A Cultural Analysis of Police Stress: An Application of Grid/Group Theory

by

Kelsey M. Aeppli

Submitted in Partial Fulfillment of the Requirements

for the Degree of

Master of Science

in the

Criminal Justice

Program

YOUNGSTOWN STATE UNIVERSITY

MAY, 2017

A Cultural Analysis of Police Stress: An Application of Grid/Group Theory

Kelsey M. Aeppli

I hereby release this thesis to the public. I understand that this thesis will be made available from the OhioLINK ETD Center and the Maag Library Circulation Desk for public access. I also authorize the University or other individuals to make copies of this thesis as needed for scholarly research.

Signature:

_____

Kelsey M. Aeppli, Student   Date

Approvals:

_____

Dr. Richard L. Rogers, Thesis Advisor   Date

_____

Dr. Christopher M. Bellas, Committee Member   Date

_____

Dr. Monica M Merrill, Committee Member   Date

_____

Dr. Salvatore A. Sanders, Dean of Graduate Studies   Date

Acknowledgements

I would like to extend a big thank you to:

My dad, mom and brother, Jonathan, Claudia and Michael Palisin – I love you! - Without the love, support, discipline and even financial support, my path for success would have never been possible. You have always stood by my side and saw my potential, even when I didn't. I thank you all for the extra drive and encouragement! Without the proper upbringing, my masters would have never even been an idea.

To my brother, Eric in heaven- I thank you for always being the extra support I needed when this process was overwhelming. You helped me push through the long nights and heavy workloads. It was because of you and your drive when you were here with us, that helped push me to the end. I thank you for always looking out for me. I love you!

My husband and son, Jonathan and Dominic Aeppli –The unconditional love and emotional support from the both of you, made this journey the most enjoyable it could be. I would have never completed this journey without you both. It was much thanks to the both of you for the long nights spent separated so that I could spend time on my school work. I love you both so very much!!

My in-laws, thank you for proving all the extra love and support. I look forward to sharing this accomplishment with each of you.

My thesis chairman, Dr. Rogers – I can't thank you enough for your patience and understanding through this process. The many emails, and meetings, you never once doubted me. You were always supportive and provided a drive that helped me complete the most rewarding project as a YSU graduate. Without you, your wisdoms and the tools you provided me, I would have never been able to be this successful.

My thesis committee, Dr. Bellas and Dr. Merrill– I thank you both for providing the reassurance I needed when I was stressed beyond belief. You both provided a wonderful perspective and additional input that helped put that extra spin on my paper. I appreciate your support and decision to be part of my journey.

Abstract

Studies have been conducted focusing on the causes of stress among law enforcement officers. Prior research has linked stress within the workplace to the inability of officers to exercise their discretionary rights. This study examines whether officers with more workplace autonomy perceive more or less stress than officers without. To explore this question, this study applies grid/group theory to a secondary analysis of *Police Stress and Domestic Violence in Police Families in Baltimore, Maryland, 1997-1999*. A total of 804 police officers were classified by the four quadrants of the theory, and quadrant placement was used to predict scores for five different kinds of stress—critical incidents, burnout, PTSD, psychological stress, and perceived stress. While it was expected that officers classified as Egalitarian (low grid/high group) should have the lowest levels of stress because of their frequent criticism of police bureaucracies and the solidarity formed by the police subculture, the study found that officers with a Hierarchical orientation (high grid/high group) consistently have the lowest stress scores. In other words, the bureaucratic structure of law enforcement can reduce stress when properly implemented.

Table of Contents

Chapter I

Introduction

Building materials are tested to discover their breaking points (Brown, Cooper & Kirkaldy, 1996). Through these tests materials are analyzed for their efficiency and accuracy. For example, a steel bar may require increasing pressure to discover the limit or the stress point at which time the bar will fracture or eventually break. Different materials have different resistant properties.

Just like a steel bar or a metal beam, people face a stress point at which they will eventually break. A mental (psychological) breaking point can include physical or psychological symptoms. Signs of reaching a psychological breaking point include anger, violence, tension, reduced energy or poor concentration and excessive worrying (Blanding, 2015).

The stress of policing is commonly described as a combination of critical incidents and general work stressors (Rogers, 2014; Stevens, 2008; Stinchcomb, 2004). Several studies have examined how stress effects like PTSD (Bowler et al., 2010), alcohol consumption (Ménard & Arter, 2013), and domestic violence (Summerlin, Oehme, Stern, & Valentine, 2010) are signs that law enforcement officers have reached their breaking points (Anderson, Litzenberger, & Piecas, 2002). Management styles, shift schedules and major shootings all result in increased psychological pressures within the workplace (Fairlie, 2013). As the pressures are applied and the stress point is reached, the officers are unable to manage or maintain any longer. Just like a steel bar, they will break.

The purpose of this study is to examine the relationship of law enforcement officers and agents with the amount of stress they constantly endure because of their workplace. Data from a Baltimore, Maryland, police stress study (Gershon, 2000) will be analyzed to determine the amount of control that is impactful on an officers' stress level. This thesis uses an approach to cultural analysis, Grid/Group Theory (Douglas, 1970; 2006), to examine how the workplace setting contributes to police officer stress. This theory provides a method for plotting stress levels on a two-dimensional map of social environments (Abrandt, 1999). We chose this theory and approach with the law enforcement field to help us understand the police culture within the department and how they are influenced and officer perception. Understanding the impact of workplace stressors on law enforcement has important theoretical implications. We will further discuss the literature addressing stress, police officer stress and the workplace, problems previously identified, theoretical approaches to stress and coping strategies, and finally review potential avenues for improvement.

Chapter II

Literature Review

Stress is a result of daily life and is common and often unavoidable. Hans Selye (1956), a leading authority on the subject, defines stress as the "body's nonspecific response to any demand placed upon it" (p. 200). This state can lead to a variety of individual responses. Symptoms of both psychological and physical stress can include lack of sleep, loss of appetite, increased anger or mood swings, abusive behavior, thoughts of suicide, or even death.

Stress symptoms among police officers as a result of on-the-job stress are a major concern in today's society (Fairlie, 2013). The literature supports the relationship between police work and job-related stress, and perhaps with adequate research new avenues could be provided to help officers explain and cope with job-related stressors (Weinberg, Sutherland, & Cooper, 2010). In this thesis, the Grid/Group Theory is proposed as one of those alternatives.

The Problem of Police Stress

Police cadets are required to pass a series of examinations to determine eligibility for the job. A passing score indicates the cadet to be physically/mentally healthy and in stable condition to begin their career (Michie, 2002; Waters & Ussery, 2007). Biological factors such as an individual's current state of health, mental and/or physical, can weigh heavily on their ability to manage the day-to-day workload. The longer an officer is with a department, the more likely his/her resistance is worn away.

In addition to the preparation to be in the law enforcement field, many experience stressors such as promotional challenges, shift work, and stress caused by delegation

(Blanding, 2015). Officers are faced with the high-risk element each day. The risk becomes greater when the work being performed is in an adverse organizational environment. Conditions such as heavy workloads, inappropriate leadership, and poor communication can heighten the level of stress being experienced (Noblet, Rodwell, & Allisey, 2009). These conditions impede task performance and reduce employee well-being.

Types of Police Stress

Efforts to study law enforcement stress have often resulted in the labeling of stressors as either "critical incident stress" or "general work stress" (Rogers, 2014; Stevens, 2008). A critical incident can be defined by J.T. Mitchell as "any situation faced by emergency personnel that causes them to experience unusually strong emotional reactions which have the potential to interfere with their ability to function at the scene or later" (Halpern, Gurevich, Schwartz, & Brazeau, 2009, p. 174). Such events create the most stressful situations that police experience, and are the source of serious mental conditions like post-traumatic stress disorder. Examples of these incidents include "being taken hostage," "being shot at," and "seeing someone die"; they are abrupt, powerful, and fall outside of normal human experiences. Post-Traumatic Stress Disorder (PTSD) can be a result of exposure to traumatic stress, often linked with a major disaster or critical incident (Brown et al., 1996).

Although critical incidents are the most severe situations a police officer faces, the greatest sources of stress for the typical officer are cumulative effects of persistent, steady pressures tied to the work environment (Kulbarsh, 2007). Causes of this stress include social isolation and top-down management. The isolation of the job has multiple

sources. The career of a law enforcement officer on the road often consists of shift work and constantly changing schedules (Kurtz, 2012). Both the physical and psychological well-being of an officer can become affected. Sleep patterns become inconsistent, appetites decrease, and family life is impacted. In addition, rural locations and the related inactivity in these places can cause isolation, i.e., big-city cops have lower stress levels than the police in rural areas (McCarty, Schuck, Skogan, & Rosenbaum, 2011; Oliver & Meier, 2004; Weekes, Hunt, & George, 2016).

Top-down management of police organizations also have been identified as a common source of stress. Detailed regulations and procedures have been created as an attempt to maintain control and minimize independent thinking. With this philosophy of management, all street-level officers must follow procedure according to regulation without modification. To ensure regulations are being followed, layers of supervision are developed, leading to disciplinary actions against officers, increasing on the job stress. In addition, officers are expected to maintain discretion and exercise their right to independently make decisions while on a call, increasing the level of stress placed on staff. Moreover, less than one-third surveyed said police are appointed to positions based on merit (Weekes, Hunt, & George, 2016).

This philosophy and disciplinary process have been cited as sources of strain (Stinchcomb, 2004). Police job stress has been attributed to the lack of consultation and communication, inadequate guidance and support from administrators, insufficient feedback, little or no input to department policy, and improper allocations of authority (too little authority and too much responsibility) (Stinchcomb, 2004).

Consequences of Police Stress

Left unaddressed, critical incident and general work stressors have severe consequences. Poor job performance, increased accidents, sleep disturbances, marital discord, domestic violence (Anderson & Lo, 2011), alcohol (Ménard & Arter, 2013), drug abuse, and suicide are common stress symptoms (Waters & Ussery, 2007).

These symptoms develop through a series of stages. As job satisfaction begins to diminish, the workload that once seemed appealing and aspiring becomes less attractive. Morale takes a downturn. The ability to maintain positive attitudes in the workplace becomes more difficult (Stinchcomb, 2004).

As this cycle continues, officers begin to manifest physical, emotional, and even personal problems. Police officers experience stress at higher levels than most other occupations that include exhaustion and cynicism (Graves, 1996) as well as burnout (Silbert, 1982). Chronic fatigue (Jen-Hung et al., 2015), over-eating, loss of appetite, muscle tension, irritability, hostility, anger, increased absences, and even early retirement are effects of job dissatisfaction (Stinchcomb, 2004). Consistent with the general strain theory, a stressful situation produces negative effects or emotions, which trigger deviant behavior (Agnew, 1992, cited in Anderson & Lo, 2011). Similarly, the angry aggression theory suggests that maladaptive strategy serves police personnel with a way to cope with work related stress or channel it towards those immediately available (Bernard, 2009).

At its most severe stages, stress can disrupt an officer's life through behaviors such as aggressive conduct, substance abuse, divorce, domestic violence, or even suicide (Rogers, 2014). Without a form of intervention, transient stress responses can develop into symptoms of physical and psychological pathology. Officers experiencing high

levels of stress will find an avenue to cope with the symptoms. Coping strategies are not always functional, i.e., alcohol consumption or drug usage (Richmond, Wodak, Kehoe, & Heather, 1998). Alan Lescher, former director of the National Institute on Drug Abuse, mentions the limited amount of studies on the relationship between law enforcement officers and alcohol abuse (Oehme, 2011).

An officer who experiences negative emotions or situations with authority are more likely to commit intimate partner violence (IPV) (Johnson, Todd & Subramanian 2005). Between 20% and 40% of police families experience domestic violence. Families who are married with children living within the home have shown to be at a higher risk for IPV. Rates of domestic violence in police homes showed a drastic decrease after the Lautenburg Amendment was passed, making it illegal for anyone who was convicted of misdemeanor domestic violence, to possess a handgun. If police families committed domestic violence at the same rate as the general public, 60,000 to 180,000 officer families would be victimized each year (Waters & Ussery, 2007).

Suicide, often a response to stress, is recognized as a maladaptive response (Bishop & Boots, 2014). Known to follow depression, suicide is found in those who experience traumatic events or disturbing situations. Officers are faced with traumatic events and disturbing situations regularly, increasing their chances for suicide. In 2008, 141 officers took their own life as a result of stress, and sadly increased to 143 in the year 2009 (Hackett, 2003). Stressors of the job create an atmosphere that pushes the officers to a physical and mental breaking point, resulting in depression, which contributes to the suicidal behaviors and ideation (Violante et al., 2009).

Structural and Cultural Determinants of Workplace Stress

It was in the early 1970s and 1980s that the profession of law enforcement was recognized as "occupation-at-risk," and there have been a variety of ways in which the issue has been addressed (Tucker, 2015). Many researchers built their work around existing scales assessing stress levels and the use of coping mechanisms (Beehr, Johnson & Nieva, 1995; Gershon, 2000). Others developed their own measures to capture the unique dynamics of law enforcement. In 1982 a scale was created to help with identifying major stressors such as unfair treatment, inadequate compensation, unsafe conditions, unmanageable equipment and shift work (Waters & Ussery, 2007). Separately, a Critical Incident Health Questionnaire (CIHQ) was developed for the purpose of studying stress exposure in law enforcement and other first responders to 34 commonly experienced incidents.

Other scholars have focused on the structure and cultural climate of an organization (Fenwick & Tausig, 2007; Tausig, 2013) to address physical or psychological stress symptoms (Brown et al., 1996). This thesis takes this approach. Two efforts to identify structural sources of workplace stress are found in the job design theory of Robert Karasek (1979) and Mary Douglas's (1970; 2006) grid/group analysis.

Job Design Theory

According to Karasek (1979), job strain occurs when job demands are high and job decision latitude is low. His theory, now sometimes called the Demand-Control-Support Model (DCS), is regarded as one of the most prominent models of job design and consists of two elements-job demands and decision latitude/control (see Figure 1). Expanding the DCS model to allow for social support, it suggests high levels of strain are

directly related to the relationships between the stress placed on employees and the external resources available to help cope with it.

Psychological strain results not from a single aspect of the work environment, but from the joint effects of the demands of a work situation and range of decision-making available to the worker facing those demands. A mismatch between high-workload and low control over long term rewards, e.g., respect and support, low income or low status control, i.e., poor promotion prospects, employment insecurity, and status inconsistency.

Jobs that are defined by low decision making latitude and high physical or psychological demands are known as *high strain jobs*. The workplace is often rigid and inflexible in both the environment and policy. Workers are unable to act in order to control their environment and cope with the stress. These jobs lead to high levels of mental and physical illness among employees.

Jobs with low decision making latitude and low work demand are known as *passive jobs*. Often these jobs include unskilled, unchallenging and irrelevant work that is unsatisfying for the employee leading to apathy and boredom. Like high strain jobs, passive jobs lead to high levels of mental and physical illness.

Low strain jobs are defined by few psychological demands and a high level of control within the workplace. The workers have higher than average level of health and happiness.

Similar to low strain jobs, *active jobs* are demanding jobs that offer challenging work environments of great flexibility and latitude. The ability to consistently learn new skills and in an environment, that allows problem solving enables employees to reduce levels of stress and maintain high levels of health. Nonetheless, workers who perform

high-risk tasks, which involve imminent threats to the well-being of themselves or others which they are responsible for, are thought to be particularly vulnerable to heightened job stress (Noblet et al., 2009).

Grid/Group Theory

Interest in Grid/Group Theory (GGT) is driven by the rise of New Public Management, an era where efforts were developed to make public service more businesslike, which emphasizes stability, fairness, predictability, and rules and procedures (Loyens & Maesschalck, 2014). Some of its aspects, like the privatization of government activities, are highly controversial: For example, the New Public Administration claims that public organizations should be run like businesses, but it has also been responsible for introducing strategic planning and the ideas of workplace design into the routines of public agencies (Hood, 2004).

Proposed by anthropologist Mary Douglas (1970; 2016), GGT offers a broad understanding of culture. Douglas devised GGT to as a tool for comparison of cultures and the forms of social organization that supports them. However, GGT need not be limited to the study of societies, but can also be used to describe the social context of an individual (Duval, 2006; Hendry, 1999). Expanding beyond its initial purpose intended, it has since been used for or adapted to the sociological study of religion and values (Chai, Liu, & Kim, 2009; Jochim, 1988), risk and environment problems (Linsley & Shrives, 2008; Rayner, 1986; Thompson, Ellis, & Wildavsky, 1990), and the cultures of politics and organizations (Cameron, 2001; Mamadouh, 1999).

In GGT, culture is defined as shared values and beliefs, i.e., mental products (Abrandt, 1999). Individuals who share similar values often generate norms and customs

that are institutionalized within group practices. Likewise, these institutions act to socialize and form the individual values and beliefs of later generations. Douglas's model of cultural theory proposes that an individual's behavior, perception and beliefs are shaped and regulated by constraints categorized into two dimensions that can be labeled as group control ("grid") and group commitment ("group") (Chai, Liu & Kim, 2009).

Analyzing the assembly of GGT further, we look at the roles played or assessed within each dimension. GGT is constructed around two dimensions, where grid is the vertical axis and group is the horizontal axis. Grid is the amount of control a member will accept (see Figure 2). Thompson et al. (1990) describe grid as different people in a group taking on different roles. It is the degree to which an individual's life is circumscribed by externally imposed measures. The more unalterable and comprehensive the scope of the measures are, the less negotiation available for an individual's life (Abrandt, 1999; Thompson et al.,1990). Grid strength is high when roles in the culture is changed or distributed. When individuals become dependent on specializations such as abilities, skills or qualifications grid is considered low.

Group represents the extent to which people are motivated or restricted in thought and action by their commitment to a social unit larger than the individual (Altman and Baruch, 1998; Hood, 1998). Group dimension measures how much of a person's life is controlled by the group in which they live. Merely belonging to a group demands acceptance to constraints placed on an individual. In an example given by Mary Douglas (2016), it is evident the strength of the group dimension varies in strength. At one end of the scale you are a member of a group with whom your social interactions are occasional at best. For example, members of many religious groups in the U.S. attend services on

18

Sundays or perhaps only annually on holidays like Christmas and Easter. On the other end of the scale there are groups which require full-time, life-time commitments, such as convents or monasteries. When group is high, members are shown to interact more, put more emphasis on the group than the individual, and provide an example to others. On the opposite end of the spectrum we experience low group, which is presented as people who are not reliant or constrained by the membership. Individuals in low group negotiate and manage their way in life solely as individuals (Loyens, 2013; Abrandt, 1999).

Assessing two dimensions of social life, GGT is a method for identifying social pressures and plotting them on a map of social environments (Douglas, 2003). There are four different ways that culture and social relations can be combined in an individual's life and these four ways can be measured on dimensions. These four types of cultures and social relations correspond further to the structure of belief available:

> Grid/group analysis claims that individuals and social units located in different parts of this typology of social experience will develop different cosmologies (types of ideology), because the premises involved in defining the social environment in terms of grid and group place certain distinctive constraints on the structure of beliefs that can be used to legitimate actions taken within it. (Rayner,1986, cited in Abrandt, 1999)

Douglas' two dimensions create four ideal types of culture-- Individualistic/Market, Hierarchical/Bureaucratic, Fatalistic and Egalitarian (see Figure 2).

Individualist/Market (Low Grid-Low Group). In this quadrant, individuals are described as entrepreneurs that operate in a competitive environment, where all

individuals are working hard to develop skills that are necessary to get results (Abrandt, 1999; Rayner 1986). Individuals stimulate the drive from within self-interest and competition, rather than cooperation (Rayner, 1986; Verweij et al., 2006). However, there is an increased risk of chaos due to a lack of cooperation and tendency to put the individual above the common good. Through one-on-one negotiation and bargaining, conflict can be resolved.

Hierarchical/Bureaucratic (High Grid-High Group). Roles and responsibilities are well defined for groups within this quadrant. Each person has its place and a role with accompanying responsibilities. Conflicts are handled by referring to these rules and authority. There is risk in misplaced trust in procedural rules and authority. This world is considered controllable; however, problems can arise, leading individuals to refer to procedures or rules to solve. Unfortunately, this method is not always successful.

Fatalistic (High Grid-Low Group). The central idea is that individuals are bounded by a system of rules that is beyond their control (Abrandt, 1999). This leads to unwillingness to plan or take necessary measures. Conflicts can be dealt with, however there is the "just survive" mentality. This group is considered a draw, unpredictable and pure chance. Those within this group often feel bound by a system of rules beyond their control which leads to an unwillingness and failure to adhere to important measures. Loyen's describes, managerial instruments such as randomness, compliance checks, firewall arrangements, designed to separate decision making, can prevent corruption.

Egalitarian (Low Grid-High Group). Everyone is considered equal and should cooperate for the welfare of the group. This group handles conflict through negotiation in

order to reach consensus (Loyens, 2013). Because this culture of people seeks negotiation as a problem solver, inefficient decision making may be made or even cause disruption.

Statement of the Problem and Hypotheses

Sociologists Kemper & Collins (1990) conclude that the structural features underlying the two-dimensional GGT model can be usefully applied not only to cross-cultural comparison between whole societies but also to the study of occupational and professional groups. Loyens (Loyens, 2013; Loyens & Maesschalck, 2014) has taken leadership in applying GGT to the culture of policing. The police cultural model assumes a specific set of cultures and characteristics that are thought to be typical for police, regardless of position or location. Classic police culture portrays police/law enforcement in a negative way. This culture feels that law enforcement look at the public with suspicion due to frequent encounters with law breakers. Themes such as moral cynicism, social isolation, and crime fighting have been developed among research when the professional norms of policing came under consideration.

Through Douglas's theory we can look at the law enforcement field and apply the four different cultures based on behaviors and outcomes, instead of profession based norms. *Given the classic perspective on police culture, it can be expected that stress scores should be lowest in the Egalitarian quadrant of Douglas's matrix, that is, low on grid dimension and high on the group dimension.* Law enforcement officers tend to seek discretion, hate hierarchy, but still like comradery. They are required to treat everyone as though they are equal, innocent until proven guilty and should cooperate for the good of the group. Officers are bound by not only a system of departmental rules but a legal framework, which is beyond their control. Confronted with criminals and law breakers

daily, there is a strong divide created between officers and society, creating an "us-vs-them" attitude (Loyens & Maesschalack, 2014), reflecting the characteristics of the egalitarian culture. In addition to the daily interaction with criminals, officers experience the feeling of powerlessness and restraint, when offenders are released or get away with a crime because of loop holes.

Applying GGT allows us the opportunity to look at other ways in which police and other agents could interact with the public. With the data set applied in this paper, we are looking at the stress levels associated with police officers and their workplace, i.e. critical incident, burnout, PTSD, psychological, and perceived. Control variables such as age, gender, ethnicity etc. have been integrated, which will allow us to evaluate the different groups which experience higher levels of stress. We can then apply those same groups to the two-dimensional matrix of GGT, plotting them among the four developed cultures. By putting these results in the matrix, we are able to see which culture types are likely to result in a defined stress level. Identifying these characteristics will allow us to address areas of risk.

Chapter III

Methodology

The data for this thesis comes from the study *Police Stress and Domestic Violence in Police Families in Baltimore, Maryland, 1997-1999* (Gershon, 2000). The study focuses on sworn officers who were part of the Baltimore City, Maryland, Police Department. Participants consist of those who had a 10th grade reading level and the survey took approximately 20 minutes to complete. All participants were given a 5-page questionnaire assessing several variables that measure personal and familial levels of stress. Variables included in the examination were demographic characteristics, officer stressors, negative health outcomes, stress levels, the levels of support, and family violence (Kurtz, 2012). Out of about 2,500 officers present at the morning and/or evening roll call, 1,100 officers chose to answer the questionnaire. The data that was collected was further utilized by Participatory Action Research (PAR) teams using techniques from Total Quality Management (TQM) to identify stress interventions.

Although the survey is now over 15 years old, the lack of publicly available data on the subject of police stress has given this study continuing relevance for contemporary researchers. Some studies have examined the relationship between work-related stress and family violence (Anderson & Lo, 2011; Zavala, Melander, & Kurtz, 2015). Others have explored the application of coercion by police officers (Gachter, Savage, & Torgler, 2011; Kurtz, Zavala, & Melander, 2015; Zavala & Kurtz, 2016). Rogers (2017) found higher levels of spirituality among African American officers over Whites and identified points where this spirituality reduced stress levels. Of these mentioned studies, none of

them took an approach to analyze the culture within a police department and their perception of the organization itself.

The version of the Gershon file that I will use was prepared by my thesis advisor for his own research (Rogers, 2017). Dependent variables are factors measuring 5 different kinds of stress (see Table 1). Individual questions in the survey are based on validated indexes of stress and police stress. Questions from each section of the survey were subjected to exploratory factor analysis, and then final scores were developed using structural equation models to produce confirmatory factor analyses. All factors generated through confirmatory factor analysis have likelihood ratio chi-square tests for the difference between the model and saturated model that are not statistically significant, and the root mean square error (RMSEA) is below .05. Each factor has been rescaled to form a 100-point scale showing the relative stress level of each individual--0 is the minimum value attained and 100 the maximum.

The independent variables are factors measuring grid and group. Scores were created for grid and group based on workplace stress variables from Section II of the survey. (The section is titled "Work Attitudes.") Questions assigned to grid tapped into some aspects of the organization's formal process, specifically loaded and the use of discretion. Questions included in the group factor measured senses of equity, belonging, and comradery. As with the stress levels discusses above, the factors included adjustments for covariant errors and fell well within generally accepted guidelines for the use of factors in confirmatory factor analysis. A complete list of question assignment for the grid and group dimensions can be defined in Table 2.

Descriptive statistics are reported in Table 3. The control variables for the study include education level, approximate age (the calculation is based on respondent's year of birth), race/ethnicity, department rank, and marital status. Due to small sample sizes, rank categories are collapsed: officers, agents and detectives are classified as special purpose officers, and sergeants and lieutenants are classified as supervisors. Sex (male/female) was included in original analyses but later dropped due to lack of significance.

Statistical analysis was conducted using SPSS. A total of five models were examined to determine if the sources of stress varied between each group with the Grid/Group Theory matrix. Among all five models a reference category was used; Individualist. Due to the majority of variables being categorical, unstandardized betas are reported. The results in unadjusted and adjusted models are for all respondents. Unadjusted results are simple OLS regression using only one independent or control variable or a block of related dummy variables (e.g., all age variables grouped together).

Chapter IV

Results

Table 4 shows the stress levels were found to be highest in the Individualist quadrant, among the other variations in stress levels. In contrast, scores were found lowest in the Hierarchical quadrant. This finding remains after the addition of control variables. Results of OLS regression are reported in separated tables for each dependent variable (Table 5 to 9).

In the critical incident stress model (Table 5), both Hierarchical (b=-10.257, p<.05) and Fatalist (b=-5.914, p<.05) exhibit significantly lower levels of stress than Individualist. Significant results are associated with three control variables—age, rank, and education. Stress levels increase with age and experience rank. College graduate experience lower stress levels, but only in the unadjusted model. and current rank, though college was significant only in the unadjusted model.

Within the burnout model (Table 6), all three GGT models are significantly lower than Individualist. Hierarchical was the lowest (b=-.15.608, p<.05) followed by Egalitarian (b=-10.076, p<.05) and Fatalist (b=-8.158, p<.05). Among the control variables, significant relationships were found between age, rank, and education. Burnout levels are significant lower among officers 40-49 years of age and among sergeants. College graduates experience lower levels of stress, but these results did not carry over into the adjusted model.

With PTSD (Table 7), the significant differences in the model are restricted to the GGT variables. Hierarchical shows the largest difference from Individualist (b=26.448, p<.05), followed by Fatalist (b=-15.644, p<.05) and Egalitarian (b=-12.792, p<.05).

Among symptoms of psychological stress (Table 8), there are again significant differences between Individualist and the other GGT variables. Hierarchical scores lowest (b=-10.639, p<.05), followed by Egalitarian (b=-6.866, p<.05) and Fatalist (b=-5.608, p<.05). Control variables have only limited and inconsistent effects. Agents are significantly less in the unadjusted model, but the relationship disappears in the adjusted. Divorced/separated appears only in the adjusted.

For perceived stress (Table 7), all three GGT models again are significantly lower than Individualist. Hierarchical scores lowest (b=-14.891, p<.05). The differences between Fatalist and Egalitarian are similar. None of the control variables show statistically significant relationships.

Over all, those who are unregulated, spontaneous, live transparent work live with no stability (Individualist) reflected the highest levels of stress. Those who emphasize on regulation, seek stability and structure, accept rules and policy, and respect authority (Hierarchicalist) reflected the lowest levels of reported stress.

Chapter V

Discussion

This analysis provides a new look into the possibility of organizational perception. We expected lower stress levels in the Egalitarian quadrant. We thought officers liked group solidarity and we accepted on face value their complaints about management and the rigidity of policies and procedures. What we learned is the officer complaints about management are associated with stress.

Contrary to what we predicted, the hierarchicalist produced the least amount of stress among the four GGT quadrants. This finding is consistent with the Situational Leadership Model, which claims that employees must match the structure and culture of their organization for the relationship to be mutually beneficial (Hersey, Blanchard, & Johnson, 2014). Police departments are hierarchies, and officers who accept some degree of hierarchy experience lower stress at work. By contrast, those officers who reject the hierarchical aspects of law enforcement exhibit stress.

What does this mean for modern-day policing? Certainly officers must exhibit autonomy and discretion when engaged in street-level policing, so it makes sense that officers have a need for input in decision making. Moreover, officers do not want to be treated as adolescents; they expect to be relatively independent. The more control over the work environment an officer has the less stress the officer experiences (Brown et al., 1996).

At the same time, it is clear that there must be balance. Structure, when properly implemented, provides emotional benefits to officers. This research implies that we need to learn more about how to properly implement policies and procedures to help aid departments in managing their staff's response to workplace stress, instead of eliminating them.

Limitations of Research

One of the primary concerns with this research is the age of the study. We are looking at results that reflect policies and procedures 18 years ago. A second concern is the design of the original study, a cross-sectional analysis, which makes it difficult to determine the effects of stress on a department over time. Furthermore, the study focused on a single police department, raising questions about the generalizability to other departments across the country. Additionally, the data that we ran did not include the performance standards of the respondents. We are unable to take into consideration the quality of the officer, which could skew the results.

Future Research

Expanding the data among different departments would allow us to take a look departments operate with their policies and procedures. Analyzing each department alone, then together, would give us an idea if the results would different based on how a department enforces their protocol.

In addition to the obvious need to replicate this study across different police departments, we see two additional avenues of additional research. One question is whether the different quadrants of GGT appealing to police officers of different background characteristics. For example, using the Baltimore study Rogers (2017) found

racial variations in the use of spirituality as a coping mechanism. We wonder how race and other background characteristics might affect the distribution of officers across the four quadrants.

Second, we wonder about the effects of extreme imbalances in GGT scores. Lyons and Maesschalck (2014) suggest that combining the four cultures together into one organization can avoid possible excesses that result from managing each culture separately. Too much hierarchy can lead to those who obsess over rules and rule making (Thompson et al., 1990). Too much egalitarianism can cause a divide within a group (Schwartz, 1991). Too much individualism may lead to chaos or disorder (Abrandt, 1999). Too much fatalism could result in desperation (Lyons and Maesschalck, 2014).

References

Abrandt, J. (1999) *The reinventing government movement: A cultural*

    perspective. Statsveternskaplig Institutionen at Lunds Universitat. Retrieved from

    http://alpha.fdu.edu/~schieman/courses/6619/readings/cultural-perspective.pdf

Agnew, R. A. (1992). Foundation for a general strain theory of crime and delinquency.

    Criminology, 30, 47-87. doi: 10.1111/j.1745-9125.1992.tb01093.x

Altman, Y., & Baruch, Y. (1998). Cultural theory and organizations: Analytical method

    and cases. *Organization Studies*, *19*(5), 769-785.

    doi:10.1177/017084069801900503

Anderson, A. S., & Lo, C. C. (2011). Intimate partner violence within law enforcement

    families. *Journal of Interpersonal Violence*, *26*(6), 1176-1193.

    doi:10.1177/0886260510368156

Anderson, G. S., Litzenberger, R., & Plecas, D. (2002). Physical evidence of police

    officer stress. *Policing: An International Journal of Police Strategies &*

    Management, *25*(2), 399-420. doi:10.1108/13639510210429437

Beehr, T. A., Johnson, L. B., & Nieva, R. (1995). Occupational stress: Coping of police

    and their spouses. *Journal of Organizational Behavior*, *16*(1), 3-25.

    doi:10.1002/job.4030160104

Bernard, T. J. (1990). Angry aggression among the "truly

    disadvantaged". *Criminology*, *28*(1), 73-96. doi:10.1111/j.1745-

    9125.1990.tb01318.x

Bishop, S. A., & Boots, D. P. (2014). General strain theory, exposure to violence, and

    suicide ideation among police officers: A gendered approach. *Journal of Criminal*

    Justice, *42*(6), 538-548. doi:10.1016/j.jcrimjus.2014.09.007

Blanding, M. (2015, January 26). Workplace stress responsible for up to $190 billion in

    annual U.S. healthcare costs. Retrieved from www.forbes.com

Blount, W. R., Yegfidis, B. L., & Maheux, R. M. (1992). Police attitudes toward

    preferred arrest: Influences of rank and productivity. *American Journal of Police,*

    11, 35-52.

Bowler, R. M., Han, H., Gocheva, V., Nakagawa, S., Alper, H., DiGrande, L., &

    Cone, J. E. (2010). Gender differences in probable posttraumatic stress disorder

    among police responders to the 2001 World Trade Center terrorist

    attack. *American Journal of Industrial Medicine, 53*(12), 1186-1196.

    doi:10.1002/ajim.20876

Brown, J., Cooper, C. L., & Kirkcaldy, B. (1996). Occupational stress among senior

    police officers. *British Journal of Psychology, 87*(1), 31-4.

    doi:10.1057/9781137310651.0028

Cameron, D. (2001). Chefs and occupational culture in a hotel chain: A grid-group

    analysis. *Tourism and Hospitality Research, 3*(2), 103-114. doi:

    10.1177/146735840100300202

Chai, S., Liu, M., & Kim, M. (2009). Cultural comparisons of beliefs and values:

    Applying the Grid-Group approach to the World Values Survey. *Beliefs and*

    Values, *1*(2), 193-208. doi:10.1891/1942-0617.1.2.193

Douglas, M. (1970). *Natural symbols: Explorations in cosmology*. New York: Pantheon

 Books.

Douglas, M. (2003). Being fair to hierarchists. *University of Pennsylvania Law*

 Review, *151*(4), 1349-1370. doi:10.2307/3312933

Douglas, M. (2006). *A history of grid and group cultural theory.* Retrieved from

 Semiotics Institute Online, A Course on Cultural Theory: The Grid /Group

 Model: http://semioticon.com/sio/courses/the-group-grid-model/

Duval, D. T. (2006). Grid/Group Theory and its applicability to tourism and

 migration. *Tourism Geographies*, *8*(1), 1-14. doi:10.1080/14616680500392424

Fairlie, P. (2013). Meaningful work is healthy work. In R. J. Burke & C. L. Cooper

 (Eds.), *The fulfilling workplace: The organization's role in achieving individual*

 and organizational health (pp. 187-205). Farham, Surrey, Eng.: Gower

 Publishing.

Fenwick, R., & Tausig, M. (2007). Work and the political economy of stress:

 Recontextualizing the study of mental health/illness in sociology. *Mental Health,*

 Social Mirror, 143-167. doi:10.1007/978-0-387-36320-2_7

Gächter, M., Savage, D. A., & Torgler, B. (2011). The relationship between stress, strain

 and social capital. *Policing: An International Journal of Police Strategies &*

 Management, *34*(3), 515-540. doi:10.1108/13639511111157546

Gershon, R. (2000). *Police stress and domestic violence in police families in Baltimore,*

 Maryland, 1997-1999. ICPSR version. Baltimore, MD: Johns Hopkins

 University [producer], 1999. Ann Arbor, MI: Inter-university Consortium for

 Political and Social Research [distributor], 2000. doi.org/10.3886/ICPSR02976.v1

Graves, W. (1996). Police cynicism: Causes and cures. *FBI Law Enforcement Bulletin,*
65, 16–20.

Hackett, D. (2003). Trust and the suicidal police officer. In D. Hackett, & J. Violanti
(Eds.), *Police suicide: Tactics for prevention.* Springfield, IL: Charles C. Thomas.

Halpern, J., Gurevich, M., Schwartz, B., & Brazeau, P. (2009). What makes an incident
critical for ambulance workers? Emotional outcomes and implications for
intervention. *Work & Stress*, *23*(2), 173-189. doi:10.1080/02678370903057317

Hendry, J. (1999). Cultural theory and contemporary management organization. *Human
Relations, 52*, 557–577. doi: 10.1177/001872679905200501

Hersey, P., Blanchard, K. H., & Johnson, D. E. (2014). *Management of organizational
behavior: leading human resources*. Delhi: PHI Learning Private Ltd.

Hood, C. (2004). *The art of the state: Culture, rhetoric, and public management*. Oxford,
Eng.: Oxford University Press.

Jen-Hung, C., Pai-Tsang, H., Yen-Kuang, L., Ching-En., Chien-Min, L., Ying-Hua, S., &
Ying-Chin, L. (2015). Association Between sleep duration and sleep quality, and
metabolic syndrome in Taiwanese police officers. *International Journal of
Occupational Medicine & Environmental Health*, *28*(6), 1011-1023.
doi:10.13075/ijomeh.1896.00359

Jochim, C. (1988). "Great" and "little," "grid" and "group": Defining the poles of the
elite-popular continuum in Chinese religion. *Journal of Chinese Religions, 16*(1),
18-42. doi: 10.1179/073776988805308029

Johnson, L. B., Todd, M., & Subramanian, G. (2005). Violence in police families: Work-family spillover. *Journal of Family Violence*, *20*(1), 3-12. doi:10.1007/s10896-005-1504-4

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*(2), 285-306. doi:10.2307/2392498

Kemper, T. D., & Collins, R. (1990). Dimensions of microinteraction. *American Journal of Sociology*, *96*(1), 32-68. doi:10.1086/229492

Kulbarsh, P. (2007, October 15). Critical Incident Stress. Retrieved February 06, 2017, from http://www.officer.com/article/10249385/critical-incident-stress

Kurtz, D. L. (2012). Roll call and the second shift: The influences of gender and family on police stress. *Police Practice and Research*, *13*(1), 71-86. doi:10.1080/15614263.2011.596714

Kurtz, D. L., Zavala, E., & Melander, L. A. (2015). The influence of early strain on later strain, stress responses, and aggression by police officers. *Criminal Justice Review, 40*(2), 190-208. doi:/10.1177/0734016814564696

Linsley, P. M., & Shrives, P. J. (2009). Mary Douglas, risk and accounting failures. *Critical Perspectives on Accounting*, *20*(4), 492-508. doi:10.1016/j.cpa.2008.05.004

Loyens, K. (2013). Why police officers and labour inspectors (do not) blow the whistle. *Policing: An International Journal of Police Strategies & Management*, *36*(1), 27-50. doi:10.1108/13639511311302461

Loyens, K., & Maesschalck, J. (2014). Police-public interactions: a grid-group cultural

theory perspective. *Policing: An International Journal of Police Strategies &*

Management, *37*(1), 144-158. doi:10.1108/pijpsm-03-2013-0023

Mamadouh, V. (1999). A political-cultural map of Europe: Family structures and the

origins of differences between national political cultures in the European Union.

GeoJournal, 47(3), 477-485. doi:10.1023/A:1007057527547

McCarty, W. P., Schuck, A., Skogan, W., & Rosenbaum, D. (2011). *Stress, burnout, and*

health. Washington, DC: National Institute of Justice.

Ménard, K. S., & Arter, M. L. (2013). Police officer alcohol use and trauma symptoms:

Associations with critical incidents, coping, and social stressors. *International*

Journal of Stress Management, *20*(1), 37-56. doi:10.1037/a0031434

Michie, S. (2002). Causes and management of stress at work. *Occupational and*

Environmental Medicine, *59*(1), 67-72. doi:10.1136/oem.59.1.67

Noblet, A., Rodwell, J., & Allisey, A. (2009). Job stress in the law enforcement sector:

Comparing the linear, non-linear and interaction effects of working

conditions. *Stress and Health*, *25*(1), 111-120. doi:10.1002/smi.1227

Oehme, K., Siebert, D. C., Siebert, C. F., Stern, N., Valentine, C., & Donnelly, E. (2011).

Protecting lives, careers, and public confidence: Florida's efforts to prevent

officers-involved domestic violence. *Family Court Review*, *49*(1), 84-106.

doi:10.1111/j.1744-1617.2010.01355.x

Oliver, W. M., & Meier, C. (2004). Stress in small town and rural law enforcement:

Testing the assumptions. *American Journal of Criminal Justice*, *29*(1), 37-56.

doi:10.1007/bf02885703

Rayner, S. (1986). Management of radiation hazards in hospitals: Plural rationalities in a

single institution. *Social Studies of Science*, *16*(4), 573-591.

doi:10.1177/030631286016004002

Richmond, R. L., Wodak, A., Kehoe, L., & Heather, N. (1998). How healthy are the

police? A survey of life-style factors. *Addiction*, *93*(11), 1729-1737.

doi:10.1046/j.1360-0443.1998.9311172910.x

Rogers, R.L. (2014). Police, sociology of. In Andrew Scull (Ed.), *Cultural Sociology of*

Mental Health: An A-to-Z Guide (Vol 2, pp. 648-650). Thousand Oaks, CA: Sage

Publications.

Rogers, R.L. (2017). Minority status and spirituality among police officers: Blacks and

women in a metropolitan department. *Journal of Police and Criminal Psychology*.

doi:10.1007/s11896-017-9229-x

Schwartz, B., Thompson, M., Ellis, R., & Wildavsky, A. (1991). A pluralistic model of

culture. *Contemporary Sociology*, *20*(5), 764. doi:10.2307/2072250

Selye, H. (1956). *The stress of life.* New York: McGraw-Hill.

Silbert, M. H. (1982, June). Job stress and burnout of new police officers. The Police

Chief, 46–48.

Stevens, D. J. (2008). *Police officer stress: Sources and solutions.* Upper Saddle River,

NJ: Pearson Prentice Hall.

Stinchcomb, J. B. (2004). Searching for stress in all the wrong places: Combating chronic

organizational stressors in policing. *Police Practice & Research*, *5*(3), 259-277.

Summerlin, Z., Oehme, K., Stern, N., & Valentine, C. (2010). Disparate levels of stress in

police and correctional officers: Preliminary evidence from a pilot study on

domestic violence. *Journal of Human Behavior in the Social Environment*, *20*(6), 762-777. doi:10.1080/10911351003749169

Tausig, M. (2013). The sociology of work and well-being. In C. A. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the sociology of mental health.* Dordrecht, The Netherlands: Springer.

Thompson, M., Ellis, R. and Wildavsky, A. (1990), *Cultural Theory*. Boulder, CO: Westview Press.

Tucker, J. M. (2015). Police officer willingness to see stress intervention services: The role of perceived organizational support (POS), confidentiality and stigma. *International Journal of Emergency Health and Home Resilience, 17*(1), 304-314.

Verweij, M., Douglas, M., Ellis, R., Engel, C., Hendriks, F., Lohmann, S., Thompson, M. (2006). Clumsy solutions for a complex world: The case of climate change. *Public Administration*, *84*(4), 817-843. doi:10.1111/j.1540-8159.2005.09566.x-i1

Violanti, J. M., Fekedulegn, D., Charles, L. E., Andrew, M. E., Hartley, T. A., Mnatsakanova, A., & Burchfiel, C. M. (2008). Suicide in police work: Exploring potential contributing influences. *American Journal of Criminal Justice*, *34*(1-2), 41-53. doi:10.1007/s12103-008-9049-8

Waters, J. A., & Ussery, W. (2007). Police stress: history, contributing factors, symptoms, and interventions. *Policing: An International Journal of Police Strategies & Management, 30*(2), 169-188. doi: 10.1108/13639510710753199

Weekes, J., Hunt, T., George, D. (2016, September 1). We're not trained to do our jobs

    properly, say police in workplace survey. *Stuff.* Retrieved from

    http://www.stuff.co.nz/

Weinberg, A., Sutherland., V., & Cooper, C. (2010). *Organizational stress management:*

    A strategic approach. Houndmills, Basingstoke, Hampshire, Eng.: Palgrave

    Macmillan.

Zavala, E., & Kurtz, D. L. 2016. Applying differential coercion and social support theory

    to police officers' misconduct. *Deviant Behavior, 37*(8), 877-892.

    doi:10.1080/01639625.2016.1153365

Zavala, E., Melander, L. A., & Kurtz, D. L. (2015). The importance of social learning and

    critical incident stressors on police officers' perpetration of intimate partner

    violence. *Victims & Offenders, 10*(1), 51-73. doi:10.1080/15564886.2014.890688

Table 1.
Question Assignment for Dependent Variables

Critical Incident Stress
s3q41   Being involved in a hostage situation
s3q38   Responding to a call related to a chemical spill
s3q40   Personally knowing the victim
s3q36   Shooting someone
s3q37   Being the subject of an IID investigation
s3q43   Experiencing a need stick inquiry or other exposure to blood and body fluids
s3q42   Attending a police funeral
s3q35   Making a violent arrest
s3q39   Responding to a bloody arrest

Burnout
s3q52   I feel burnout out from my job.
s3q53   I feel like I am at the end of my rope.
s3q50   I feel like I am on automatic pilot most of the time.
s3q51   I feel like I need to take control of the people in my life.
s3q54   I feel I treat the public as if they were impersonal objects.
s3q49   I feel optimistic or hopeful about the future.
s3q48   I feel that I can rely on support from my family, friends, etc.
s3q55   I have accomplished many worthwhile things in this job.

PTSD
s3q44   Cause you to have intrusive or recurrent distressing thoughts, memories, or
         dreams about the event
s3q45   Make you avoid things related to the event (i.e., thoughts places, conversations)
s3q46   Make you feel detached from people and activities that are important to you

Psychological Symptoms
s5q93   Feeling blue
s5q92   Blaming yourself for things
s5q96   Feeling no interest in things
s5q90   Feelings of being trapped or caught
s5q99   Feeling hopeless about the future
s5q88   Feelings of low energy or slowed down
s5q101   Feeling so restless you couldn't sit still
s5q91   Headaches or pressure in your head
s5q103   Feeling that something bad was going to happen to you
s5q94   Nausea, upset stomach, stomach pains

Table 1 (con't).
Question Assignment for Dependent Variables

Perceived Stress

s5q106 You want to withdraw from the constant demands on my time and energy from work.

s5q107   I feel negative, future or depressed about work.

s5q105   I am moody, irritable, or impatient over small problems.

s5q109   I feel physically, emotionally and spiritually depleted.

s5q104   I feel tired at work even with adequate sleep.

s5q111   My interest in doing fun activities is lowered because of my work.

s5q114   When I ask myself why I get up and got to work, the only answer that occurs to me is "I have to."

s5q110   My resistance to illness is lowered because of my work.

s5q113   I have difficulty concentrating on my job.

s5q108   I think that I am not as efficient at work as I should be.

s5q112   I feel uncaring about the problems and needs of the public when I am at work.

Table 2.
Assignment of Questions for Grid and Group Factors

Grid Questions

s2q30   The administration supports officers who are in trouble.

s2q31   I have to make split second decisions on the street that could have had serious consequences

s2q32   The department tends to be more lenient in enforcing rules and regulations for female officers.

s2q25   I feel that I am less likely to get chosen for certain assignments because of "who I am" (e.g., race, gender, sexual orientation, physical characteristics).

s2q22   There is not enough time at the beginning or end of the day for my chores at home.

Group Questions

s2q27   Promotions in this department are tied to ability and merit.

s2q24   Compared to my peers (same rank), I find that I am likely to be more criticized for my mistakes.

s2q20   I can trust my work partner.

s2q19   There is good and effective cooperation between units.

Table 3.
Summary of Factors

Categorical measures	Number	%	Numeric measures	Mean	SD.
Marital status			Critical incident stress	43.38	19.709
Married	800	48.2	Burnout	40.40	18.740
Live-in partner	800	26.6	PTSD	27.67	36.812
Divorced/separated	800	32.5	Psychological symptoms	18.04	15.228
Single	800	37.5	Perceived stress	25.19	16.693
Age					
21-29	804	41.3			
30-39	804	49.6			
40-49	804	41.3			
50 or more	804	13.0			
Race/ethnicity					
African American	795	45.7			
White	795	47.0			
Other	795	18.1			
Education					
High school	796	34.8			
Some college	796	49.3			
College	796	44.7			
Rank					
Officer Trainee	802	0.00			
Officer	802	48.2			
Agent	802	22.8			
Detective	802	35.6			
Sergeant	802	33.6			
Lieutenant	802	18.0			

Note: Percents may not total 100% due to rounding error

Table 4.
Means of Dependent Variable

Stressors	N	Fatalist	Hierarchical	Individualist	Egalitarian	Total
Critical incidents	804	42.34	37.99	48.26	45.02	43.38
Burnout	804	40.63	33.18	48.79	38.71	40.40
PTSD	797	26.23	14.92	40.98	28.33	27.67
Psychological	804	18.14	12.91	23.66	17.31	18.04
Perceived	804	24.56	17.78	32.58	25.83	25.19

Table 5.
Dependent Variable: Critical Stress

	Unadjusted	Adjusted
GGT (ref= Individualist)		
Fatalist	-5.914*	-5.721*
Hierarchical	-10.267*	-8.299*
Egalitarian	-3.231	-1.439
Education (ref= some college)		
High School	-3.024	-.785
College	-3.702*	-.347
Age (ref= 50 or more)		
21-29	-18.431*	-14.369*
30-39	-13.483*	-11.537*
40-49	-4.125	-5.403*
Race/Ethnicity (ref= other)		
African American	-.439	1.585
White	3.032	.697
Current Rank (ref= officer trainee/officer)		
Agent	6.763*	7.230*
Detective	4.311*	2.834
Sergeant	12.743*	8.235*
Lieutenant + above	21.590*	15.424*
Marital Status (ref= live-in partner)		
Married	4.699	1.615
Divorced/Separated	5.184	2.775
Single	-.322	1.230

Note: *$p < .05$

Table 6.
Dependent Variable: Burnout

	Unadjusted	Adjusted
GGT (ref= Individualist)		
Fatalist	-8.158*	-7.862*
Hierarchical	-15.608*	-16.161*
Egalitarian	-10.076*	-10.792*
Education (ref= some college)		
High School	2.210	2.068
College	-3.893*	-2.827
Age (ref= 50 or more)		
21-29	-.332	.141
30-39	-3.666	-3.630
40-49	-4.613*	-4.586*
Race/Ethnicity (ref= other)		
African American	-.046	-.001
White	-.162	-.309
Current Rank (ref= officer trainee/officer)		
Agent	-4.655	-.841
Detective	-5.527*	-3.277
Sergeant	-4.732	-5.195*
Lieutenant + above	-.025	.743
Marital Status (ref= live-in partner)		
Married	2.022	1.038
Divorced/Separated	4.744	3.749
Single	.567	-1.118

Note: *p<.05

Table 7.
Dependent Variable: PTSD

	Unadjusted	Adjusted
GGT (ref= Individualist)		
Fatalist	-14.755*	-15.644*
Hierarchical	-26.060*	-26.448*
Egalitarian	-12.653*	-12.792*
Education (ref= some college)		
High School	-6.684	.392
College	-6.656	11.090
Age (ref= 50 or more)		
21-29	-5.482	-1.260
30-39	-4.037	-1.616
40-49	-.310	.008
Ethnicity (ref= other)		
African American	-1.952	.811
White	-1.837	-2.986
Current Rank (ref= officer trainee/officer)		
Agent	-8.846	-16.871
Detective	1.393	-.886
Sergeant	4.238	-2.336
Lieutenant + above	11.147	2.885
Marital Status (ref= live-in partner)		
Married	3.485	2.485
Divorced/Separated	9.080	10.186
Single	1.012	-.264

Note: *p<.05

Table 8.
Dependent Variable: Psychological

	Unadjusted	Adjusted
GGT (ref= Individualist)		
Fatalist	-5.518*	-5.608*
Hierarchical	-10.743*	-10.639*
Egalitarian	-6.344*	-6.866*
Education (ref= some college)		
High School	1.872	.184
College	2.001	-1.890
Age (ref= 50 or more)		
21-29	-2.628	-.772
30-39	-1.835	-1.318
40-49	-1.978	-2.397
Ethnicity (ref= other)		
African American	-5.039	-4.448
White	-2.789	-2.322
Current Rank (ref= officer trainee/officer)		
Agent	-4.937*	-3.135
Detective	.415	1.345
Sergeant	1.241	.267
Lieutenant + above	5.923*	5.598
Marital Status (ref= live-in partner)		
Married	-1.779	-2.488
Divorced/Separated	4.849	5.055*
Single	-2.056	-1.915

Note: *p<.05

Table 9.
Dependent Variable: Perceived

	Unadjusted	Adjusted
GGT (ref= Individualist)		
Fatalist	-8.013*	-7.725*
Hierarchical	-14.793*	-14.891*
Egalitarian	-6.751*	-7.597*
Education (ref= some college)		
High School	.614	-1.379
College	1.752	-8.68
Age (ref= 50 or more)		
21-29	-1.460	.443
30-39	-3.096	-2.182
40-49	-3.379	-3.345
Ethnicity (ref= other)		
African American	-.353	.959
White	2.887	-1.379
Current Rank (ref= officer trainee/officer)		
Agent	-5.220*	-4.212
Detective	-1.408	-.219
Sergeant	-1.639	-3.267
Lieutenant + above	4.235	3.562
Marital Status (ref= live-in partner)		
Married	-1.526	-2.425
Divorced/Separated	.945	1.023
Single	-2.872	-3.693

Note: *p<.05

Figure 1.
Karasek's Demand-Control-Support Model

Psychological Job Demands (Demand)

	Low	High
Low	Passive	High Strain
High	Low Strain	Active

Decision Latitude (Control)

Source: Karasek (1979)

Figure 2.
Grid/Group Theory

	Group	
G r i d	**Fatalism** • Sense of chaos & futility • Apathy • Powerlessness • Social exclusion	**Hierarchicalism** • Emphasis on strong regulation • Rule bound institutions • Stability & Structure
	Individualism • Spontaneous action • Transparent • Voluntary • Unregulated environment • Openness & entrepreneurialism	**Egalitarianism** • Partnership & group solidarity • Peer pressure • Mutualism & cooperation

Source: Douglas (2006)