high-profile events. I would also like to see this research conducted in a variety of communities, to see if there are differences in officer perceptions based on the type of community that they serve in, since research indicates that opinions on police tend to vary along demographic lines (Pew Research Center, 2020).

Conclusion

The purpose of this study was to use the JD-R model to examine demands, resources, burnout, and health outcomes of police officers from the US and the UK. I found that there is support for nuance within the JD-R model, with each sample following the general pattern of high demands and low resources being associated with more burnout, yet each country having different combinations of which demands and resources were significant predictors for each dimensions of burnout. Additionally, I found that emotional exhaustion could predict health outcomes, as measured in sick absences from work (both samples) and in the frequency of experiencing symptoms (US sample only). This information can help police departments address the issue of burnout more effectively by identifying which dimensions of burnout and which demands and resources would be most impactful to target for their officers specifically, which also prevents using resources on ineffective interventions.

Additionally, I conducted exploratory research to determine if perceptions of civilian support could function within the JD-R model, with positive perceptions acting as resources and negative perceptions acting as demands. I found support for this idea, with officer perceptions of community respect for and confidence in police were significantly correlated with all three dimensions of burnout. Those results and the responses officers provided about their perceptions of public attitudes towards police support the idea that the relationship between police and the public does impact officers' experiences at work. Considering the ongoing national conversation about the role of police in the US, these findings are timely and suggest that the degradation of the relationship between police and their communities could result in even more negative outcomes later on by fueling a harmful cycle.

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APPENDIX A

IRB APPROVAL LETTER

THE UNIVERSITY OF TENNESSEE CHATTANOOGA

Institutional Review Board
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TO: Jacquelyn Keaton **IRB # 20-116**
Dr. Kristen Black

FROM: David Deardorff, Interim Director of Research Integrity
Dr. Susan Davidson, IRB Committee Chair

DATE: 10/9/2020

SUBJECT: IRB #20-116: Understanding the Working Conditions of Police Officers

Thank you for submitting your application for exemption to The University of Tennessee at Chattanooga Institutional Review Board. Your proposal was evaluated in light of the federal regulations that govern the protection of human subjects.

Specifically, 45 CFR 46.104(d) identifies studies that are exempt from IRB oversight. The UTC IRB Chairperson or his/her designee has determined that your proposed project falls within the category described in the following subsection of this policy:

46.104(d)(2)(i): Research only includes educational tests, surveys, interviews, public observation and recorded information cannot readily identify the subject (directly or indirectly/linked)

Even though your project is exempt from further IRB review, the research must be conducted according to the proposal submitted to the UTC IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an Application for Changes, Annual Review, or Project Termination/Completion form to the UTC IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the UTC IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the UTC IRB as soon as possible. Once notified, we will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event.

APPENDIX B

COPY OF UK SURVEY ITEMS

PUBLIC PROTECTION UNIT WORK AND HEALTH SURVEY

Resources

1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

1. I have the administrative support I need to do my job effectively
2. I have sufficient officer colleagues to get the job done
3. The Force provides me with the transportation that I need to do my job efficiently
4. IT equipment is up to the task
5. We have sufficient IT equipment
6. Colleagues have the appropriate IT training
7. Communication channels with officers outside of my unit are effective

Directions: The UK Health and Safety Executive has developed the following questions to explore exposure to a set of common stress-related working conditions. Please indicate the extent to which each is a problem for you.

1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

8. I am clear on what is expected of me at work
9. I can decide when to take a break
10. Different groups at work demand things from me that are hard to combine
11. I know how to go about getting my job done
12. I am subject to personal harassment in the form of unkind words or behavior
13. I have unachievable deadlines
14. If work gets difficult, my colleagues will help me
15. I am given supportive feedback on the work I do
16. I have to work very intensively
17. I have a say in my own work speed
18. I am clear what my duties and responsibilities are
19. I have to neglect some tasks because I have too much to do
20. I am clear about the goals and objectives for my department
21. There is friction or anger between colleagues
22. I have a choice in deciding how I do my work
23. I am unable to take sufficient breaks
24. I understand how my work fits into the overall aim of the organization
25. I am pressured to work long hours
26. I have a choice in deciding what I do at work
27. I have to work very fast
28. I have unrealistic time pressures
29. I can rely on my supervisor to help me out with a work problem

30. I get help and support I need from colleagues
31. I have some say over the way I work
32. I have sufficient opportunities to question supervisors about change at work
33. I receive the respect at work I deserve from my colleagues
34. Staff are always consulted about change at work
35. I can talk to my supervisor about something that has upset or annoyed me about work
36. My working time can be flexible
37. My colleagues are willing to listen to my work-related problems
38. When changes are made at work, I am clear how they will work out in practice
39. I am supported through emotionally demanding work
40. Relationships at work are strained
41. My supervisor encourages me at work

42. On a typical week how many hours do you work (excluding overtime)?
    a. Less than 10
    b. Numerical drop-down options between 10 and 60
    c. More than 60

43. On a typical week how many hours overtime do you work?
    a. Numerical drop-down options between 1 and 40
    b. More than 40

44. How much pressure is placed on you to work overtime?
    a. No pressure at all
    b. Mildly pressured
    c. Moderately pressured
    d. Very pressured
    e. Extremely pressured

Directions: The questions on this page examine aspects of your health that are known to be commonly associated with exposure to stress-related working conditions.

0 = never
1 = a few times a year or less
2 = once a month or less
3 = a few times a month
4 = once a week
5 = a few times a week
6 = every day

Per the licensing agreement, only three sample items are included.

1. I feel emotionally drained from my work.
2. I have accomplished many worthwhile things in this job.
3. I don't really care what happens to some recipients.

45. How many days have you been absent from work in the last 12 months due to stress, depression, or anxiety caused or made worse by work?
    a. Numerical drop-down options between 1 and 90
    b. More than 90

46. In the past five years how many episodes or spells (not days) of absence have you had due to stress, depression or anxiety caused or made worse by work?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
    i. 8
    j. 9
    k. 10
    l. More than 10

Demographics

47. Which area of PPU do you currently work in?
    a. Child abuse
    b. Adult abuse
    c. Sex offender management
    d. Domestic abuse
    e. Vulnerable adult
    f. Central referral unit
    g. MASH

48. Rank
    a. Constable
    b. Sergeant
    c. Inspector

49. Age
    a. Numerical drop-down options between 20 and 65

50. Gender
    a. Male
    b. Female

51. For how many years have you worked in PPU?
    a. Numerical drop-down options between 1 and 30

52. Years of police service
    a. Numerical drop-down options between 1 and 40

APPENDIX C

INFORMED CONSENT (US SAMPLE)

You are being invited to participate in a research study about the working conditions and the experiences of police officers. This study is being conducted by Jacquelyn Keaton (lbd495@mocs.utc.edu), an Industrial-Organizational Psychology Master's student, and Dr. Kristen Black (423-425-5479; kristen-j-black@utc.edu) at the University of Tennessee at Chattanooga.

You were selected as a possible participant in this study because you are employed as a law enforcement officer in the United States.

The questionnaire will take about 15- 20 minutes to complete.

Your responses to this survey are completely confidential. Any identifiable information automatically recorded by the survey platform, such as IP address, will not be retained with the survey responses. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Any information that you provide that could possibly be identifying will not be included in any publication or sharing of our study results. Results may be reported back to your organization in summary form (e.g., average ratings of all employees that participate), but no individual responses will be provided.

By participating in this study, you will have the opportunity to be entered into a raffle for one of 15 $20 Amazon gift cards. We will ask for an email address that we can send this gift card to, if you are selected as a winner. Email addresses will only be used for distributing gift cards and will otherwise be deleted from our data.

Your participation in this study is voluntary. By clicking "Continue" you are voluntarily agreeing to participate and you are acknowledging that you are **18 years of age or older**. You are free to stop answering questions at any time or to decline to answer any particular question you do not wish to answer for any reason. If you are younger than 18, do not proceed.

Research at the University of Tennessee at Chattanooga involving human participants is carried out under the oversight of the Institutional Review Board. Address questions or problems regarding these activities to Dr. Susan Davidson, UTC IRB Chair, email: susan-davidson@utc.edu phone: (423) 425-5568.

APPENDIX D

COPY OF US SURVEY ITEMS

UNDERSTANDING POLICE WORKING CONDITIONS

Demographics

4. Age:
   [write-in option]

5. Sex:
   a. Male
   b. Female
   c. Prefer not to answer

6. Which of the following best describes your current unit assignment?
   a. Neighborhood Policing Adam
   b. Neighborhood Policing Baker
   c. Neighborhood Policing Charlie
   d. Investigations I
   e. Investigations II
   f. Special Operations
   g. Other
   h. Professional Staff

7. Tenure in current department (number of years)
   [write-in option]

Working Conditions

Directions: Thinking about the past 6 months, please indicate how often you would say the following statements are true for you.

1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

8. I am clear on what is expected of me at work
9. I can decide when to take a break
10. Different groups at work demand things from me that are hard to combine
11. I know how to go about getting my job done
12. I am subject to personal harassment in the form of unkind words or behavior
13. I have unachievable deadlines
14. If work gets difficult, my colleagues will help me
15. I am given supportive feedback on the work I do
16. I have to work very intensively
17. I have a say in my own work speed
18. I am clear what my duties and responsibilities are

19. I have to neglect some tasks because I have too much to do
20. I am clear about the goals and objectives for my department
21. There is friction or anger between colleagues
22. I have a choice in deciding how I do my work
23. I am unable to take sufficient breaks
24. I understand how my work fits into the overall aim of the organization
25. I am pressured to work long hours
26. I have a choice in deciding what I do at work
27. I have to work very fast
28. I have unrealistic time pressures
29. I can rely on my supervisor to help me out with a work problem
30. I get help and support I need from colleagues
31. I have some say over the way I work
32. I have sufficient opportunities to question supervisors about change at work
33. I receive the respect at work I deserve from my colleagues
34. Staff are always consulted about change at work
35. I can talk to my supervisor about something that has upset or annoyed me about work
36. My working time can be flexible
37. My colleagues are willing to listen to my work-related problems
38. When changes are made at work, I am clear how they will work out in practice
39. I am supported through emotionally demanding work
40. Relationships at work are strained
41. My supervisor encourages me at work

42. On average, how many hours do you work during a typical week **at your police job**? [write-in option]

43. On average, how many hours of **overtime** do you work per week **at your police job**? [write-in option]

44. On average, how many hours do you work per week at jobs **other than** your police job? [write-in option]

Directions: Please respond to each question with how frequently you have experienced the scenario at work during the past 6 months.

1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

45. I have the administrative support I need to do my job effectively
46. I have sufficient officer colleagues to get the job done
47. The Force provides me with the transportation that I need to do my job efficiently
48. IT equipment is up to the task
49. We have sufficient IT equipment
50. Colleagues have the appropriate IT training
51. Communication channels with officers outside of my unit are effective

Directions: Please respond to each question with how frequently you have experienced the scenario. For questions asking about "recipients", those are people that you are providing services to while at work. These people could be civilians or other officers, depending on the type of task.

0 = never
1 = a few times a year or less
2 = once a month or less
3 = a few times a month
4 = once a week
5 = a few times a week
6 = every day

Per the licensing agreement, only three sample items are included.

52. I feel emotionally drained from my work.
53. I have accomplished many worthwhile things in this job.
54. I don't really care what happens to some recipients.

Directions: For the following questions, an episode of illness is one, discrete illness that may last from one to several days, but then subsides. For example, having strep throat for one week would be 1 episode. If you have a chronic illness that has fairly consistent symptoms all the time, count that as 1 episode. If you have a chronic illness in which symptoms are present for a period of time but then subside, count each flare-up as one episode.

55. Approximately, how many episodes of illness have you experienced in the **past 6 months?**
    [write-in option]

56. Approximately, how many days have you taken off work because you were sick in the **past 6 months?**
    [write-in option]

Directions: Please respond to each item with how frequently you have experienced the symptom during the **past month.**

1 = not at all
2 = once or twice
3 = once or twice per week
4 = most days
5 = every day

57. An upset stomach or nausea
58. A backache
59. Trouble sleeping
60. Headache
61. Acid indigestion or heartburn
62. Eye strain
63. Diarrhea
64. Stomach cramps (not menstrual)
65. Constipation
66. Ringing in the ears
67. Loss of appetite
68. Dizziness
69. Tiredness or fatigue

Directions: Please respond to each item with how frequently you have engaged in that behavior during the past year

1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

70. Have you used annual leave or rest days to take time off due to your state of physical health?
71. Have you used annual leave or rest days to take time off when you really should have taken sick leave due to stress, low mood, anxiety, or other problems with your mental health and wellbeing?
72. If you have used annual leave or rest days to take time off when unwell (instead of sick leave) please indicate your reasons for having done so.
    [write-in option]

73. How often have you taken work home that cannot be completed in normal working hours?
74. How often have you worked while on annual leave in order to catch up with work?

Perceptions of Community Support

75. How do you think the general public views police work in America?
    [write-in option]
76. How do you think public perceptions of police work affect officers in general?
77. [write-in option]
78. How do you personally feel perceived by individuals in your community?
    [write-in option]

79. Do civilian perceptions impact how you experience your job? Provide two or three examples.
[write-in option]

Directions: Please respond to each statement based on your personal experiences at work

1 = strongly disagree
2 = disagree
3 = neither disagree nor agree
4 = agree
5 = strongly agree

80. I feel respected by the community that I serve
81. I feel that the community has a great deal of confidence in the police as an institution

Directions: In the "rate from 0-100" column, please indicate the average amount of stress that you feel is associated with each event with 0 being no stress associated and 100 being the maximum amount of stress. Then rate from 1 (never) to 5 (always) how frequently you personally have experienced each event.

	Rate from 0-100	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
Distorted or negative press coverage of police work						
Lack of recognition for good work						
Public criticism of police						
Personal insult from a citizen						
Experiencing negative attitudes towards police						
Public apathy toward police						
Strained relations with non-police friends						
Racial pressures or conflicts at work						

APPENDIX E

PERCEPTIONS OF CIVILIAN SUPPORT QUALITATIVE CODING GUIDE (US SAMPLE)

PERCEPTIONS OF CIVILIAN SUPPORT QUALITATIVE CODING GUIDE (US SAMPLE)

For each response, coders indicated one primary code (either 1,2,3,4 or 1,2). Then coders listed all subcodes that applied to each response or left the subcodes blank if none applied.

For questions 1 & 3		
1= Negative Response		**Response is entirely negative, no mention of positive or mitigating factors**
Subcodes	1a	Racial = public holds negative views, mentions race
	1b	Lack of understanding = public holds negative views, response mentions that the public does not understand police work
	1c	Media Portrayals = public holds negative views, mentions media
2= Mixed Response		**Response indicates a mix of positive and negative perceptions of police**
Subcodes	2a	General Mixed = public holds variety of views about police
	2b	Polarized Mixed = public holds split views at 2 extreme ends of a spectrum
	2c	Mixed Feelings = individual people in the public have mixed feelings, seeing both positive and negative aspects
3= Positive Response		**Response is entirely positive, no mention of negative or worsening factors**
4= Neutral Response		**Response is unsure or is neither positive, negative, or mixed**
For questions 2 & 4		
1= Does not affect		**Officers are not impacted by public perceptions**
2= Does affect		**Officers are impacted by public perceptions**
Subcodes	2a	Negatively = officers are impacted by public perceptions in a negative way
	2b	Positively = officers are impacted by public perceptions in a positive way
	2c	Mixed = officers are impacted by public perceptions in both positive and negative ways
	2d	Neutral= officers are impacted by public perceptions, but the impact is neither positive not negative
	What is affected?	
	Z	Motivation / Morale
	Y	Procedure / how they do the job
	X	Wellbeing/ Mental or emotional health
	W	Larger system or societal impacts (laws, policy, culture, community, etc.)

VITA

Jacquelyn Keaton earned her Bachelor of Science in Psychology from the University of Georgia in 2017. She then worked for two years before deciding to go to graduate school at the University of Tennessee at Chattanooga. She graduated with her Master of Science in Industrial-Organizational Psychology in May of 2021.